The impact of Enterprise 2.0 tools on Innovation processes

The Case Study of Incentive at IBS

Master Thesis within IT Management

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Abstract

The impact of Web 2.0 technologies has crossed the Internet borders and is increasingly affecting not only individuals but also organizations as entities. The emergence of the Enterprise 2.0 concept, which presumes the application of Web 2.0 tools within the organizational context, is being intensively adopted by many organizations of all types and sizes worldwide. Authors suggest that there is a direct impact of Enterprise 2.0 system on such organizational aspects as communication, collaboration, cooperation, co-creation and even innovation activities. There is though a sort of informational gap in the literature that would address these concepts (Enterprise 2.0 and Innovation) simultaneously and this was one of the main reasons that motivated the authors of this master thesis to investigate this topic.

In conducting this research all kinds of informational resources were used and these findings were combined with the results obtained from a real business case study, which is an example of an Enterprise 2.0 platform (Incentive) implemented within an organization (IBS). The overall research can be described in three main parts. In the first part analysis of the theoretical aspects related to Innovation and Enterprise 2.0 is made. A preliminary research framework is build based on these findings and this framework represents an attempt to bridge these theoretical dimensions. In the second part the investigation of the ‘Colin’ case study was presented. With this case investigation the research gains access to primary data and information. This strengthens the initial research framework and also delivers new insights and perspectives in connection to the highlighted topic. The findings related to the impact of Enterprise 2.0 on Innovation processes are analyzed and discussed in the final part of the research from theoretical and empirical perspectives.

An enhanced framework, representing the result of the theoretical and empirical studies, is ultimately suggested. This model represents an attempt to portray how can an Enterprise 2.0 system support innovation activities in a more generic way, addressing together major factors that are critical for an innovation process. This investigation has also determined that such Enterprise 2.0 tools as Wikis, Blogs, Social Networking, Micro-blogging, Forums & Discussions, Search Engines, Tagging etc. are having the highest impact on innovation related activities. Additionally, the managerial aspect in relation to Enterprise 2.0 influence on Innovation has proved to be extremely important, especially during the implementation phase.
Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Definition</th>
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<tr>
<td>AB</td>
<td>Aktiebolag</td>
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<tr>
<td>CEO</td>
<td>Chief Executive Officer</td>
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<td>COINs</td>
<td>Collaborative Innovation Networks</td>
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<td>E2.0</td>
<td>Enterprise 2.0</td>
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<td>FLATNESSES</td>
<td>Freeform, Links, Authorizing, Tags, Network-oriented, Extensions, Signals, Social, Emergent, Search</td>
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<td>IBS</td>
<td>International Business Systems</td>
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<td>IM</td>
<td>Instant Messaging</td>
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<tr>
<td>IPs</td>
<td>Intellectual Properties</td>
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<tr>
<td>IT</td>
<td>Information Technologies</td>
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<tr>
<td>NGO</td>
<td>Non-Governmental Organization</td>
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<td>RSS</td>
<td>Really Simple Syndication</td>
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<td>SEK</td>
<td>Swedish Krona</td>
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<tr>
<td>SLATES</td>
<td>Search, Links, Authorizing, Tags, Extensions, Signals</td>
</tr>
<tr>
<td>4Cs</td>
<td>Connection, Collaboration, Communication, Cooperation</td>
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Key Concepts

**Enterprise 2.0** - the use of emergent social software platforms within companies, or between companies and their customers (McAfee, 2006);

**Web 2.0** – web tools, which in contrast to the previous Web 1.0 (where information was passed to an inactive and receptive user), enables people to interact, collaborate and edit information (Oberhelman, 2007).

**Social networking** – a social structure made of individuals (or organizations) called ‘nodes’, which are tied (connected) by one or more specific types of interdependency, such as friendship, kinship, financial exchange, dislike, sexual relationships, relationships of beliefs, knowledge or prestige (wikipedia).

**Collective intelligence** – the capacity of human communities to evolve towards higher order complexity and harmony, through such innovation mechanisms as differentiation and integration, competition and collaboration (Por, 2005).

**Innovation** – a process that translates knowledge into economic growth and social well being (Australian research council). It may refer to incremental and emergent or radical and revolutionary changes in thinking, products, processes, or organizations.

**Organizational learning** – an area of knowledge within organizational theory that studies models and theories about the way an organization learns and adapts.

**Incentive** – a collaborative software platform designed to promote and enhance the use of Enterprise 2.0 tools inside and outside an organization (Incentive Live).

**Colin** – stands for ‘Collaborative Intranet’, as the name of the new communication strategy at IBS which presumes the use of Incentive platform to support company’s new intranet (E2.0 Blog).
Acknowledgements

This master thesis project was an exciting six months journey, which brought us a lot of thrilling experiences. But this journey would definitely not be so compelling, insightful and amazing unless we had some active support from a group of different persons, to which we would like to express our sincere gratitude for their undeniable contribution.

First, we would like to thank a lot our thesis supervisor, Mr. Ahmad Ghazawneh, for his continuous guidance, detailed feedbacks and inspirational ideas which had a great impact on our thesis. Also, Mr. Jörgen Lindh fully deserves to be mentioned here as thanks to his motivational seminars and consultations we have obtained a lot of valuable feedbacks and ideas related to our work and this made us more prepared for the thesis research.

There are also other persons which had a decisive contribution in our project. Probably the “cornerstone” of our research was the ‘Colin’ case study of Incentive use at IBS. This would not be possible unless Mr. Rickard Hansson, CEO of Mindroute Incentive AB, kindly gave us the permission to use this case study. In that sense we would like to acknowledge the great contribution of Mr. Rickard Hansson in our research and say a big “THANK YOU!” for his openness and positive attitude. The investigation of this case study gave us the opportunity to research this challenging topic from a practical point of view and the very insightful discussion we had during our interview with Mr. Rickard Hansson has delivered a lot of unique and precious information for the research. Additionally, Mr. Gustav Jonsson, from Mindroute Incentive AB, is also worth to be mentioned here, as we thank him a lot for being receptive and helpful when we required some extra help with the case.

The thesis project would look somehow incomplete unless we managed to investigate the IBS perspective of our case study. That is why we are also very grateful and thankful to Mr. Oskar Ahlberg, Senior Vice President for Corporate Communications at IBS, who found time in his busy agenda and had a captivating discussion with us. His contribution has made the overall research more objective and helped us to view some aspects related to Enterprise 2.0 and Innovation from different perspectives. This information eventually helped us to fortify our research and accomplish our main goals.

There are also persons who maybe did not have an obvious direct impact on our thesis, but their moral support was very important for us. These are our friends, relatives and of course our parents, to which we are ever thankful for educating us and giving us the opportunity to become who we are.

Thank You All Very Much!!!

June, 2010.

Agne Mackeviciute and Stanislav Iacubițchi
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1. Introduction

This chapter provides the reader with an overview of the emergent concept of Enterprise 2.0, and together with a problem description and purpose sections underlines the main scopes of this research. All these are translated into concrete research questions, which outline the main focus of this study. Additional information on delimitations, definitions and thesis outline are provided in order to further support the reader.

1.1. Background

The burst of the famous ‘Dot-com bubble’, in the beginning of the new millennium, has dramatically and irreversibly reshaped the Web environment. It became clear that a major shift was needed in order to keep up with the growing needs of the ever increasing online community and the progress in the IT industry.

The rise of new types of technologies, dubbed by some authors as collaborative or social software tools (Cook, 2008), have molded the face of Web like never before. Wiki’s, Blogs, Tags, RSS, Mash-ups, Bookmarking, IM etc. combined with new types of web sites promoting interactivity and a more intense and diverse online communication such as Facebook, Myspace, Youtube, Flickr etc. marked the begging of the new Web 2.0 era (Tapscott & Williams, 2006).

The Web cyberspace has transfigured into a more accessible, faster and easy to use communication platform. In this circumstances it was inevitable that the mindset of the online users would also shift to a more open state, allowing to express ones thoughts, ideas, opinions in a more participative and interactive way, therefore creating a new and quite efficient form of cooperation and collaboration. The aggregation of all these factors and trends consequently gave birth to new types of online movements such as social networking, mass collaboration, collective intelligence, open innovation etc. (Por, 2005; Tapscott & Williams; 2006).

The spectacular rise of the above mentioned concepts have shown that it was only a matter of time when all these novelties would be transferred to other human activities. The first obvious place that a user would most likely export his Web 2.0 experiences was his/her working medium (Tapscott, 2006). Without even fully realizing what was going on, organizations of all types (business, NGO’s, governmental, educational etc.) have started to absorb Web 2.0 elements and face all its consequences (positive and negative) (McAfee, 2006).

Some organizations perceived this as a major threat, considering that it was an unacceptable immixture in its internal orders, structures, IPs (intellectual properties), confidentiality etc., thus trying to reduce the impact of these tools. Other organizations, on the contrary, have identified some unique opportunities in these recent trends. They decided to embrace Web 2.0 technologies and incorporate them inside their organizational ecosystem (McAfee, 2006). As a result a new concept emerged in order to describe this phenomenon. McAfee (2006) has coined the term ‘Enterprise 2.0’ by defining it as “the use of emergent social software platforms within companies, or between companies and their customers”.

Also, given these recent trends, many started to perceive innovation as ‘the new hot thing’ in the modern business world. It is evidently not that ‘new’ but it is definitely very ‘hot’
nowadays. According to Porter’s generic strategies (Porter, 2008) the philosophy of achieving higher value by moving accents on cost efficiencies goals was a common strategy for most of the big organizations for many years. Still, businesses realize that delivering extra value for customers and stakeholders can be also achieved by differentiation strategies (Porter, 2008). Developing unique products, hence generating a higher rate of innovativeness, would allow businesses to find their profitable niches on highly competitive markets (Porter, 2008).

Since innovation is not only associated with radical inventions and breakthrough discoveries, but often represent genuine solutions to everyday problems and challenges of all sorts, therefore adding brick by brick values to the overall business. Another ‘hot thing’ that challenges managers’ minds nowadays is collaboration (Tapscott & Williams, 2006). Being closely connected to innovation processes this creates additional challenges on businesses, which are forced to ensure a collaborative working environment that would allow and motivate employees to better nurture and exploit their ideas and transform them into innovative solutions (Tapscott & Williams, 2006).

If we connect all the above with the recent severe global crisis and environmental changes, it becomes clear that organizations need to rethink their place in the modern world. To stay tuned to the market evolutions, sustain competitive advantage and pursue new opportunities organizations need to shift to new business models, transforming the old paradigm of command and control structure to a more open and collaborative environment, allowing its employees to interact more efficiently, hence produce greater output and innovate on a higher rate (Tapscott & Williams, 2006).

In that sense the Enterprise 2.0 approach comes with an up-to-date and relatively cheap solution, meant to assist organizations in creating an open and collaborative working atmosphere (McAfee, 2006; Cook, 2008). Of course each such example is situational and needs proper consideration and unique approaches, but it is evident that ignoring Enterprise 2.0 nowadays is at least illogical.

1.2. Problem description

If applied in the right way Enterprise 2.0 philosophy comes together with a set of improvements, enhancements and solutions which organizations have always pursued in one form or another (Cook, 2008). Although the concept of Enterprise 2.0 is still very young, and relatively little research was made in this direction, many authors, executives, managers, experts and simple employees agree that this approach unveils a lot of benefits in the following dimensions(Cook, 2008; McAfee, 2006; Tapscott, 2006):

- Communication – creating new channels of communication (Blogs, IM, social networks, forums) and enhancing the older ones (email); allowing employees to communicate easier and faster, eliminating many organizational, cultural and other sorts of barriers (McAfee, 2006);
- Collaboration – connecting people from different departments through Social Networks, Wikis, Blogs etc. in a cyberspace which allows creation, editing and sharing of useful content with all the users, hence promoting cross-functional interaction and cooperation (Tapscott, 2006);
• Creativity – Enterprise 2.0 provides a digital platform which allows and encourages users to suggest and spread new ideas and receive a constant feedback from the online community (Cook, 2008);

• Sharing and transparency – being an open system, accessible for everyone inside an organization, is the key fundamental aspect of the Enterprise 2.0. The openness of such a system is crucial in order to ensure trust and further motivate employees to contribute to the achievement of the common objectives (McAfee, 2006).

These advantages can be easily extended to many other areas and domains, but there is always one aspect which remains a top priority for the majority of the organizations and this relates to Innovation and Innovativeness. The concept of Innovation can be understood as the process of turning opportunity into new ideas and putting these into widely used practice (Tidd et al., 2001). Considering the current global situation and the turbulent pace of the technological progress, organizations realize an ever increasing need to innovate and transform innovation into a repeatable sustainable process, so they can stay competitive and deliver extra value for their customers and stakeholders.

For many authors (Cook, 2008; McAfee, 2006; Tapscott, 2006) and experts as well as representatives from business community the concept of Enterprise 2.0 is closely connected to the notion of innovation. Having so many positive effects on almost every aspect of the organization, the logical thinking would consequently suggest a positive and sometimes crucial correlation between Enterprise 2.0 and Innovation activities. Hard to debate on this, the answer might seem quite obvious for some and is most likely right, but the main challenge here is to actually show how all these things happen.

Since the concept of Enterprise 2.0 is still relatively immature, little scientific research was made to determine its impact on innovation as the final scope. In this regard the area connecting both Innovation and Enterprise 2.0 still remains in shadow and requires deeper insights supporting and depicting this correlation. The results of such studies would bring a better understanding on how Enterprise 2.0 impacts on Innovation processes and how to better coordinate and align related activities in order to trigger innovativeness in a new, open, collaborative and agile working environment.

1.3. Purpose and research questions

The main purpose of this study is to determine the influence of the Enterprise 2.0 concept on innovation activities inside an organization. Specifically, the research will primarily focus on identifying and showing how Enterprise 2.0 tools are influencing certain factors which are considered critical for innovation processes and how managers can better align the Enterprise 2.0 platform in order to trigger innovation activities. The main scope of this research is translated into the following research questions, which are supposed to shed some light in the given area of the study:

1. What are the major factors that influence innovation activities inside an organization and how are they connected to each other?
2. Which tools related to Enterprise 2.0 have a direct and indirect impact on the factors influencing innovation activities?
3. How can organizations support an innovative culture by better aligning Enterprise 2.0 approach with the innovation paradigm? (Such indirect factors as visions, strategy, management, leadership, organizational culture etc.)
By answering these questions we are trying to build a logical chain of thinking in order to reach the final scope of this project. In that regard the second and third questions are considered to be of a higher importance for the actual research and the main contribution of this study can be found in the answers of these questions. But these questions cannot be answered unless we determine which factors are critical for innovation activities achieved in a collaborative environment and that is the answer of the first question. That’s why we chose this order of the main research questions.

1.4. Delimitations

The main focus of this research is centered on depicting the correlation between Enterprise 2.0 approach and innovation activities, hence, a deeper attention will be given to the analysis of innovation achieved in a collaborative environment. From that perspective we plan to move the accent from seeing innovation as the result of the activity of an individual to the result of the activity of groups of individuals which collaborate, cooperate and co-create together.

Innovation dimension will be analyzed from the perspective of Enterprise 2.0 factors that have direct and indirect impact on it and later we will analyze how these factors are connected to each other. This means that while conducting our study we do not intend to deeply analyze such aspects of Enterprise 2.0 as adoption, integration, management, technology etc., although some of them will be mentioned throughout this paper in order to support the demonstration of our main goals.

At the same time, on the other side of our investigation purpose, which is innovation, we intend to analyze it in terms of factors that are affecting an innovation process. In that sense we plan to conduct an extensive literature review connected to innovation and determine the factors that are most often seen as decisive when dealing with innovation activities.

Additionally, pertinent models and theoretical frameworks will be used to better grasp and support the research in connection to innovation processes as well as to assist in building a connection bridge with the Enterprise 2.0 theory. This will help us to create our own theoretical framework that will fit our research goals and support the overall research purpose.

1.5. Interested Parties

This paper is an attempt to provide information to those who are interested in Enterprise 2.0 and its effect on organizational culture, collaboration and innovation.

The prime beneficiaries of the thesis are middle sized or large international companies with an interest of adopting Enterprise 2.0 platform in their organizational settings. Companies operating in knowledge sensitive branches, like consulting and development, and innovation-dependent branches, like quickly evolving IT sector, may be most interested in the results of this thesis research.

Additionally, scientific community, researching and analyzing the relation between social technologies and innovativeness of groups of individuals may find the results of this research interesting and motivating to pursue future researches in this area.
1.6. Thesis outline

Introduction
In this chapter we give a brief explanation of the main subject of the thesis. We also provide a background and a problem description in order to introduce the reader to the area of the research and give general understanding of the topic. Purpose, research questions and delimitations are also provided to support the main focus of this research.

Research Methodology
In that section we describe the main research approaches chosen for the investigation of the highlighted topic. Arguments are presented to support the option of the specific research methods in order to strengthen validity and reliability of our findings.

Theoretical framework
In this chapter we describe the two main perspectives of our research (Enterprise 2.0 and Innovation) from the theoretical standpoint. The innovation dimensions will be mainly focused on the process of identification of pertinent factors that have an impact on innovation activities achieved in a collaborative environment, while the Enterprise 2.0 perspective will provide general information, concepts, theories and models connected to this new emergent trend.

Case study and Empirical Findings
These sections will describe a real business case study which represents the main source of primary data and information needed for analysis. The described case is called ‘Colin’ and represents an example of an Enterprise 2.0 platform (Incentive) used within a business organization (IBS).

Analysis
In this part we discuss and reflect upon to what extent the initial goals and objectives have been accomplished and what concrete results this study has achieved.

Conclusions
Main conclusions drawn from the analysis of the case study and the discussions parts will be presented in this chapter in order to unveil the final verdict of the actual study.
2. Methodology

In this chapter we discuss different research approaches and techniques, used to support our master thesis research process. We explain why it is beneficial to combine inductive and deductive approaches, as well as arguing why we chose the qualitative method in our research. We present how we managed data collection and what techniques were used for that. Finally, we discuss the issues related to data analysis, interpretation and trustworthiness.

2.1. Choice of method - Qualitative research approach

The choice of method, which would be used throughout the whole research, was one of the first issues we had to handle. The two possible alternatives are qualitative or quantitative research designs. On one hand, in quantitative research, findings are arrived at by statistical methods or other procedures of quantification (Ghauri & Grönhaug, 2005). On the other hand, in qualitative research findings are arrived from insights about opinions, behaviors, events, social environment, relationships etc.

According to Jankowicz (1991), methods and techniques that are most suitable for research depends on the research problem and purposes. Qualitative research method is usually used in social and behavioral sciences. It is suitable for studying organizations, groups and individuals (Strauss & Corbin, 1990). Qualitative methods are useful in inductive research, because they can lead to hypotheses building and explanations. Hypotheses might be later checked by using quantitative methods. Therefore, it is possible to combine these methods and use them in different stages of research.

We have decided to choose qualitative method as our main research approach as it best fits our research problem. Our research questions are related to the social consequences of technological platforms, namely Enterprise 2.0 impact of innovativeness and creativity. The intention and motivation to use Enterprise 2.0 platforms in organizational settings are also related to the way group of individuals, concentrated on the same goal and working together towards it, react to the risk and exposure, how they share ideas and information. We believe that our research problem is social and behavior-related rather than purely technological. Therefore, qualitative research design is most suitable in this case. We have used semi-structured interviews as our main source of collecting primary data, as it represents the most appropriate technique when conducting a qualitative study.

2.2. Deductive, Inductive and Abductive approaches

Related to qualitative and quantitative research design is the issue of inductive and deductive research approaches. The difference between these approaches is that while induction is based on empirical evidence, deduction is based on logic (Ghauri & Grönhaug, 2005).

Through induction, general conclusions are drawn from empirical observations. In this kind of research, observations give background for the findings, on which theory is later built on. The theory is the outcome of the research (Bryman & Bell, 2003). Inductive research is often associated with qualitative type of research.
In the deductive research, conclusions are drawn through logic reasoning (Ghauri & Grönhaug, 2005). Data for such research comes from the existing knowledge i.e. literature review. Using this information, researchers build hypotheses, which are checked empirically and may be accepted or rejected. Deductive research is often associated with quantitative type of research.

As well as qualitative and quantitative research designs, induction and deduction may be combined. Induction is the process of observing the facts in order to generate a theory and usually it is the first step in the scientific research. Deduction involves fact gathering in order to confirm or disprove hypothesized relationships which were arrived at during inductive part of the research (Ghauri & Grönhaug, 2005).

Abductive approach can be used when there is a need to combine both inductive and deductive approaches (Ezzy, 2002). This means that theoretical dimension and empirical findings will alternate and support each other at different stages of our research. In order to construct our own theoretical framework based on the abductive approach we have used the model suggested by DeMast & Bergman (2006) for abductive studies (Figure 2-1).

![Figure 2-1 Research process (modified after DeMast & Bergman, 2006)](image)

The main idea behind this concept is that it allows the use of both inductive and deductive approaches at different phases of the research without contradicting each other. As in the beginning of the research mainly deductive methods were used to gather theoretical information related to the problem area. Later on inductive approach is used to collect empirical data and information from the case study. Since these processes (Figure 2-1) cannot be conducted in a chronological way (different dates of the interviews, newly emerged findings from literature review, new insights for the theoretical framework etc.), they are repeated in an iterative way, which means that both theoretical findings obtained through deductive approach and empirical findings gathered through inductive technique are continuously updated and enhanced, therefore having an effect on all the phases related to the thesis project (theoretical baseline, research framework, case study, analysis). Eventually, all these are supposed to make the final results and conclusions more objective.

### 2.3. Research strategy – Case study

Case study research is very useful when phenomenon is difficult to investigate outside its natural settings (Yin, 2003). Also, according to Yin (1994) a case study method is preferred when ‘how’ and ‘why’ questions are to be answered, when the researcher has little control over events and when the focus is on a current phenomenon in real-life context.
In our case, we decided to study the Enterprise 2.0 implementation in one of the companies, which employees were located in many different countries around the world. The effect of the E2.0 platform on the existing organizational processes, such as communication and ways of working together, sharing information and new ideas, getting feedback etc., was to be explored. In this way, the current phenomenon of technological intervention into employees’ communication and collaboration was intended to be explored in a real-life situation. That is why a case study approach was a logical choice we made to better tackle the current investigation.

Case study presumes that data is collected from multiple sources, e.g., such primary sources as verbal reports, personal interviews, observations, surveys, as well as secondary data sources as financial reports, researches already performed by organizations themselves etc. (Yin, 2003). It is important to collect as much sufficient information as possible in order to characterize and explicitly explain unique features of the case.

There have been many discussions if one case study is enough for studying of phenomenon and arriving to valid conclusions. Authors, however, agree that the number of cases is influenced by the research problem and objectives. Yin (1994) argues that it is useful to analyze a single group or event at a single point of time after some phenomenon that may have produced changes. Single case is appropriate if it is used for testing an established theory. However, the case should be representative – represent phenomena or behavior studied.

The case we chose involve a company, dealing with the Enterprise 2.0 effect on its everyday activities. We intended to distinguish the changes this company experienced, to realize the relation between these changes and Enterprise 2.0, and understand how these changes affect company’s ability to innovate. Though we chose to analyze a single case because of different kinds of constraints (time, resources, geographical location etc.), we believe that this case is representative for companies using Enterprise 2.0 in their activities and striving to enhance their innovation potential.

2.3.1. Population of Interest

In order to enable justification of the research results and their further application in other similar organizations, study population, from which the case of a particular company (-ies), must be defined (Ghauri & Grönhaug, 2005).

As the purpose of the research is to analyze the changes an Enterprise 2.0 platform invokes in the organization, and how these changes are affecting organization’s ability to innovate, only companies that have already implemented E2.0 are in our focus. As the changes do not occur immediately, companies that interest us are the ones that have had E2.0 systems implemented for at least a half a year.

Having in mind, that middle sized and especially big companies are very complex in the way employees from different departments or different hierarchical levels communicate and work together on innovation projects, we have decided to focus on such kind of companies, since the Enterprise 2.0 concept perfectly suits such organizations. Additionally, international companies, with very distributed structures are the ones that are in greatest need of such platforms, enabling them to better communicate and efficiently share information.
Knowledge sensitive branches, like consulting & development and innovation-dependent branches, like quickly evolving IT sector, are also in our primary focus.

As there is no existing statistics on how many companies have implemented Enterprise 2.0 platform, the sample of the case to analyze this phenomenon cannot be chosen randomly. Therefore, probability sampling is not suitable in this situation. The case was chosen using non-probability convenience sampling, meaning that the case was conveniently available and it was easy to access people related to it for information.

To conclude, we have chosen most convenient case from a number of cases involving large international companies, with the focus on IT development and consulting. We have decided to choose a Swedish based case study; however, the country of origin does not make any big difference when applying research results to other similar cases since the studied companies have an international focus.

2.3.2. Short case background

In order to reach our research goals we have decided to analyze a real life case study that would allow us to have access to unique primary and secondary sources of information and therefore to help us better tackle our research questions. The case that we have chosen for these purposes is called ‘Colin’, which stands for ‘Collaborative Intranet’. Basically, it represents a situation of the implementation of an Enterprise 2.0 platform, called Incentive, into a business organization (IBS). The project was started in October 2009, which shows that it was an up to date case, as for the time when this thesis project was conducted (beginning of 2010).

Initial scope of the ‘Colin’ project was meant to extend an existing intranet with a social platform, which would enhance communication, collaboration, innovation activities, knowledge & information sharing and exchange etc. But after seizing all the benefits and opportunities brought by an Enterprise 2.0 philosophy, IBS top management decided to take a brave decision and replace the entire intranet with the new Incentive platform. In that sense this case becomes even more representative for our research as its main focus is put solely on Enterprise 2.0 aspects, ignoring some of the principles of the old intranet, thus allowing us to analyze this emergent phenomenon in a more appropriate for us context.

There are several important reasons that make this case so relevant and important for our study. Besides the fact that the case fits perfectly our research goals and purposes it also brings the following advantages:

- allows us to analyze both perspectives simultaneously, that of vendor’s (Incentive Live) and of organization’s (IBS) perspectives, to ensure a higher level of objectivity of our analyses;
- gives access to valuable information and data that would not be possible to obtain in normal conditions;
- helps us to connect theoretical perspectives with practical (empirical) dimension.

A more thorough description and presentation of relevant information and details from the case is presented in the case chapter.
2.4. Data collection

We have used several different data collection techniques during our research. Firstly, we have consulted existing literature, related to our research topic, in order to frame the problem and get more familiar with relevant concepts and facts, related to innovation and Enterprise 2.0. Later on, we held several semi-structured interviews with people, directly related to the Colin project. All data collection methods that we used in our research are presented below.

2.4.1. Literature study

The prime purposes of the literature review, discussed by Ghauri & Grönhaug (2005) are:

- To frame the research problem;
- To identify relevant concepts and facts;
- To position the study – find the gap in the existing knowledge and concentrate on it.

In our literature review, we have used up to date and state-of-art literature as well as older (classical) literature connected to our topic, in order to show how the views on innovation and the role of technology in innovation process have changed during the years and how it evolved to nowadays perspective. We have used a wide range of literature sources: scientific and commercial articles, books, information from blogs, conferences reports, videos, presentations etc. Most of the literature resources (except the books), have been obtained through the Internet using University database and Google Scholar.

As the main purpose of the thesis is to connect two perspectives – Innovation and Enterprise 2.0, literature on both subjects were gathered and analyzed. As the concept of innovation is not new, there has been a wide range of literature to choose from. We have chosen the articles and books that were related to the collaborative nature of innovation and could reveal factors influencing innovativeness and creativity of the individual within the organizational setting.

Literature on Enterprise 2.0 has been much more complicated to obtain, because the concept is rather new and relatively unexplored. We have been able to find only two books on Enterprise 2.0 that were published to date. Much more information was found in blogs of academics, researching this new phenomenon, conference videos and a limited number of articles.

The literature review helped us in providing most of the answers for our first research question about the factors influencing innovation and also significantly helped us to prepare for the case study analysis, interviews and build our theoretical framework.

2.4.2. Use of primary and secondary data

When it is possible, primary data sources should be used. The main advantage of primary data is that data is collected for a particular research problem and is more consistent with research questions and objectives (Ghauri & Grönhaug, 2005). However, it takes time to collect primary data and the quality of such data depends highly on the willingness and expertise of the respondents.
During our research, we have used the following primary data sources:

- Personal interviews through Skype with persons directly related to the case study;
- Our own observations of Incentive platform.

Secondary data is useful not only in finding information to answer research questions, but also to better grasp and explain the research problem. It also helps to interpret and understand primary data. Some of the research questions may be answered by only using secondary data sources, then no new data collections is needed (Ghauri & Grönhaug, 2005). However, secondary data sources may provide data that has been collected for different purposes; therefore, it can only partly correspond to the main research purpose. That's why it is more advised to use secondary data as the complementary source of information for primary data.

Advantages of secondary data are that it saves time and resources. It also helps to better formulate and understand the research question; provide historical data; it can be also helpful in segmentation and sampling of the target group etc. (Ghauri & Grönhaug, 2005).

Other issue, related to secondary data is the reliability of the secondary information. The authenticity and accuracy of such information must be checked before using it. Responsibility of the credibility of secondary information is held by the researchers themselves.

During our research, we have used the following secondary data sources:

- Data and information about the Colin project, provided by Incentives Live blog site;
- Documentation, statistics and information which was made available to us by Incentive Live CEO Mr. Rickard Hansson and Mr. Gustav Jonsson;
- Other secondary information from the Internet, mostly online publications on Incentive and IBS, and their success stories.

2.4.3. Online interview

Yin (2003) argues that interviews represent one of the most important sources of information when dealing with a case study. Therefore, we have done everything possible to obtain several interview sessions with relevant respondents related to our case, in order to obtain as much primary information and insights as possible.

As it is known communication between researchers and respondents does not necessarily have to be face-to-face. Depending on situation, context, different constraints and purposes it may take place using other means, such as post, e-mail, telephone, voice and video chat (ex: Skype), social networking platforms etc. The advantages of online interview are that it can save time and money; convenient for both researchers and respondents, because they can conduct the interview in their most suitable place (work, office or home) etc. What is more, online interviews can offer some options of face-to-face communication, like video conversations which can provide the possibility to notice respondent's reactions, witness body language, facilitate better understanding, ensure some level of credibility etc.

Considering our dispersed geographical location as well as other issues we decided to choose the online interview as our main channel of communication with our respondents. The software used for our online interviews was Skype. We have used video conversations,
in order to benefit as much as possible from the face-to-face communication. We agreed upon the time for the interview, which was most suitable for both parties and could conduct an interview without stepping out of our natural settings. After the interview, which was recorded with the consent of the respondents, the whole conversation was transcribed and further analyzed.

2.4.3.1. Selection of the respondents

For an optimal interview it is very important to select the most suitable respondents. He/she should be the most relevant person from the point of view of the research problem and questions. Therefore, we used a non-probability purposive sampling in choosing our respondents, meaning that the people, who became our respondents, were chosen by us only after a careful consideration (Ghauri & Grönhaug, 2005).

In qualitative research the purpose is seldom to arrive at statistically valid conclusions, but rather to understand, get insights and create explanations (Ghauri & Grönhaug, 2005). Therefore, it is important to interview the right people, who can give different views on the studied subject. We have interviewed two persons, who we consider to be the most tightly related to the Colin project. First one is Mr. Rickard Hansson, the CEO of Mindroute AB (Incentive creators) and one of the main developers of the Colin strategy. Second respondent is Mr. Oskar Ahlberg, Senior Vice President for Corporate Communications at IBS, who was the top management representative responsible for the implementation of this new strategy within IBS. We believe that these respondents possesses the most accurate knowledge and information related to the case study, therefore we consider that it is enough to interview these persons.

2.4.3.2. Outlining interview questions

Generally, there exist three types of interviews (Ghauri & Grönhaug, 2005): structured (standard format of interview with fixed responses), unstructured interviews (an interview without a predefined structure and order where certain degree of liberty is allowed), semi-structured interviews (a combination of both).

We have decided to use the semi-structured approach, where the main questions were predetermined beforehand, however some newly emerged questions during the interview were also considered and discussed. For example, while talking to Mr. Hansson, he was asked which drawbacks he sees in the Incentive. He revealed some problems with participation rate; therefore, the question ‘How organization deals with this problem and tries to increase this rate?’ was asked, although it was not in the preliminary list of questions. What is more, answers to the questions were not suggested, meaning that respondents could answer in their own words. However, some guidance was necessary, in order to point respondents to the right direction and not let them get off the track of the discussed subject.

2.5. Ethical issues of the research

Ethics represent moral principles and values that influence the way a researcher conducts research activities (Ghauri & Grönhaug, 2005). In order to ensure the ethical part of this research we have decided to pay additional attention to the following aspects:
• preserving participant’s anonymity when asked;
• informed consent (Kvale, 1997) – informing respondents before the interviews about the main purpose, goals, risks and other issues related to this research;
• participants are not forced to answer unwanted questions;
• use of special equipment (audio recorder) only with the consent of the involved persons;
• give the right to comment on research before it is made public and send a copy of the final report beforehand;
• results of the research should be presented in the way so it would not cause embarrassment, misinformation or any kind of harm or disadvantage etc.

2.6. Reliability and validity

According to Merriam (1995) reliability and validity are the concepts foremost connected to qualitative research methods influencing the quality of the final research outcome. Reliability measures the concordance, consistency or repeatability of outcomes e.g. it refers to the accurateness of the data collected (Haas, 1991). However, even if the measurement was proved to be consistent and reliable, it does not necessarily means that it is valid. Validity shows that the accuracy of a measurement represents the true state of a phenomenon. Hammersley (1990) (p.57) states that: “By validity, I mean truth: interpreted as the extent to which an account accurately represents the social phenomena to which it refers.”

Evidently the issues of reliability and validity are very important to our study as we are aiming at achieving highest quality of the actual research. In order to ensure simultaneously both reliability and validity of the research outcomes we have taken the following actions:

• Use of the triangulation method (collection of data from multiple sources) (Ghauri & Grönhaug, 2005) in order to achieve highest level of validity;
• Interviews only persons which are very closely related to the Colin project to ensure most accurate answers;
• Clear formulation of interview questions which would prevent from misunderstandings and wrong answers;
• Use of recording means in order to accurately collect all the responses and later transfer the full meaning of the answers without losing precious information and insights;
• Clarification of questions when asked by interviewers;
• Constantly checking the consistency and accurateness of the information with literature, theory, experts’ opinions etc.

2.7. Generalization of findings

Generalization is a concept addressing an important issue whether or not a research sample can be held equally true of the parent population from which the sample is drawn (Ritchie & Lewis, 2003). In other words, generalization answers the question, whether results of the research can be applied to other cases other than a studied one in similar circumstances.

As we have explained before, the population of interest consists of big or middle sized international companies, with distributed structures and operating in knowledge sensitive and
innovation dependent branches, such a consulting and IT development. The case we have chosen involves international, Swedish based company, called IBS. It has about 1100 employees around the world and is operating within the IT consultancy and software development industry. Therefore, the results of our research to a certain extent can be generalized and applied to other similar companies, facing with comparable problems and challenges – e.g. having difficulties of sharing knowledge and ideas due to distributed structure etc.

However, generalization of findings is not the main concern of this research. As explained before, in qualitative research like ours the purpose is not to arrive at statistically valid conclusions, but rather to understand, get insights and create explanations (Ghauri & Grönhaug, 2005). We, as authors, understand that the contexts in which organizations operate may be very different; with different cultures, with different regard to risks, anonymity and openness may also have an impact on how organizations perceive Enterprise 2.0 in their work etc. Because of these and other related reasons generalization of research findings may be complicated and not always appropriate for other organizations.
3. Theoretical Framework

The theoretical framework will be presented in three major sections. The first section is focused on existing literature, related to innovation, its collaborative nature and factors influencing innovativeness in the organization. The second section is devoted to the literature on Enterprise 2.0 technology, its features and tools. Finally, a special sectioned is devoted for the aspects which bridge these two dimensions.

3.1. Innovation

Innovation has long been cited as essential for organizational competitiveness and success (Edwards et al, 2005; Smith et al, 2008). The concepts of innovation and innovativeness evolved as a separate field of study over a significant period of time and received much attention and insightful contribution from the scientific community. As a result, innovation has become an extensive and broad concept that can be perceived in a number of different ways (Smith et al, 2008). This makes Innovation relatively hard to define and describe. Sharma (2005) goes as far as considering innovation as being more of an art than science – inherently intangible - making its measurement and analysis difficult. However, despite its intangible nature and complicated effect measurement, organizations and academic community have spent ever increasing time and efforts to investigate and cultivate innovation.

Utterback (1971) devoted his efforts to explain managers the difference between the concepts of innovation and invention, as both of them are similar and may be easily mixed. According to him, invention, on one hand, is an original solution resulting from the synthesis of the realization of a personal or organizational needs and the ability of the organization to provide technical means to meet that need. On the other hand, innovation may be defined as an invention, which was introduced to the market and had significant economic effect on the organization itself. Tidd et al (2001) summarized the wide range of Innovation definitions into one, describing Innovation as the process of turning opportunity into new ideas and putting these into widely used practice.

Lately, innovation concept has been studied from a slightly different point of view. Scientists and practitioners shifted their focus from the individual to corporate innovation. Throughout the past years, innovation has been recognized as being the result of the combination of different knowledge and expertise that exist within and outside the organization (Johnsen & Ford, 2000). Though already in 1971 Utterback agreed that innovation is most often the result of the communication of a need followed by the search for information, recently with technology finally enabling virtual integration, innovation is being sold as a commodity, thus finally giving some concrete shape to this once abstract concept (Sharma, 2005).

3.2. Collaborative Innovation

Studies of innovation have always agreed to some extent that innovation is an interactive and, therefore, distributed process. However, only from the mid 1980-ies the distributed forms of innovations, such as strategic technology alliances, collaborative agreements and innovation networks (Tether, 2002) were finally recognized and analyzed. Since then, the interest in so called cooperative or collaborative innovation has only been growing.
Davis (2008) states that many studies until now have linked social networks to innovation. Authors agree that while competences, knowledge and resources become more and more distributed among actors, communication and collaboration between individuals and groups become more relevant to organizational innovation (Davis 2008). Tether (2002) adds that the rise of these relationships has changed the existing understanding of the organization of innovation. Innovation now is seen as being increasingly distributed and therefore dependent on collective action.

Kuczmarski (1996) explains the relation between innovation and collaborative action by asking several basic questions. As the innovation usually emerges from the understanding of the problem or need, the potential innovators must, therefore, go out, ask questions and listen. Imagine if these innovators:

1. Would be each and every employee, supplier or customer;
2. Were able to share their thoughts and ideas with each other;
3. Could enhance their understanding and start from a higher base while solving any problem;
4. Did not need to re-invent solution for avoidable iterations during product lifecycle;
5. Could have access to a ‘Shared Innovation and Experience database’ that could serve as a repository of each idea and give birth to new ones.

The answer to these questions is provided by Madjar (2005). This author argues that new and diverse information provided to the employee by others inside and outside the organization should influence creativity by stimulating additional associations and ideas. Paulus et al (2001) complements to this view saying, that the benefit of interaction with others may be not so much the acquisition of new information but the creation or consideration of new associations among the existing information and knowledge a person has (Paulus et al, 2001). In this way collaboration could be an efficient way to connect People, Processes and Information (Sharma, 2005) and, consequently, foster creativity and innovation.

As it can be understood, collaboration between individuals may affect creativity and with that innovation in two ways:

1. Other individuals may encourage person’s creativity by providing support and assistance to the new ideas;
2. Or they may stimulate creativity by presenting new information and knowledge.

The ones who provide innovators with support and information may be both work colleagues, employees from other organizational units or even other organizations, and non-work related people, such as customers, academic community etc. (Figure 3-1)
Tapscott and Williams (2006) go even further by introducing the concept of mass collaboration. According to these authors, mass collaboration, sometimes referred as a Wisdom of Crowds (Hoyer & Fischer, 2008), is a form of collective actions that occurs while large numbers of people, called peers, work independently but collaboratively on a single often modular project. The ideas of mass collaboration is based on large number of individuals, most of them having different interests and possess diverse knowledge and expertise, employing widely distributed computation and communication technologies to achieve shared outcomes through loose voluntary associations (Tapscott & Williams, 2006). Collaboration executed mostly by using Web 2.0 technologies may be the source of both information and support in the process of innovation. Innovation networks may be considered as being an effective mean for such collaboration. This concept is described further on.

### 3.2.1. Collaborative Innovation Networks

According to Gloor et al (2003), Collaborative Innovation Networks (COINs) are the groups of self-motivated individuals from various parts of an organization or from multiple organizations, empowered by the Internet, who work together on a new idea, driven by a common vision. These networks are socio-technical, meaning that are both being influenced by the continuing development of digital technologies, services and processes, and that they enable actors to connect, socialize and carry out innovation in various forms. (Yoo et al., 2008)

Hanseth & Lyytinen (2004) emphasize that technologies which connect members of the networks, act as the fundamental layer of information infrastructure. According to Yoo et al (2008), the information infrastructure, supporting an innovation network, is barely ever a homogenous technology base. Most often it is the bricolage of heterogeneous technology resources brought in by the organizations joining the network. As a result, information technology, supporting innovation network, adds new complexities and dynamics, and produces unintended consequences. The actors, their activities and resources are interconnected within the network, which means that what happens in one of the relationships affects – positively or negatively – what happens in other relationships within the network. In this way the process of innovation is both constrained and enabled by the network in which it is embedded. (Johnsen & Ford, 2000)
Several kinds of networks can be distinguished, depending on the degrees of distribution of coordination and control over various actors in the network, and the degree of heterogeneity of knowledge resources. Using these dimensions, Yoo et al (2008) has summarized the four possible types of networks into a model (Table 3-1).

<table>
<thead>
<tr>
<th>Heterogeneity of knowledge resources</th>
<th>Distribution of coordination &amp; control</th>
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<tbody>
<tr>
<td>Homogeneous</td>
<td>Centralized</td>
</tr>
<tr>
<td>Type A</td>
<td>Singular Innovation</td>
</tr>
<tr>
<td>Type C</td>
<td>Internal Market of Innovations</td>
</tr>
</tbody>
</table>

Table 3-1 Four types of Innovation Networks (Yoo et al, 2008)

The first type of innovation networks (Type A) is singular innovation. In such networks, process innovation efforts are driven by a singular organizing vision and supported by a homogeneous set of knowledge resources (Yoo et al, 2008). This is the simplest type of innovation networks.

The second type of innovation networks (Type B) is open source innovation, which is used by open source communities. In this network, the individual actors are not bound by centralized control, but act based on their own self-interest and initiative (Yoo et al, 2008). However, actors from such networks work on relatively homogenous technological platforms and use homogenous knowledge resources.

The third type of innovation networks (Type C) is Internal Market of Innovations. In this type of innovation network different actors, possessing and using heterogeneous knowledge resources, are under centralized control. Within the organization there exist many diverse communities of knowledge that may be connected in some ways to the external organizations. As members of the internal communities collaborate with external organizations in terms of their knowledge and expertise, they maintain their own unique set of knowledge resources (Yoo et al, 2008). An example of such innovation networks can be many multi-divisional large firms that provide integrated solutions or services (Galbraith, 2002).

The most complex type of innovation networks (Type D) is called Doubly Distributed Innovation Networks. Here organizational coordination and control is distributed and knowledge resources are heterogeneous. The key challenge in such kind of network is to mobilize and manage various innovators with different, often conflicting, interests. An example of the communities, which use Doubly Distributed Networks are: project based teams, scientific communities etc. (Yoo et al, 2008) Similar innovation networks can be found in a highly volatile new technology markets such as mobile services (Yoo et al, 2005).

When coordination and control of heterogeneous actors are loose, innovation becomes very distributed. Distributed collaborative innovation becomes affected by network messiness, ambiguity, and combinability (Yoo et al, 2008). However, there are even more affects of collaborative networks on innovation process. They are both positive and negative.
3.2.2. The Effect of Collaborative Innovation Networks

Several authors have devoted their time to analyze, in what way collaborative activity affects innovation processes.

Gloor et al (2003) highlight four ways in which Collaborative Innovation Networks may be useful:

1. By using COINs, firms may learn about innovations that are on the way, meaning that they may spot hidden business opportunities and cut time to market for new inventions;
2. By using and supporting COINs, firms may become more efficient at working together. They can better identify knowledge sources and streamline communication processes inside the firm itself;
3. Having transparent COINs, enables firms to notice the key contributors to the project and in this way easier identify and reward leaders and important collaborators;
4. By using COINs, more open working environment may be created, co-workers tend to be friendlier and trust each other.

Johnsen & Ford (2000) adds that presumed advantage of collaboration networks include generation of product ideas, better information about user requirements, assistance on development and testing of prototypes and their introduction to the market. According to Johnsen & Ford (2000), the use of COINs may result in reduced costs, higher product quality and reduced time of introduction new product to the market.

On the other hand, the use of COINs has several potential drawbacks. Biemans (1995) identified some disadvantages of collaborative networking that affects innovation process, which were overlooked before that:

1. Increased dependency and cost of coordination;
2. The need of new management skills;
3. Changed management of personnel in order to ensure cooperative behavior;
4. Access to confidential information and proprietary skills by third parties;
5. Lack of commitment and loss of critical knowledge and skills.

Developing innovations in networks implies that the process becomes path dependent as relationships are built up over a period of time and thus become difficult and costly to withdraw from. This means that if companies invest in relationships over long period of time it becomes very difficult and costly to terminate existing relationships in favor of the new one. (Johnsen & Ford, 2000)

Additionally, engagement in the network means that sensitive knowledge may be lost to third parties, including competitors. Companies face the dilemma that, on the one hand, they want to learn from their partners, but on the other hand, they want to retain their own core proprietary assets and thus prevent leakage of critical information (Kale et al, 2000). This may come of as constrain to the process of collaboration by limiting the extent of information and knowledge shared within the partners and hindering the generation of innovation.

Though there are some drawbacks of collaborative networking, they may be dealt by identifying the factors, affecting innovation, and working on collaboration process to influence these factors in the desirable direction.
3.2.3. Factors influencing Collaborative Innovation

There exist numerous factors, influencing an innovation process. Innovation theorists dedicated considerable amount of time and energy to study and analyze these factors in different settings and from different perspectives. It is hard to estimate the approximate amount of the literature connected to this issue, but it is obvious that it is huge to say the least. Smith et al (2008), after a thorough synthesis and analyses of a vast amount of innovation literature, of more than 300 articles and publications related to innovation, summarized major innovation factors into 9 categories (Table 3-2): (1) Innovation process; (2) Corporate Strategy; (3) Organizational structure; (4) Organizational culture; (5) Employees; (6) Management style and leadership; (7) Resources; (8) Knowledge management; and (9) Technology.

<table>
<thead>
<tr>
<th>Factor</th>
<th>Sub-Factors</th>
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<tr>
<td>Technology</td>
<td>Utilisation of technology</td>
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<tr>
<td></td>
<td>Technical skills and education</td>
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<tr>
<td></td>
<td>Technology strategy</td>
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<tr>
<td>Innovation process</td>
<td>Idea generation</td>
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<td></td>
<td>Selection and evaluation techniques</td>
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<td></td>
<td>Implementation mechanism</td>
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<tr>
<td>Corporate strategy</td>
<td>Organisational strategy</td>
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<tr>
<td></td>
<td>Innovation strategy</td>
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<tr>
<td></td>
<td>Vision and goals of the organisation</td>
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<td></td>
<td>Strategic decision making</td>
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<td>Organisational structure</td>
<td>Organisational differentiation</td>
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<td></td>
<td>Centralisation</td>
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<td></td>
<td>Formality</td>
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<td>Organisational culture</td>
<td>Communication</td>
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<td>Collaboration</td>
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<td></td>
<td>Attitude to risk</td>
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<td></td>
<td>Attitude to innovation</td>
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<td>Employees</td>
<td>Motivation to innovate</td>
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<td></td>
<td>Employee skills and education</td>
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<td>Employee personalities</td>
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<td></td>
<td>Training</td>
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<tr>
<td>Resources</td>
<td>Utilisation of slack resources</td>
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<td></td>
<td>Planning and management of resources</td>
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<td></td>
<td>Knowledge resources</td>
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<td></td>
<td>Technology resources</td>
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<td></td>
<td>Financial resources</td>
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<tr>
<td>Knowledge management</td>
<td>Organisational learning</td>
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<td></td>
<td>Knowledge of external environment</td>
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<tr>
<td></td>
<td>Utilisation of knowledge repositories</td>
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<tr>
<td>Management style and leadership</td>
<td>Management personalities</td>
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<tr>
<td></td>
<td>Management style</td>
</tr>
<tr>
<td></td>
<td>Motivation of employees</td>
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</tbody>
</table>

Furthermore, authors decided to go beyond this categorization and to determine the relationships that exist between these factors. After analyzing different relevant models, theories and results of numerous studies, a new model that unveils relationships between the factors that influence innovation, is suggested (Figure 3-2) (Smith et al., 2008).
The above shown model is later expanded to a more generic conceptual framework that puts innovation factors into pyramidal relationships and order for a better understanding and visual aid (Figure 3-3) (Smith et al., 2008).

Similar models that depict appropriate relationships between the factors that have a major impact on innovation activities can also be found. An interesting model that summarizes studies in this direction was suggested by Johannessen et al (1999) (Figure 3-4). This model shows similar traits to the above mentioned models and underlines some common major factors, despite the time differences between the studies. This comparison can be perceived
as a test for theories and models and thus shows that regardless time, authoring, scopes, location etc. same patterns and similar conclusions are found, supporting the overall scientific opinion in relation to innovation factors.

Figure 3-4 Aspects of innovation theory based on knowledge-management (Johannessen et al, 1999)

Considering the relevance, up to date state, consistent, reliable and valid source of the information in the above mentioned theories and models, we decided to use them as the theoretical basis in order to analyze the innovation perspective of our research. Major theoretical elements connected to innovation that are pertinent to our study will be described in details further on.

**Innovation process**

Back in 1971, Utterback presented the model of innovation process that has been widely used till now by scholars when analyzing innovation. According to this model the process of innovation comprises three distinct phases: (1) idea generation, (2) problem solving, and (3) implementation (or innovation diffusion).

According to Johannessen & Olaisen (1993), the phase of the innovation process defines the degree of communication and coordination needed for the innovation to be developed successfully. At the same time, different factors have different values in the particular phase of the process. (Figure 3-5) For example, in the first phase of innovation process, extensive external information and communication is needed. Decentralized, weakly formalized and organic structure is important for maintaining creative environment, which result in more efficient idea generation. In the problem solving phase, internal information exchange and communication has higher value. Variety of communication centres and channels are the drivers of innovation in this phase. In the implementation phase, formalized organizational structure is more efficient and large internal co-ordination and integration is desired. The emphasis is laid on regulations, routines and procedures.
Corporate Strategy

Corporate strategy needs to reflect the organizational culture and refer to the shared vision and goals of the organization (Jager et al., 2004). All employees in the organization need to understand the impact of corporate strategy on their jobs and what they need to do to help the organization to achieve its goals (Pearson et al., 1989). Thus, if an organization wants to be more effective in innovation development, it needs to find the way to reflect this goal somewhere within the corporate strategy; otherwise employees will not see how innovation directly impacts on their day-to-day work (Smith et al., 2008).

Organizational structure

Organizational structure influences employees, working on innovation projects, in many different ways. Some of the issues, related to this factor, are team-working, degree of formality within the organization, bureaucratic nature of organization etc. (Smith et al., 2008)

Team work influences overall ability of the organization to innovate (Smith et al., 2008). Employees, working in teams tend to be more open and collaborative, more eager to discuss and implement new ideas. They compose informal networks, which are important to innovation process as they induce trust and commitment (Conway, 1995, Ruppel & Harrington, 2000).

The informality on the intra-organizational level, according to Ebadi & Utterback (1984) is positively related to innovation, particularly at the initiation stage. A formal and bureaucratic style of communication must be avoided if innovation is to be in focus. In other words, a work environment with low formality and a loose structure will be ideal for innovative persons. (Johannessen & Olaisen, 1993)

Organizational culture

Organizational culture refers to the values and beliefs of the organization. It takes into consideration organization's approach to collaboration, communication, risk and innovation management (Smith et al., 2008). Culture is one of the most discussed factors, while talking
about innovation. Ahmed (1998) considers the culture as primary determinant for innovation.

Creative climate (or culture), favorable to survival of new ideas, increases the participation and commitment to excellence in the task performance. (Kivimäki et al, 2000) According to Johannessen & Olaisen (1993), many various studies have found a positive correlation between the creative climate and communication with regard to the exchange of ideas inside of the organization.

Employees

Employees can be referred to non-management working people in the organization. They are seen as being fundamental to the generation and development of new ideas (Smith et al, 2008). In order to empower employees, greater degree of freedom must be given to them. They must have higher degree of control over their own work, meaning that employees need to feel good in their own working environment to be innovative (Nystrom et al, 2002). Personal features and characteristics of employees and their ability to innovate and communicate are also important factors in innovation process.

Management style and leadership

As Kivimäki et al (2000) claim that the role of the management is often stressed in innovation literature, because successful development and adoption of innovation depends largely on the support and coordination during the innovation process that only managers can provide. Participatory and democratic managerial style is reflected in the organizational culture, which becomes more focused on stimulating innovation. Though democratic management has a huge impact on the organizations ability to stimulate innovativeness, management still must retain a balance between an innovative culture and the maintenance of everyday operational requirements (McDonough and Leifer’s, 1986).

Resources

Smith et al (2008) argues that employees need to be given sufficient resources, in time, technologies, materials and finance in order to allow new ideas to emerge. One of the most important resources in the organization is information. The number and arrangement of organizations’ communication channels, through which information may be spread, is positively related to innovation success. (Fidler & Johnson, 1984) According to Utterback (1971), highly developed internal technical resources and communication channels are vital to success of innovation development and management. The more organizations exploit their knowledge resources, the greater is their chance to increasing the number of innovations they develop (Pavitt, 2002).

Knowledge management

Several issues, related to knowledge management and innovation generation, are: organizational learning, knowledge generation from the external environment, and utilization of knowledge repositories (Smith et al, 2008). Learning orientation is a part of the organizational culture that supports the generation of knowledge through variety of channels. Employees are learning both from the past projects, about which information is stored inside the knowledge repositories, or obtain knowledge from the channels outside the organization. Companies that have a high level of learning orientation and knowledge generation are better in using this knowledge to generate and develop new ideas and foster innovation (Smith et al, 2008).
Technology

Technology has an indirect impact on employees, working on innovation project. Technologies, such as virtual reality (Watts et al, 1998) or group work software (Aranda & Molina-Fernandez, 2002) may be used for the knowledge transfer, drawing together fragmented knowledge resources etc. (Smith et al, 2008) This means that people, working on innovation, by the means of technologies get an access to a wide range of knowledge, which comes from all or almost all organization employees. This knowledge is important throughout the whole innovation process – in idea generation, problem solving and implementation. (Smith et al, 2008) One of the most recent technologies, used by companies, in order to facilitate efficient knowledge exchange, communication and collaboration, is Enterprise 2.0 platform, which will be presented in the next section of this chapter.

3.2.4. Implications for the thesis

Literature used in the first section of the Theoretical Framework chapter helps in answering the first research question by identifying major factors that influence innovation activities inside an organization and defining relations between these factors.

The concept of collaborative innovation is explained in order to relate innovation activities to social technologies, such as Enterprise 2.0 platforms. Innovativeness of the individuals can be affected by Enterprise 2.0 technologies only if these individuals are connected to each other in their everyday activities and the results of their work are dependent on the level of collaboration between them.

Collaborative Innovation Networks and their impact on organizations ability to innovate are considered important because nowadays most innovation activities are crossing organizational borders and involving many people outside the organizational settings. The use of such networks represent new challenges; however, if used well, they can have a positive impact on innovation inside the organization by bringing new perspectives, knowledge and ideas as well as additional support and motivation to collaborate and innovate.

3.3. Enterprise 2.0

3.3.1. From Web 1.0 to Web 2.0

Andrew P. McAfee (2006) named two categories of information technologies, which knowledge workers in the organization can use to communicate and exchange relevant information. First category includes channels (e-mails, person to person instant messaging etc.) in which information can be distributed by anyone; however, the level of communality of this information is low. Even if all the e-mails are located in the same server, the contents of the messages may be viewed only by those workers, who are part of the thread. Second category comprises platforms, such as intranets, corporate web sites, information portals etc. (McAfee, 2006). These platforms may be considered to be the opposite of the mentioned channels: here the content is generated by a small group of people; however, the information is widely visible. In other words – production of information is centralized and its commonality is high (McAfee, 2006).

The use of platforms as the means for collaboration has its origins in 1990s Lotus Notes (Tapscott, 2006). Notes showed companies how information technology may enable group
formation and how these newly formed groups may be effective source of knowledge exchange. Around 2005 a wide range of new tools appeared on the scene. These tools enabled team collaboration for almost all knowledge work aimed at innovativeness, agility and competitiveness of the company. Maturing quickly in the last years, these platforms, comprising in themselves a broad range of tools, have enabled employees to operate in a decentralized manner and in this way fulfill both individual and common goals (Tapscott, 2006).

These new digital platforms for generating, sharing and refining information has long been popular on the internet before they were integrated into organizational settings – they were collectively labeled as Web 2.0 technologies (McAfee, 2006). According to Oberhelman (2007), Web 2.0 technologies refer to web tools, which in contrast to the previous Web 1.0 (where information was passed to an inactive and receptive user), enables people to interact, collaborate and edit information.

O’Reilly (2005) makes an attempt to summarize all the points distinguishing Web 2.0 and Web 1.0 tools (Table 3-3).

<table>
<thead>
<tr>
<th>Web 1.0</th>
<th>Web 2.0</th>
</tr>
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<tbody>
<tr>
<td>DoubleClick</td>
<td>Google AdSense</td>
</tr>
<tr>
<td>Ofoto</td>
<td>Flickr</td>
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<tr>
<td>Akamai</td>
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<td>mp3.com</td>
<td>Napster</td>
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<td>publishing</td>
<td>participation</td>
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<td>content management systems</td>
<td>wikis</td>
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<td>directories (taxonomy)</td>
<td>tagging (“folksonomy”)</td>
</tr>
<tr>
<td>stickiness</td>
<td>syndication</td>
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</table>

Table 3-3 Differences between Web 1.0 and Web 2.0 (O’Reilly, 2005)

According to O’Reilly (2005), the principles of Web 2.0, in comparison to Web 1.0, are:

1. **Web as Platform.** Web 2.0 does not have a hard boundary, but rather a gravitational core. Author compares Web 2.0 platform to a solar system, in which the set of principles and practices are tied together to a system of sites, related to the core and positioned at a varying distance around it.
2. **Harnessing Collective Intelligence.** Network effect from user contribution is the key to the market dominance.
3. **Data is Next Intel Inside.** The ambiguity of data and information ownership is a distinguished feature of Web 2.0 platforms.
4. **End of the Software Release Cycle.** As users are understood and treated as co-developers, the boundaries of software release cycle become blurred.
5. **Lightweight Programming Models** allow the loosely coupled systems. Syndication, “hackability” and remixability are the main features of new programming models (O’Reilly, 2005).
6. *Software above the Level of a Single Device.* More and more devices are connected to the single platform.

Needleman (2007) calls the Web 2.0 “the social Web”, because of its openness and user friendliness, which enables users to create and publish their own content. Boulous & Wheeler (2007) add that Web 2.0 is “people-centric”, meaning that it includes conversations, interpersonal networking, personalization and individualism. What is more, web 2.0 is participative in a sense that users are peers and co-developers instead of being just publishers or passive users.

More recently, Shimazu & Koike (2007) pointed out that Web 2.0 has caused such innovative changes in software development and service operations that this enabled to establish a growth strategy involving customers. In this way Web 2.0 was transferred and adopted in the business environment. McAfee (2006) proposed the concept of Enterprise 2.0 and the introduction of Web 2.0 tools to enterprise settings. According to McAfee (2006), new form of communication should emerge, replacing the previous one, inclined to e-mail and instant messaging. Communication should be diversified using new diverse communication tools in order to improve the quality of the knowledge, its distribution and accumulation. Installation of new communication tools and assurance of job systems extensibility are the main factors influencing the introduction of Web 2.0 to corporate information systems (Shimazu & Koike, 2007).

### 3.3.2. Enterprise 2.0

McAfee (2006) defines Enterprise 2.0 as the platforms that companies can buy or build in order to make visible the practices and outputs of their knowledge workers. Primarily, Enterprise 2.0 was understood as “the use of emergent social software platforms within companies, or between companies and their partners and customers”. Later on the definition has been refined and extended by the scientific community. In 2007 Hinchcliffe summarized definition of the Enterprise 2.0 as the set of social applications that are *optional to use, free of unnecessary structure, highly egalitarian, and support many forms of data.*

Enterprise 2.0 provides companies with new models and tools for emergent collaboration and co-creation (Soriano et al, 2007). These collaboration platforms help enterprises to build unique ecosystem, where knowledge workers can collaborate in developing new business solutions by collectively generating, sharing and adding value to the information and business knowledge. The design of Enterprise 2.0 is primarily focused on creating a structure that supports common processes and stores information to assure that it is easy to find, use, and back up (Soriano et al, 2007).

Enterprise 2.0 collaboration enables firms to leverage desirable Web 2.0 attributes, which in turn enables them to both harness collective intelligence and encourage full-scale participation. Enterprise 2.0 is, therefore, being enhanced by virtual communities, that leverage social linking and tagging tools (such as social networking, social bookmarking, social search etc.), as well as user contributed content management tools (like Wikis, blogs, forums etc.), tools leveraging user opinions (commenting and voting) and subscription-based tools (like RSS feeds) etc. (Soriano et al, 2007)

The first attempt in classifying Enterprise 2.0 elements was made by its “conceptual father” A. McAfee (2006), who proposed the SLATES (Search, Links, Authoring, Tags, Extension)
acronym (Figure 3-6); At a later point Dion Hinchcliffe (2007), a wide-known blogger, expanded it to FLATNESS concept, adding more features (Figure 3-7).

Search

The value of any information platform for the users highly depends on how easily they can find what they are looking for on the platform. Intranet page layouts and navigation aids are critical in this situation, however, it is noted that users are easily bypassing these features by using simple keyword search (McAfee, 2006).

Links

It was Google, which first made a leap towards the better Internet search quality by taking advantage of the information contained in links between Web pages (McAfee, 2006). Links are an excellent indicator of importance, because they provide the structure to online content. In this structure, the pages that are most frequently linked are the ones which are the most important. However, in the intranets links are not of such importance, because here links are made only by the relatively small internal Web development group. That is why to rely only on the frequency of links may be ambiguous.

In order for this to change within companies, many people have to be given the ability to build links inside the internal platform (McAfee, 2006). The best way to do this is to let the intranet be built by a large amount of people. The rate of participation is an important issue in this case.

Authoring

The rising amount of internet blogs and Wikipedia are the evidence that many people have a desire to author, in other words – to write for a broad audience (McAfee, 2006). As wiki inventor Ward Cunningham explains, “I wanted people who would not normally author to find it comfortable authoring, so that there stood a chance of us discovering the structure of what they had to say” (Venners, 2003)

Blogs are the tools, used for individual authoring, while wikis are most suitable for group authoring (McAfee, 2006). Contents of blogs are cumulative, including both individual posts and responses to them, accumulated over time. Wikis, on the other hand, are more iterative, meaning that people undo and redo each other’s work all the time. When authoring tools are used within a company, the intranet platform shifts from being the creation of a few to the creation of many. In the “live” intranet the contents is being constantly updated and interlinked together.

Tags

Though the content is the most important thing in the platform, its disposition, or categorization has also a big impact on users. Some sites on the internet gather and provide huge amounts of contents, but at the same time enable the users to categorize this content by themselves. Users can attach tags (simple one word descriptions), which provide a way to track all the sites visited by knowledge workers.

Employees in such way can use this information to keep track of useful intranet pages they have consulted, and to assign tags to these pages as the reminders of their content. They can also see which sites are visited and tagged by other employees. As a result, visibility of patterns and processes in knowledge work would increase (McAfee, 2006).
Extensions

The extension to tagging is possible if computers support some automatic categorization and pattern matching. The algorithms used by such computers may offer users information on the products, services, or information related to the ones that were tagged by the user. One of the first companies applying extensions was Amazon, which started recommending books based on users previous activities.

Signals

Contents of the web-sites change over time. New content is added so often that it may become a full-time job just to check for updates on all sites of interest (McAfee, 2006). The technology to signal users when new content of interest appears is called Signals. Signals may come as e-mail alerts, but more recent technology for signaling is RSS.

RSS (which refers to "really simple syndication") is a short notice generated each time the bloggers or other creators add new content. Software for users called "aggregators" periodically queries sites of interest for new notices, downloads them, puts them in order and displays their headlines (McAfee, 2006). With RSS, you no longer have to constantly check for changes, technology does that for you.

Hinchcliffe (2007) adds to this list four new elements. According to him, Enterprise 2.0 is also social, emergent and freeform. What is more, it is network-oriented.
Social

The social aspect was mentioned while talking about Web 2.0 as the “social Web”. Similarly, openness and user friendliness, enabling users to create and publish their own contents, is a distinguished feature of Enterprise 2.0 platforms. Such platforms are the right place for community creation and peer communication.

Emergent

Enterprise 2.0 platforms are in constant development and improvement process. All the tools of such platforms comprise constantly changing structure which is built by distributed, autonomous and largely self-interested peers (McAfee, 2006). With a limited amount of contents in the beginning, platforms evolve due to participation of their users. The search, extension, tagging and signaling tools make emergent structures and patterns in the content visible and usable.

Free-form

The creation of Enterprise 2.0 platform usually starts with several free-form tools that soon evolve to more sophisticated and more suitable for specific situations. For example, enterprise mash-ups enable for user-created Web applications encompassing both enterprise blogs and wikis for user-created content and structure (Hinchcliffe, 2007).

Network oriented

To reflect all the aspect of Enterprise 2.0, the platform must not only include the applications that are fundamentally delivered over a network, but its content must be fully Web-oriented, addressable, and reusable (Hinchcliffe, 2007).

All the above mentioned elements of the Enterprise 2.0 platforms may be fully supported and maintained by the help of specific tools, which will be described further on.
### 3.3.3. **Enterprise 2.0 tools**

Within the last few years, successful Web 2.0 based social applications, such as wikis, blogs, and application specific software, such as MySpace, Flickr and YouTube have been gradually infiltrated into the business settings (Papanikolaou & Mavromoustakos, 2008). A huge variety of tools used by companies in their Enterprise 2.0 platforms exist nowadays. Cook (2008) summarized them all into four categories (Appendix 1), according to his 4C model. According to the author, all the Enterprise 2.0 tools may be categorized by the level of formality and interaction enabled by these tools (Figure 3-8).

![4Cs model (Cook, 2008)](image)

### 3.3.3.1. **Connection Tools**

Cook (2008) calls CONNECTION tools those ones which are most formal in their nature and which enable little interaction between the users. To this category may be included such tools as Social Networking, Tagging, Syndication and Mashups (Figure 3-9).

**Social Networking**

Social Networking refers to systems which allow users to learn about each others skills, knowledge, hobbies, tastes and preferences. Commercial examples include LinkedIn, Facebook, however, these tools have been introduced to internal enterprise settings as well and used by management and co-workers to identify experts inside the company. (Bughin, 2007)

**Tagging**

Tagging makes information easy to search, discover, and navigate. Employees can create tag and see the other tags that other colleagues have created. Three main features of the tags are: content, context and structure (Cook, 2008)
RSS (Really Simple Syndication)

RSS is the method that allows people to subscribe to news, blogs, podcasts and other information available online (Bughin, 2007). RSS feeds enable the employee to stay updated to the great amounts of information without having to visit numerous websites every day (Ward, 2007). They work automatically and besides having to determine the settings, do not need excessive control (Ewing, 2007). Many companies use RSS within their intranets in order to help the internal teams to communicate more efficiently.

Mash-Ups

Mash-ups are the aggregations of contents from different online sources, normally provided through uncomplicated web services, in order to create a new service (Bughin, 2007; Tatemura et al, 2007). The need to integrate data from numerous web sources leads to the recent appearance of mash-up applications (Thor et al, 2007). Papanikolaou & Mavromoustakos (2008) mentions that there are seven major mash-ups categories, namely: mapping, search, mobile, messaging, sports, shopping, and movies. More than 40 percent of mash-ups are mapping mash-ups.

![Figure 3-9 Enterprise 2.0 tools disposition in 4 Cs model (Cook, 2008)](image)

3.3.3.2. Collaboration tools

The tools that are formal, but at the same time enable interactive activities are called the COLLABORATION tools (Figure 3-9). In this category Wikis is the most widely used tool.
**Wikis**

The term wiki is derived from the Hawaiian word *wikiwiki*, which means fast or quick. (Papanikolaou & Mavromoustakos, 2008) According to Bibikas et al (2008), it is a web-based authoring tool allowing knowledge workers to collaborate by creating, editing, and sharing knowledge artifacts such as documents, diagrams, etc. Wiki can be treated as the systems for collaborative publishing, because it allows many authors to contribute to an online document or a discussion. (Bughin, 2007) Using Wiki anyone may add a new content or revise an existing one through a Web browser as well as track all the changes made to this content. Wikis can be used as the source for locating mutual information and knowledge or as a method of virtual collaboration (Boulos et al, 2007). What is more, Wiki’s can enable the team members to share knowledge easier and quicker.

**3.3.3.3. Communication tools**

The tools that are less formal (or informal) and, at the same time, not interactive are COMMUNICATION tools (Figure 3-9). In this category Cook (2008) includes many tools, of which the most popular and most widely used are blogs, instant messaging and discussion forums.

**Blogs**

Blogs (short for the web-logs) are the online journals or diaries, hosted on a website and often distributed to other sites or readers using RSS. (Bughin, 2007) According to Bibikas et al (2008), Blog is a rather simple content management tool enabling knowledge workers to build and maintain open project monitoring diaries, complete with links to relevant resources and user commentary. The term was first introduced by Jorn Barger in 1997 and initially expressed the outcome of a common need for the sharing and expression of thoughts, criticism and experiences by individuals. (Papanikolaou & Mavromoustakos, 2008)

The use of blogs has several advantages for the company. First, blogs have the potential to involve people in collaborative activities, knowledge sharing, reflections and debate (Williams & Jacobs, 2004). Furthermore, according to Ojala (2004) blogs are rather cheap to implement, because companies do not need to spend much time and money on programming, installing or implementing a blog. What is more, if a blog is considered to be unsuccessful, it can be inexpensively and easily shut down (Ojala, 2004). Also, by using blogs, employees are being empowered to express their ideas and concerns as well as provide feedback, which was not previously possible in a similar environment (Williams et al 2004). Finally, through the responses and comments on the news and messages employees can develop a deeper understanding of the organization which may result in broader collective knowledge of the firm (Williams et al, 2004).

**Instant Messaging**

Instant messaging allows employees to communicate with each other or within the groups in real time using software installed on computer. Usually, it is text-based, but the new software allows real-time audio and video conversations with no cost (Cook, 2008).
Discussion Forums

Discussion forum is an instrument that allows employees to initiate discussions, share opinions and common interests (Cook, 2008). De Ruiter (2006) distinguishes these features of the forums:

- many-to-many (everybody can ask a question or start a discussion; anybody participate) – this is the main difference from the blogs where the structure is one-to-many;
- different sub-forums and category within a forum (exist some inner structure, however, not as well expressed as in wikis);
- tracking tools, such as: “subscribe to this thread”;
- structured information on users (location, number of posts etc.);
- content is searchable and linkable.

3.3.3.4. Cooperation Tools

The tools that are informal in their nature and most interactive are defined by Cook (2008) as – COOPERATION tools (Figure 3-9). To this category may be included such tools as Social Search, Media Sharing, Social Bookmarking etc.

Social Search

Social search include browsing, searching, retrieving and displaying knowledge resources based on semantic annotation indexing and logic-based conclusion making (Bibikas et al, 2008). Social search, however, takes a bit different approach to the problem of searching. Through the process of tagging, the social search relies on human beings to select the important content and index it using keywords that mean something to them (Cook, 2008)

Media Sharing (Podcast)

As Cook (2008) explains, Media sharing occurs in online social networks and digital communities with a comprehensive platform and interface to upload, aggregate, host and share images, text, applications, videos, and audios. However, effective media sharing requires more than that. Everyone has to be enabled to share, tag, comment and vote for the media.

As one kind of media sharing, we can call a Podcast, which is in use when a multimedia file is distributed by subscription over the Internet using syndication feeds. In the past, multimedia files meant only audio files; however, nowadays they include also video files, which are distributed via Podcasts (Papanikolaou & Mavromoustakos, 2008).

Social Bookmarking

Social bookmarking is an instrument that allows collective intelligence strategies and knowledge management (Cook, 2008). Using social bookmarking, employees can save links to web pages that they want to remember and/or share. These bookmarks are usually public, but may be as well saved privately, or shared only with specified people or groups or only inside certain networks. In the business environment, Social Bookmarking enables knowledge workers to organize and annotate resources relevant to their activities (intranet documents, web resources, wiki entries, blog posts, etc) and share them with their co-workers. (Bibikas et al, 2008)
3.3.4. Implications for the thesis

The second section of Theoretical Framework chapter introduces new but quickly emergent concept of Enterprise 2.0.

As Enterprise 2.0 can be described as being part of Web 2.0 technologies, only implemented into organizational settings, the short description of Web 2.0 and its predecessor Web 1.0 are presented. The features of Enterprise 2.0 are described in order to give a reader a clear picture of this technology. Though these two aspects of Enterprise 2.0 are not directly relevant to the thesis, they are important in understanding the nature of Enterprise 2.0 and its possible use.

The most famous tools of contemporary Enterprise 2.0 platforms are presented in this section. Literature on this issue builds the basis for answering the second research question of the thesis and helps in preparing for empirical research.

All the tools are divided into four categories, meaning that different tools may have an effect on different aspects of collaborative innovation. This division into groups is partially represented in the final model, though with adjustments according to the situation of the studied case.

3.4. Bridging Innovation and Enterprise 2.0 theoretical perspectives – preliminary research model

As it was described earlier in this chapter there are several specific issues related to the theoretical aspects of this research. On the one side Innovation literature is overflowed with publications and researches, which gives the opportunity to better understand and thoroughly analyze most of the aspects related to innovation activities. At the same time, on the other side of our research, which is related to Enterprise 2.0, we had to confront with an insufficiency of theoretical material, as it is a relatively new and emergent concept.

In our task to investigate the correlation between Enterprise 2.0 and Innovation we have taken the advantage of the literature available to us at that time (begging of 2010) and managed to identify significant commonly accepted relationships between these two concepts. Still, in our strive to identify articles and publications that would focus solely on these theoretical dimensions and show how exactly Enterprise 2.0 affects innovation activities, we discovered that in this area exists a sort of a theoretical gap, as we couldn’t spot more than several articles, which just briefly addressed these concepts together.

Although many reputable authors (Cook, 2008; McAfee, 2006; Tapscott, 2006) state that there exist a lot of facts supporting the positive impact of Enterprise 2.0 on Innovation, not so many significant publications in that sense were made yet. This situation was somehow constraining us, but at the same time we considered it is a challenging opportunity, which could expand our knowledge in these areas. We hope that this master thesis research can bring at least some small contribution at the crossroads of Enterprise 2.0 and Innovation dimensions. Therefore, in this paragraph we will discuss the theoretical aspects, which we consider to be common for these concepts and also suggest relationships which might exist in that sense.

Describing the logic in our attempt to bridge Innovation and Enterprise 2.0 theories we have to go back to the research questions. In dealing with the first question we have tried
to understand the broad concept of Innovation and try to ‘break it down’ into factors which impact innovation processes within an organizational context and also from a collaborative perspective, as it constitutes a link to Enterprise 2.0 (Cook, 2008; McAfee, 2006; Tapscott, 2006).

This question was answered by conducting an extensive literature review connected to Innovation and all the findings were presented in this chapter. Basically, it was a theoretical question and we have used Innovation theory to answer it, which is a rather deductive research method.

The next two research questions require a more complex approach. In order to address them we have decided to use both theoretical and empirical (practical) dimensions. As stated in the methodology chapter, this process represents an abductive (Ezzy, 2002) research approach, in which we combine both deductive (deriving insights through logical reasoning from theory) and inductive (using empirical findings from the case study) methods.

Further on, in order to accomplish our goal in connecting these two theoretical dimensions, we have decided to create a conceptual framework or in other words a model that would put together most pertinent and relevant concepts both from Innovation and Enterprise 2.0 theories. With this model we intend to tackle our case study. We have to state that this is a preliminary model, which later on will be modified and adjusted based on the empirical findings we obtain. The final model will also represent one of the main outcomes of this master thesis research.

As raw materials in building our research model we have used the concepts, theories and models presented earlier in this chapter. We decided to ‘break them down’ and categorize main concepts and constructs from these theories in the following form (Figure 3-10):
Given the categorization we made, based on the literature review together with the insights, ideas, visions and other similar models we found, all these have influenced us when building our own model tailored for this specific research. All our views and ideas that we think can bridge the gap between the Innovation and Enterprise 2.0 perspectives are assembled into the following research model (Figure 3-11):
In this model we view Innovation as the main scope of the activity so we place it on the top of this imaginary pyramid. All other elements from the model are considered to be factors that have a direct or indirect impact on innovation as a final outcome. Most of them in part have been described in this chapter. Further on, as also suggested in the related literature (Smith et al, 2008; Johannessen et al, 1999; Tidd et al 2001 etc.), we consider Knowledge & Ideas to be the basis for any innovation activity. Specifically, creation, sharing and dissemination of the knowledge are considered to be extremely important as it spurs innovation processes.

In order to enable knowledge processes inside an organization many other sub-related activities should be met. We decided to summarize them in 3 groups of factors which are attributed to Collaboration activities, Communication and Organizational Structure. All these parts are considered to be the linking elements to the Enterprise 2.0 (Cook, 2008; McAfee, 2006; Tapscott, 2006; Tapscott & Williams, 2007), which we decided to put at the basis of this conceptual pyramid. In our view Enterprise 2.0 represents the socio-technological platform, which reinforces all these critical elements and ultimately has a direct impact on innovation processes.

Additionally, to this innovation framework we decided to include several vital factors often mentioned in the related literature (Smith et al, 2008; Johannessen et al, 1999; Tidd et al 2001; Cook, 2008; McAfee, 2006; Tapscott, 2006; Tapscott & Williams, 2007 etc.). These factors are Management, Vision & Strategies, Organizational Culture and Technology.
These are more generic factors, therefore we have placed them outside the pyramid, which means that maybe their direct impact is less observed in the innovation process, but the fact that these factors are decisive for any innovation activity is undisputable.

With this model we will try to better investigate our case study, specifically the ‘Colin’ case, involving the use of an Enterprise 2.0 platform (Incentive) at IBS. With this model we also want to create a solid approach in order to view Innovation activities in a more generic framework and hence obtain valuable insights. In our view the model represents a good foundation for further research activities and makes us ‘theoretically equipped’ for better investigating the practical part of this research.

As described in the methodology part and shown in Figure 2-1 we are continuously enhancing our research model with theoretical and empirical findings which we obtain at different stages, since we have embraced the abductive research approach. This also means that a final model will be suggested at the end of this paper and will represent the synthesis and analysis of both theoretical and empirical dimensions of this research. The final model can also be considered as one of the major outcomes of this master thesis research.
4. Case study

In this chapter a real business case study involving the use of an Enterprise 2.0 platform, namely Incentive, at International Business Systems (IBS) is described. This case study represents the main source of primary data and information needed for analysis.

4.1. The studied companies

The two companies, providing information to the research, were Mindroute Incentive AB, the vendor of the Enterprise 2.0 platform, called Incentive, and International Business Systems (IBS), the company using this platform for their every day operations.

Mindroute Incentive AB

According to the information obtained from Mr. Gustav Jonsson, one of the founders of Midroute Incentive AB, the company started its activities in 2009 as a daughter company for Mindroute Software AB. The aim of the co-founders was to develop and sell the Incentive software, which is a software package which includes Wikis, Blogs, Micro-blogging, RSS, Social Networking and other Enterprise 2.0 related features used for internal communications. The company has its headquarters in Malmö, Sweden, and currently has three employees.

Mindroute Incentive AB works within the fields of consultancy as well as software development. The business idea of Mindroute Incentive AB is to deliver business value through internal social media. Midroute Incentive AB plans to improve Incentive Live software in order to make it more mobile, user-friendly and time-saving.

During the years of existence, Midroute Incentive AB has had many significant clients, including SBAB, Dagens Nyheter, Tillväxtverket, Europeiska Försäkringar, IBS etc.

For additional information about the company, its products, features, offers etc. please visit its official website - http://www.incentivelive.com/
International Business Systems (IBS)

International Business Systems (IBS) was founded in 1978, when Staffan Ahlberg and Gunnar Rylander decided to turn the IT division of Ekonomisk Företagsledning into an independent company. The company joined the Stockholm Stock exchange in 1986 and around that time established close cooperation with IBM. IBS became one of the leading suppliers of software for the IBM AS/400. (IBS Company website)

In recent years, IBS has made a number of key acquisitions with the aim of increasing global sales and entering new wholesale distributor markets and regions. In 2008, under the leadership of a new Board of Directors and CEO Mike Shinya, the company has been restructured to become an internationally oriented software organization, with an explicit focus on wholesale distribution.

Today IBS is the world leader in distribution resource management with subsidiaries in 22 countries with approximately 1100 employees (Hansson, 2010).

Additional information about the company available here - [http://www.ibs.net/](http://www.ibs.net/)

4.2. Case description

The original version of the case was retrieved with the permission of Mr. Rickard Hansson from his personal blog (Hansson, 2010). The case is called “Enterprise 2.0 enrolls on IBS – Mr Ahlberg scraps the intranet” and is described personally by Mr. Rickard Hansson. The case description comes as follows:

“Since October 2009 we have been rolling out Incentive on IBS as a part of their new internal communications strategy – named Colin (short for Collaborative Intranet).” (Hansson, 2010)

Centralized intranet, or?

Though the initial idea was only to add-on social networking possibility to an already existing intranet within IBS, Oskar Ahlberg, Senior Vice President for Corporate Communications of International Business Systems (IBS), was not afraid to go even further and rebuild completely the new intranet based on the features of Incentive, software proposed by Rickard Hansson. The new collaborative intranet was more than just an intranet – it was an Enterprise 2.0 platform within the IBS.
It all began with the need of a centralized intranet. The reality showed that there was almost an intranet for each country creating silos. So their first idea was to try to centralize what they already had and then add social features.

Oskar Ahlberg Senior Vice President, Corporate Communications explains:

"We initially wanted to add collaboration to our existing intranet, but after listening to the principles of Enterprise 2.0 and especially what Incentive had to offer we decided that an intranet should really be completely turned upside down to be effective. So we scrapped the entire intranet and re-built it with Incentive"

This is brave. This is a leap in my opinion. I usually recommend extending the existing intranet with a social platform. But Oskar among others saw the window of opportunity to take this leap. So they did.” (Hansson, 2010)

The plan

The idea was further on discussed by Mr. Hansson and Mr. Ahlberg. Many important things must have been done before the platform could be launched. The preparations involved many people both inside IBS and Incentive Live.

“We had a lot of initial meetings discussing around the phenomenon Enterprise 2.0 and how that could fit IBS’ needs.

It was also a question of building the self-confidence to make the move, get all pieces in place. This was a work done by Oskar, Pia and Jill at the beginning and later on Maria joined – this is the core-team of Colin. They are the champs.” (Hansson, 2010)

The launch

In order to reach and involve as many employees as possible, the public launch was planned. The surprising part of the launch was that no initial information was posted on the intranet. Employees needed to understand that only with their contribution this new Intranet can successfully operate.

“In November we gathered what we considered being the opinion builders and the people that had the immediate need for an efficient intranet. Then we did what we always do – we did the wiki and blog dance. We invited them all regardless of geographical location by using Bambuser to live stream the launch.

We launched the principle, the tool - not the new intranet. That is a very important distinction.

Normally when launching a new intranet it’s full of information (structure), instead we launched an empty notebook waiting to be filled (emergence). Why did we launch an empty notebook? We wanted the new intranet to be a tool for everyone, everyday. Not a tool for management to broadcast the latest news and guidelines. We treated the employees like visitors to a public web page – like stars! We wanted the pull effect – not the push. And it was important to not force anyone onto the intranet but rather attract individuals and later teams, groups, divisions…” (Hansson, 2010)
Contributions, some diagrams

In order to evaluate the success of Incentive platform within IBS, some statistical information was gathered and analyzed. Figures reveal the tendency of decisive but slowing growth of contributions to Incentive contents.

“We installed Incentive in late October, a couple of weeks before the official launch and we have extracted some data to see the progress.

First of all we can see that over four months the users have created 6500 wiki contributions, 24 new blogs and attached nearly 2500 files. To see the progress over time, I’ve created two diagrams – one showing contributions per month (Figure 4-1), the other showing the accumulated growth (Figure 4-2).

Here we see a huge “hockey stick effect” in November – right after the launch, as a lot of material from the old intranet was migrated over to Colin. We can see that the most popular feature is the wiki, in second place we see files and in third place we see comments.” (Hansson, 2010)

![Figure 4-1 Contribution to Incentive at IBS per month (Hansson, 2010)]

“Here we see the accumulated diagram for the same period of time. We see the growth, but it’s slowing down – and we’re yet to see if this is the normal state. There are 943 profiles registered. A profile means that they have been visiting their new intranet but not necessarily contributed.

If we extract the contributors – there are 143 of them. So, 143 persons generating 6500 wiki contributions and uploading 2500 files in four months is quite impressive. They are the real champs – believing in the principle.” (Hansson, 2010)
Bad news and where to dig in

Though the launch of Incentive in IBS can be considered successful, there are still many things to be considered, revised and improved. Mr. Hansson sees the greatest challenge in increasing the contribution rate.

“The bad news is that the contributors are only 15% of the total profile count. That is startling close to the figures we apply on public social communities (such as Wikipedia). We call it the 90-9-1 rule = 90% lurkers, 9% editors and 1% creators. So if we compare 15% with 10% it’s too close – the figure for internal usage should be between 40%-60%.

Why only 40%-60% some of you might say? You will never get 100% contributors. I’m convinced that hell will freeze before that happens, but that’s my humble opinion.

The reason for these figures - I think - is that this is on the verge. When we do a follow-up in another 6 months I think the figure will be higher. The new intranet is settling in, the champs are doing their job – attracting readers. Next thing is to get them to understand that they are a part of the experience.” (Hansson, 2010)

Visitors

Though the number of contributors is not high, IBS employees tend to benefit from all the content that is already available on Incentive.

“Looking at the visitor statistics using Google Analytics we can see that in February 2010 alone we had 7000 visits, 31000 page views from 19 countries spending in average 5 minutes of their time on their intranet.

16% of them used the search to locate information with a total of 2000 unique searches. The reason I’m highlighting the search is because a new behavior we stress is the search of content, not the navigation (hierarchy) of content.
In a successful Enterprise 2.0 roll-out there will be tons of information published making it nearly impossible to structure in a hierarchy. More importantly, any structure implemented will almost immediately be found to out of date as well as being ambiguous to users.” (Hansson, 2010)

**The shining parts**

One of the potential advantages of Enterprise 2.0 platforms is that it enables managers to reach their employees much easier. However, how managers choose to execute this advantage depends only on them. Mr. Oskar Ahlberg found a great opportunity of using Incentive as a channel for manager-employee communication.

“Being listed on a Stock Exchange gives the use of Enterprise 2.0 an extra twist. You have to watch what you say. And the other way around – a lot of communication going out is targeted to the stock owners. This spells “mumbo-jumbo” for a lot of employees – so how do you explain that in a simple way? Another tricky challenge is how to bring the management closer to the “floor”.

Oskar has solved that by creating a blog named Blog-O. The blog is intended to spread information from Group Management and to “answer questions” raised by the stock market. This sounds easy – but it’s not. You need to apply the correct tone - down to earth, informative but not patronizing, and so on. You also have to handle both bad and good news. Oskar does this brilliant – I can’t give you any details – but for example he explains the latest published report in human, non-bureaucrat way. He immediately receives feedback like “OK! Now I understand and I feel a-lot more positive”. He raises questions from Group Management urging everyone to get involved, their opinion is valued.

This is so right. Being proactive. They are making conversation instead of broadcasting – as commonly done in a traditional intranet.” (Hansson, 2010)

**Summed up**

Mr. Hansson (2010) sums up six months experiences of Incentive at IBS. In his opinion, the task, which seems to be impossible to many, may be accomplished if you only believe and work hard.

**The key decisions**

- Not making an existing intranet act social – use the window of opportunity and take the full advantage of Enterprise 2.0;
- Launching the principle – not the new intranet.

**The challenges**

- Raise the percentage of contributors from 15% - this is commonly done with viral marketing, calling to interact and the oldest medicine in the world - endurance.

**The surprises**

- The management approach through the Blog-O – a perfect way of creating a close relationship regardless of the title on your business card, their ear to the ground.

“And the most positive conclusion is that a company listed on the stock exchange can adopt Enterprise 2.0 – believe me, I’ve heard a-lot of times that that is impossible. Well, it’s not.” (Hansson, 2010)
5. Empirical Findings

In this chapter the material derived from a series of interviews with Mr. Rickard Hansson, CEO of Mindroute Incentive AB, and Mr. Oskar Ahlberg, Senior Vice President for Corporate Communications of International Business Systems (IBS) is presented. The structure of this chapter follows according to the concepts of the paper, focusing on the implemented Enterprise 2.0 platform, its characteristics, and observed impact on the Innovation related organizational issues. Important to notice is that only the quotes that were considered to be most relevant are used.

5.1. Incentive – Enterprise 2.0 at IBS

In October 2009 as a part of their new internal communications strategy – named Colin (short for Collaborative Intranet) Incentive platform was introduced at IBS. The intention behind this strategy and implementation of Incentive lay in company’s struggle to efficiently share information around its subsidiaries located in different parts of the globe. According to Mr. Rickard Hansson, CEO of Mindroute Incentive AB:

“Prior to our platform they all had their own intranets in all the subsidiaries in 21 countries. There was a huge problem for them because they had no way of sharing the knowledge and information between the different companies.” (1.1Q)

In relation to this, IBS has decided to reorganize the whole communication strategy and implement a global intranet, which would be common for the whole organization. As Mr. Hansson explains:

“<…> the problem within the IBS was that each country had created their own intranet in some way or another and some countries chose to create wiki-like platforms and others classic communication intranets, so the intention from the head office was to kill the local intranets and replace them with ideal global intranet" (1Q)

The new intranet happened to be more than a simple “traditional” intranet, but a way for the company employees to collaborate. Many tools, of which Wikis were the most popular, became part of the new intranet:

“The platform <...> called Incentive <...> is primarily focusing on collaboration features and not so much on social networking features. If you look at what tool is most widely used – it is the wiki part. It stands for about 90% of the communication.” (1Q)

The other Enterprise 2.0 tools used by IBS employees, according to Mr. Hansson, are:

“<...> micro blogging, like twitter, but again within the firewalls. We have also implemented widgets and Business Intelligence informal feeds. They can set up subscriptions for different feed over the intranet and set up them as mutual package that co-workers can subscribe to. <...> But the most break through we have so far is the Wiki part. We are waiting for other things to break through as well.” (1.2Q)

Mr. Ahlberg’s of IBS, while talking about the first impressions on Incentive platform, mention its suitability for enhancing communication and collaboration in the organization:

“I think it’s obvious that it has been designed from the scratch to be what it is, a tool designed for collaboration inside a company or an organization. It is clear that it has been designed specifically for that purposes
and not just being an ‘add on’ to for example a content management system or to some sort of a web system. It is purely a social networking and collaboration service” (Q1).

The few minuses that Incentive has, according to Mr. Ahlberg (IBS), are there due to fact that Incentive is a relatively new product and needs some improvements:

“It’s a very new tool, it has some minor bugs, it has some difficulties, there are things that don’t work they should be working and all sorts of little things. It’s clear that it is a new tool or a young immature tool. There are a lot of support requests, we often ask for little fixes, or little updates, or little enhancements.” (Q1)

Mr. Hansson acknowledges, that one more concern they have about the Enterprise 2.0 platform is the relatively low participation rate:

“<...> we have attracted almost every employee of the company to go to the intranet and try its new version, but we have only reached about 15% of them to actually contribute and create comments or create a new outcome. That is way too low figure for the company; I think you have to reach minimum 30-50% of the participants. 15% is way to close to the use of public collaboration platforms such as Wikipedia and that is ok there, because there are huge amount of users, but in the organization like IBS with 1100 employees, 15% of participation is a too low level.” (2Q)

Mr. Ahlberg share that there is even smaller participation rate, than Mr. Hansson thinks, however, it is growing steadily:

“I think from the start we had maybe 5 contributors out of 1100, and that is 0,5% of contributors, now we have about 50 who contribute regularly. So during the first several months we went from 5 to 50, so 10 times more, but we are still long way from 15%.” (Q10)

The problem behind this, according to Mr. Hansson, is the communication problem:

“We have managed to launch the new intranet but we forgot to tell people that it is an open intranet that everybody can participate in. So the main experience is that it is used as the classic intranet where you just read the information and don’t participate, don’t co-create.” (2Q)

Mr. Ahlberg thinks that there are two main problems behind the low participation – lack of confidence to share ideas and lack of English language skills:

“I think there still is big fear in a lot of people, they are afraid to contribute, because they don’t speak English very well or they are not very good at spelling, <...> and they are a little bit intimidated of sharing idea with all the employees. <...> every time I meet people, I get this question – can I share it only with some people, can I share it with only my team, and it is not because they want to be secret, but because they don’t have enough confidence to share it with everybody.” (Q10)

However, managers try to motivate employees to use the Incentive platform. As Mr. Hansson tells:

“<...>we did the so called launch, we invited all the officers around the globe to have live feeds and live streaming and did inspirational talk, we launched the concept, we introduced the tools and told it was ok to contribute and it was successful, but this hasn’t been done in each department, we only had this for marketing department. And that is, I think, also why the participation level is low, because the other ones were not (yet) introduced to this way of working.” (2.1Q)

Mr. Ahlberg shows by example that employees should not be afraid to step out and share their ideas:
“I point out, look at my blogs. They are full of spelling errors and that’s ok, people still understand what I’m trying to say. And my blog with hundreds of spelling errors is better than no blog at all.” (Q11)

Nevertheless, as Mr. Ahlberg of IBS notices, though the co-creation level is low, people tend to use Incentive in their work:

“<…> we have about 1150 employees, and I think about 900 of them have logged in at least once already so it’s very widely used as a tool.” (Q1.1)

5.2. Incentive and Innovation

In regard to the impact of the platforms like Incentive on the innovation, Mr. Ahlberg thinks that it is too soon to talk about Incentive’s direct impact on innovation, but some small changes can be already seen:

“Well, I wish I could say that this person had this idea and it became a patent and we earned 10 millions out of it (laugh). But I can say we definitely have a lot of small ideas and good ideas that come up. <…> I wouldn’t say that I can see that innovation rate has increased, not yet, but it definitely helps, it helps sales people, it helps consultants …” (Q9)

Mr. Hansson adds that although it is harder to trace the impact of Incentive to product innovation, there are other innovations going on in the company using the collaborative platforms:

“This is too soon to expect such direct effect both in IBS and other companies. But there is other kind of innovation going on – process innovation – you see new solutions to the problems and the problems are solved by many people, not only by me and those who are related to that problem.” (16Q)

In Mr. Hansson’s opinion the atmosphere in the company is one of the most important factors, influencing the use of Incentive to enhance innovation:

“There is this case of not being afraid to be wrong, this one major issue. And manager should always be flexible. It is better to have 100 crazy ideas than one great idea. But for that you have to have a right atmosphere. How you address and deal with your employees, whether you call them Human Resources or Talents, it makes a huge difference.” (16.1Q)

5.3. Incentive impact on factors influencing innovation

Mr. Hansson, CEO of Mindroute Incentive AB, and Mr. Ahlberg, Senior Vice President for Corporate Communications of IBS, were further questioned about the factors, which may influence Innovation, in regard to the Incentive platform.

5.3.1. Incentive impact on Communication inside the company

Mr. Hansson believes that using Incentive in everyday work operations increases communication in the company. However, it is not easy to calculate this change and in this way assess Enterprise 2.0 impact on communication:
“It is a gasp thing to say that the communication between the employees improved. We can’t get any figures on that, we have the figures only on people who create the wikis and come doing the commenting and reading the information. That is the information we can get. To get to know about the other things there is only one way – by asking.” (6Q)

Mr. Hansson explains that Incentive enabling communication is most noticeable at the inter-department level, because of the increase in number of information sharing channels:

“It has maybe most notably improved communication between two different departments, because to the other departments you usually used to mail information. And you have the feeling that communication is working ok, but you have no idea what other department is doing.” (6Q)

Mr. Ahlberg agrees with this by adding:

“It’s a big risk that departments create their own silos or their own islands and a tool like Incentive helps to break those islands up. Yeah, it can be said it’s a great tool for bridging those islands.” (Q5)

“<…> They often post a question to me or my department and it’s very easy for me to say that ‘It’s a great question, but it is a question for HR department’ and I can just forward it to them or alert the HR department. So absolutely, it’s a great connection link between main functions and departments.” (Q5)

The use of information sharing channels, such as wikis, blogs, micro-blogging etc., according to Mr. Hansson, directly effects formal communication in the company:

“<…> it’s a huge benefit for all to have a wiki or blog commenting and formalized communication because it is stored over time and can be searched at a later time, and to me this is the real power of the Enterprise 2.0 that you can search for any information created at any time by anyone. Instant messaging can be also done by micro-blogging instead, which will let people communicate in real time but the discussion will be stored centrally. And again it’s up to people to decide in which way to communicate.” (7Q)

In Mr. Hansson opinion, informal communication, or social networking, is a helpful tool for connecting employees together:

“A lot of companies for instance have chosen to shut down Facebook in their workplace, because people are spending too much time there and all sorts of viruses are attacking their system. But anyway, what we try to do is to encourage these companies to create their own Facebook, which means that instead of turning their eyes outside employees can turn their eyes inside the organization, creating social networks within the firewalls, creating collaboration tools for everyday work life.” (15.1Q)

Mr. Ahlberg notices the advantage of the increased communication for the departments, which work is interconnected:

“I think for us the main advantages are between the professional services and product development department and also between product development and marketing department. Marketing and product development need to communicate a lot because marketing knows what the customers will want in the future and product development needs to tell marketing department what they are building for the future. So they need to communicate a LOT!” (Q6)

5.3.2. Incentive impact on Organizational structure

The increase in communication little by little causes some changes in organizational structure. The limits and communication barriers of departments and hierarchical levels slowly dissolve. According to Mr. Ahlberg:
“If you compare to a year ago it’s a completely different environment. There is a huge amount of information shared from management to employees but also more importantly the other way around. It’s a lot easier for the employees to communicate to managers, not only to their personal manager but also to another manager from another part of the company, either another geographical part or more importantly I think from another functional part.” (Q5)

When asked about the changes in the organizational structure, Mr. Hansson explains that the use of Enterprise 2.0 platforms, such as Incentive, reinforces informal networks:

“<…> informal networks actually merge. The informal networks become more or less formal, because they become visible all of the sudden. Prior implementation, you had no idea actually whom to ask the specific question. But after the couple months you see specific competence, interests emerge, you see how to influence the customer, the decision maker etc. So Incentive has modified the organizational structure – it has made it more visible than before.” (AQ)

What is more, new groups of interest emerge in the company, which in turn helps and enables collaboration. According to Mr. Hansson:

“<…> if you look at the company like IBS, they have such a big problem to set up a wiki for the company, which is all around the world, in different locations. <…> to create a good refill there is to actually put forward employees and what they are interested in so they could create their own social networks.” (3Q)

As a surplus advantage, employees’ retention rate increases in a company, by using Enterprise 2.0 this enabled informal networking. As Mr. Hansson explains:

“<…> people were more eager to stay at the same company, rather than to leave for next, because by leaving the company they would have lost their social network, which was behind the firewalls. So, it created higher employee retention rate.” (3Q)

While talking about changes in organizational structure, Mr. Hansson was asked about Incentive’s effect on decentralized decision making. In his opinion:

“It absolutely supports decentralized decision making, especially through blogging. We had to put efforts to get blogs on the road, because in the wikis and collaboration tools you don’t see people working on the same issue and you are not so exposed but in the blogging you are actually exposed – you reveal your opinion or you state your point. That is why blogging is harder to get going. But if you get them going, you get positive effect on decentralized decision making.” (5Q)

Moreover, Incentive enables changes in organizational structure by giving employees additional channels to reach managers directly in order to express their opinions or ideas:

“<…> bad managers often create silos, which means that they get the information from the group they work with and then he presents the information up to the higher managers. So the groups have no saying, employees don’t have the possibility to express their own feelings and ideas, because they are always halted by bad managers. And what we have seen is that now knowledge workers can go around the bad managers and speak directly to the higher management or directly to their co-workers. And also in that way you are tearing down silos.” (5Q)

The top-down approach is in this way replaced by bottom-up approach, because now employees have more saying on the way company is operating. Mr. Hansson explains:

“If for example in past many ideas came from top or middle management it was much harder to sell this ideas to the employees and in that sense it’s easier to all the way around. When such ideas are suggested by employees they can be executed in no time, because they have created these ideas and made them emerge and
they believe in these ideas. If such ideas are accepted by the company they are definitely more favorable to be executed and management has to spend so much less time in getting people to work.” (12Q)

Mr. Ahlberg agrees with Mr. Hansson, by saying that now:

“for employees it is a much easier way to communicate to management if they have a concern, if they have an idea, if they have a problem, if they have done something good etc.” (Q5)

5.3.3. Incentive impact on Management

Mr. Rickard Hansson believes that Incentive is a valuable tool for managers to share the information on company’s work, future plans etc. as well as to motivate employees to reach better results or share new ideas or information. However, managers usually need to persistently promote the use of Enterprise 2.0 in the company:

“In some cases with some clients we urge the management to say ‘the hell out of it’ and that’s because it motivates employees to begin with it and that they are allowed to say what they think. In other cases we encourage management to make the first attempt.” (9.2 Q)

By using blogs, managers may not only share important information with the employees, but also lead by example – by influencing and motivating employees, as well as creating friendly and understanding atmosphere:

“In this case Oskar Ahlberg is part of the management team from IBS. Since the company is listed on the stock exchange, all the communication within the company is more or less adjusted to the stock owners rather than employees. There are a lot of official reports and press releases that doesn’t bring too much to ordinary employees. So what he has tried to do was to create a blog where he explained what they were doing in a more ‘human way’ and it’s working really well. Employees were eager to give instant feedback to what he suggested and better understand new management proposals. Also he has a ‘light’ tone in his communication which supports a ‘normal’ communication with lower level employees. So blogging is the most commonly used tool by managers in that sense.” (9.2 Q)

Mr. Ahlberg himself explains, how he uses his blog to reach and influence the employees of the IBS as well as to bridge the gap between them and top managers:

“My job is “communication director” so I use Incentive to spread values and visions and plans. But what I typically use, I guess, the ideas and points of view of other managers as well. I use the blog mainly; blogging regularly 2-3 times a week in Incentive and some of it obviously being my thoughts and ideas but a lot of it is borrowed from other managers. For example last week I met with the CEO and he said this and that and other and I decided to write about it in my blog rather than him doing it himself. He is more old-fashioned so he doesn’t like or understand things like blogs and content and so on.” (Q4)

Incentive, as an Enterprise 2.0 platform, enables not only information, idea and opinion sharing, but also feedback and complaining system. Managers are enabled to get instant information on the problems occurring in the company and in this way they can approach these problems quicker and more effectively. According to Mr. Hansson:

“If the company succeeded in the way of using it, that it is OK to criticize, then a company can see when people are not satisfied with bonus system or coffee machine or whatever and then management can approach all these problems. You can only speak to one person at a time and not always you can be sure that this complaint is relevant. But when you deal with 900 people then you understand that maybe something is wrong and requires more attention. In long term this kind of attitude increases the trust within the organi-
zation. But at the same time this is a thing that managers are also very afraid of, that criticism will occur more often. There is always a lot of criticism but you didn’t have any tools in the past to actually see it and manage it.” (11Q)

Mr. Hansson also points out the negative side of complaining system as well:

“<...> there is such notion as ‘executive hijacking’. For instance management can suggest some new idea or proposal and the minute criticism comes from employees they put them into silence and you have the initiative killed. That is how ‘executive hijacking’ works. In our case we hope that these things (constructive criticism) will happen and the management will support it, because it’s a powerful tool.” (11Q)

Mr. Hansson explains one more concern top level managers have, while deciding to implement an Enterprise 2.0 platform or not:

“The greatest fear, however, of the top level managers is that they will loose the control they never had. They think that they control the message and that is true, they control the message, but they don’t control the opinions, they don’t control the discussions. And if you succeed, you make the discussions emerge and you may approach them better than in a coffee room or whatever.” (5Q)

Mr. Ahlberg admits this by saying:

“Managers are slower and they don’t use it so much, they don’t have so many ideas and they are worried. I definitely know managers that are worried that they will lose control, so they are less favorable, initially at least. For the wrong reasons but that’s the fact and the employees are more favorable to Enterprise 2.0 than managers.” (Q3)

5.3.4. Incentive impact on Organizational culture

The use of Enterprise 2.0 tools and the organizational culture are two-way related subjects.

On one hand, to begin and proceed in using Incentive or other Enterprise 2.0 platform requires appropriate climate and attitude inside the organization. Mr. Alhberg explains the situation in IBS:

“We are a big organization geographically and we have quite a lot of small offices, like 20-30 people in one office. <...> So that’s also a challenge for us to get employees to share their problems, to share their solutions and to come with new ideas. And that was for me definitely the biggest driver for purchasing the Incentive platform, in order to increase the collaboration between these employees, because we are a “100% people company”, we don’t have any factories, we don’t have any machines, we don’t have any warehouses, we don’t have anything except people and those people’s mind and experience.” (Q8.1)

Mr. Hansson explains that this problem is also common in the companies with strict career path:

“I’ve met couple of companies like law firms, with particular organizational culture, and for them it was very hard to grasp this idea. The main philosophy inside their company was to move up within the hierarchy, starting your career as a trainee and finishing as a senior partner. So it’s kind of tricky to adopt such a system in these kinds of environments.” (10Q)

In the company with open and tolerant organizational culture, the spread of Enterprise 2.0 values happen faster, however, some encouragement from the managers or some active employees is usually very important. As Mr. Hansson explains:
“It actually takes a lot of courage to stand in front of 1100 employees and say your opinion, but if one does so, commonly a lot of people will follow, because that one has taken this first step. It’s exactly same thing with these tools. Someone has to start commenting to get other people to follow the comment or say their own opinions. But again that is a strategic work; there is nothing that happens by its own. I have never seen this happening before, in very very open companies in the begging maybe it may happen but you have to have this attitude as part of your strategy. But when you get that in place overtime it makes more people to comment and eventually creates a more open atmosphere within the company.” (8.1Q)

On other hand, when implemented and used, Incentive Live can encourage the change of organizational culture to more open and collaborative one; however, it takes some time to reach this. According to Mr. Ahlberg:

“I wouldn’t say there is a cultural change yet. I could see this change at individual level, but individuals work differently. But to say that there is an overall cultural change I think we will have to wait a little bit, I can’t say we have a cultural change it’s too early for that. But that is going to be on the individual level and hopefully that will trigger a cultural change over time.” (Q8)

Mr. Hansson believes that the change in organizational culture is a definite consequence of the use of Enterprise 2.0 technologies:

“<…> I consider that sooner or later those companies will go for E 2.0 as they are at the same time the most knowledge intensive organizations with huge amount of information and knowledge stuck into the heads of their employees. <…> And of course if these organizations adopt E 2.0 this will eventually change company’s culture.” (10Q)

5.3.5. Incentive impact on Collaboration

According to Mr. Hansson, the main advantage of Incentive as an Enterprise 2.0 platform is its ability to encourage corporate collaboration:

“If a team has collaborated through wikis and blogs and came up to some ideas they can ask for managers to either comment on the blog or send them some feedback through the link where ideas are stored. <…> People are contributing all the time regardless the fact if it’s ‘relevant’ now or later or whenever.” (12Q)

Mr. Ahlberg notices the increase in collaboration since the introduction of Incentive as well:

“<…> we only started to use the tool in November and really in a big way only in January/February but already I can see a better inter-departmental collaboration between product development and marketing particularly and the professional services is coming as well. ” (Q7)

The main tool for collaboration, according to Mr. Hansson, is the wiki part of Incentive. However, only about 10% of the IBS users actually actively contribute to its contents:

“In the public platforms like Wikipedia there is 90%, 9% to 1% rule. This means that only 1% are creators, they offer completely new article from sketch. 9% are contributors, who edit the text, make it more accurate etc. And 90% are lurkers who only read those articles and don’t contribute. And we have the same within the walls of organization – we also have the creators, contributors and lurkers.” (17Q)

Mr. Ahlberg adds that the contributors, which he calls ‘gardeners’ play a very important role in the collaboration process:
“We talk about contributors, but there are different types of contributors – some of them are creators of content, others are amendments of content – they fulfill a gardener role. Not many people create new contents, some of them go and do, for example, spell check, or add facts.” (Q11)

In addition to that, Mr. Hansson explains that even those who are not active contributors to Incentive wikis have a positive effect on the collaboration executed through these tools:

“However, what we have seen, we reach 100% in one way or another. We gonna reach 100%, because over time we will get a great searching engine which could answer more or less any question you have. Not only business ones. From that you will probably be inspired, but more importantly, you will be more efficient as well. They will be inspired, not to create and contribute but they will be more efficient, because they will find the information they cannot find anywhere else.” (17Q)

While asked about the possible collaboration with persons and organizations outside the IBS, using the Incentive platform, Mr. Hansson agrees that it is a good idea, but with several constraints:

“IBS could have collaboration with the customers and partners and that is a good idea. The benefit is there absolutely. Would be great to have all within the same platform. It would be totally transparent if you communicate with your consumer, with your partner, with your reseller. This would be very beneficial, because no one knows the needs better than your customer, of course, and within the firewall we have a problem of getting our heads out and hear what the customers want say and so on.” (18Q)

“However, there is always the question concerning security. How do you share internal information without exposing yourself? And that is always a big problem, because security and ease of use have never worked hand in hand. But what we believe is that other separate platforms may be used to communicate to the customer. It is technically impossible to do it any other way, it is so hard to make infrastructure to work: behind the firewall and outside the firewall and so on.” (18Q)

Mr. Ahlberg reveals that there is already one company, which has an access to Incentive, however, to add customers to the system would require some changes:

“One of our partners is an Indian company they are our development partners, and they already have access to the intranet, so they can use it the same way all the IBS employees do. Adding customers would be a great addition, but we have to think a bit about how to do this the right way. Today it is difficult to separate employee and customer content, you have to set a completely new server and completely new database and duplicate data and so on. From a critical perspective, yes, we would like to have the collaborative tools with our customer base, absolutely.” (Q14)

5.3.6. Incentive impact on Organizational Learning

Mr. Hansson and Mr. Ahlberg were asked about his opinion on possible Incentive effects on organizational learning. In their opinion:

“it absolutely enhances organizational learning, because you are writing the type of content that was within the firewalls and you don’t have any obstacles in terms of permissions. If you see an article you can edit it instantly or if you are within a specific subject you can easily create entirely new one.” (13Q)

According to Mr. Hansson, the wiki tool is the most suitable and affective tool for promoting organizational learning inside the company:
“Wiki is like a white board. Anyone can write some notes, to add or remove information, mark what is done and what is not done etc. And it’s a global-wide process. If you work in a global company like IKEA or SonyEricsson or whatever you can have a global ‘white board’, which can preserve information that can be searched later.” (13Q)

As a part of organizational learning, the matter of feedback was discussed. According to Mr. Hansson, feedback in Incentive is most often given by using discussions, commenting and information grading options:

“<…> they get feedback through people commenting their good work or not so good work, so they get feedback through discussion. It’s like if you have a blog of your own where you can share some thoughts and ideas and get feedback. In that way you can get your feedback naturally if I can say so. You can also grade information, if you like it you can put 5 stars or if you dislike it you can put 1 star. You can do both comment and grade and also see how many views my blog had, so it’s a self-driven process like in everyday life.” (14Q)

However, some pieces of feedback are still stuck in the closed channels of communication. According to Mr. Ahlberg, it takes time to teach employees to use Incentive for giving feedback, but they do not give up and work on that:

“We are trying to encourage people to use Incentive to give feedback. But mainly people still use e-mails. So they will call Jill or me, or they will send an e-mail saying, this should be in Incentive, and I always e-mail back, saying yep, you create the article on Incentive and I’ll make sure that someone will solve your problem, so I always encourage people to post their question in Incentive before calling or writing e-mail.” (Q13)

One of the advantage of Incentive as a source of giving and getting feedback, Mr. Hansson names the extent of people this feedback can reach:

“<…> you are talking to a broader audience. If you are talking to a co-worker next desk you only get that opinion or feedback. But if you blog it you more or less communicate to 1100 other employees and you will get a higher impact on your opinion.” (14.1Q)

5.3.7. Incentive impact on Knowledge, Idea creation, sharing and Information search

The main advantage of Incentive named by Mr. Hansson is the huge amount of information shared throughout the company:

“<…> you give a chance for employees to publish their best practices and find the right people who can help solving the problem. For example if someone needs an expert opinion from someone else he has to find and ask that person, and maybe that person doesn’t know the answer and be has to look for another and so on. And if you get that things going (E 2.0) you can easily find the people who actually have the knowledge for that specific question you have.” (13Q)

The difference between the Incentive and previous intranet, used by IBS, is that there are no restrictions on the information shared. As Mr. Hansson explains:

“<…> in the old intranet you had the information department which decided on what information to publish and which one to skip. They considered which information was relevant or not. Now anyone who has a problem can publish it on the intranet and receive feedback.” (12Q)

Mr. Ahlberg explains it in more details:
“<...> they come with ideas for content. So they say “This specific content should be available”, “I want to search for customer projects” or “I want to search for contracts”. So the main suggestion is that they want more content inside Incentive. <...> The previous intranet didn’t have working processes at all. The previous intranet was a pure working database. The only way to work with was to send an email to me and say “I would like this to be posted on the intranet” and I would say yes and I would send it on to someone to do the technical converting so it can be posted on the intranet.” (Q3)

Mr. Ahlber notices a biggest positive effect of information sharing in the product development department:

“I would say that in the product department they are now with Incentive much better at sharing information inside the department, so what was developed in one area of a system can be used in other areas of the system. So they share code much more easily with Incentive. We are writing computer code and share computer code and by having code examples available I think is a huge step forward, I think, for the product development department.” (Q9)

What is more, Mr. Hansson notices a positive effect on how employees express themselves by sharing the information they want to share:

“<...> there is a lot of information they want to share but in a traditional intranet there is no natural place where to do this. But in a wiki environment it’s just information inputting and tagging and then it’s searchable. It’s has no structure or context, except the wiki context where you can publish anything.” (15Q)

The huge amount of information shared enables easier and faster information search. As explained by Mr. Hansson:

“The huge positive effect is the extent of searched information, because in a successful platform you get huge volume of information published and the search than give better results. If you search for specific business related information it is nothing that will help you better in this. In this way you are adding value to the existing information.” (4Q)

Mr. Ahlberg explains that the information sharing and possibility to search and find information is very important for a company, which most important asset is people:

“You can get so much benefit from raising the productivity level of those who don’t have the right information <...> It is not like in a factory where you can increase the output of a machine by 10 or 20%, but if you motivate a person you can produce 10 times or have a 1000 % increase <...> So for me motivation and access to information are the most critical drivers for a company like ours.” (Q8.1)

Though all the divisions have different languages according to the country they operate in, it does not hinder information search. According to Mr. Hansson:

“If you look at Wikipedia, each language has a wiki. For our cases we have wiki for each country. And we also of course have a central wiki. Nonetheless, it’s not that important because you can search for information regardless where it was published, but within the company we encourage to use their own language, because we don’t want to create language obstacles. <...> local language helps people to actually collaborate and share more information because they are not hindered by language barriers.” (13.1Q)

Mr. Ahlberg explains that the use of different languages in Incentive is encouraged, because by the help of others really important and interesting information will be translated into English anyway:

“<...> we have contents in Finnish and Flemish, and Swedish, and other languages as well. And we say, if you are really uncomfortable writing in English, write in your own language. I myself sometimes link to
Swedish newspaper articles and it has happened on several occasions that someone read the article and translated the whole thing, because they thought that this is a really good article and everybody should read it. The Swedish text will become very good English text eventually. That is why we are encouraging people – write in Danish, Italian or whatever you language is.” (Q12)

5.3.8. Incentive impact on Time Saving

One of the most important factors in innovation process is time – specifically time spent to market the idea, time to find relevant information or experts on the matter. We asked Mr. Hansson and Mr. Ahlberg, if in their opinion Incentive helps to save time for the employees. They were open by saying that:

Mr. Hansson: “In the beginning it will consume more time because you have to learn the new tools. Maybe it doesn’t save so much time on the contribution side, because you have to write it down anyway. but when you get over these obstacles it definitely saves time.” (15Q)

Mr. Ahlberg: “I think most people say it consumes time, but in my view it saves time. People spend more time on a new tool, so people feel they have to go to a new place. But I think the time they spend on Incentive means they save it in other areas. Particularly, people send less emails and they spend less time searching with Google or other search tools.” (Q2)

Mr. Hansson explains that the intention of IBS is to replace the use of time consuming channels with the Enterprise 2.0 platform:

“We don’t want to create new time consuming things but we want to move the time. Everyday people are writing emails, they are writing things in a notepad, or notebook or whatever so we want to move that to the wiki environment.” (15Q)

By using Incentive, most time is saved while searching for the information. According to Mr. Hansson:

“it absolutely saves huge time on the search side. People spend more or less half an hour a day to search the information they never find. They end up going to some persons asking ‘where I can get this information?’ If we could lower that, for instance we could say ‘every day we will save 38 minutes on your search time’, then you are saving a lot of time and then you will see the efficiency going higher.” (15Q)

Mr. Ahlberg explains that the value of time in IBS is expressed in money. One of the reasons of purchasing Incentive was to save time in everyday live situations, especially in the searching process:

“We did a survey last year, so if you are a consultant (our biggest source of revenue and the biggest number of employees are consultants providing professional consultant services) that’s where you have the biggest time savings. The survey results said that about 10% of what we call ‘billable time’, the time that we can bill the customers, is actually spent for searching information and this is a huge cost for us if you take the cost for a consultant. We hope to get that at least 25 to 50 % off that cost down, to take away at least 25% of the search time at least for the professional services. And if you average that, we can say that our average speed to a customer for a professional service guide is saving about 1200SEK.” (Q2.1)

Incentive, according to Mr. Ahlberg, is a tool, which may help IBS save both time and money, however, some work still needs to be done:
“We still need to have a lot of information in the systems that isn’t searchable yet so, you know, it’s something we are still working on to get Incentive to help consultants to search for information everywhere not just within the Incentive tool. But the ambition is to save more time. So saving 1200 to 2000 SEK per a consultant per a week is our goal.” (Q2.2)

5.4. Empirical Findings concluded

After revision of all the empirical information, obtained through interviews, some main patterns may be distinguished:

- The Enterprise 2.0 platform (Incentive) was described by both respondents as being a very useful tool which significantly enhances communication and collaboration within the organization.

- The main problems seen by respondents are: yet a pretty low participation rate; some minor bugs occurred due to novelty of the platform; resistance from some employees and managers etc. However, both respondents assure that these problems are dealt with.

- Both respondents think that it is too early to talk about the direct influence of the Enterprise 2.0 platform (Incentive) on innovation; however, some significant changes in working processes may be seen already.

- Both respondents noticed increased communication at the intra-department level. They believe that this increase has a positive effect on information, knowledge, feedback and idea sharing.

- The interviewers agree that the distributed structure of IBS may be an obstacle to get Incentive (E 2.0) on the track; however, if handled accordingly, the barriers between different parts of IBS may be subsided, creating friendlier, more open and trustful atmosphere inside the organization.

- Both respondents noticed positive effect on the decentralized decision making, and how employees are bypassing hierarchical structures and managerial silos by contacting and sharing their experiences with other employees and managers through Incentive without intermediaries.

- Respondents noticed one important obstacle regarding Incentive (E 2.0) use – namely, managers’ fear of losing control over their subordinates. However, both Mr. Hansson and Mr. Ahlberg agree that managers should approach their employees using Incentive, share their ideas and new information, and encourage employees to do the same.

- One of the biggest advantages of the Enterprise 2.0 system (Incentive), according to both respondents, is that it saves a lot of time and efforts while searching for information, therefore, information sharing as well as feedback must be highly encouraged and motivated.

- By using Enterprise 2.0 (Incentive), IBS is gradually enhancing its organizational learning objectives, with a huge repository of information as well as transparent system of sharing ideas and best practices.
6. Analysis

In this chapter we analyze the information we have managed to collect during our research and also try to answer our research questions. We show how we managed to combine both theoretical and empirical perspectives related to our study and analyze the impact of Enterprise 2.0 on innovation activities from these two standpoints. In that sense we are aiming at obtaining a more objective picture by supporting our theoretical findings with the empirical information we obtained from the case study. The structure of the chapter has the following format: we discuss the findings related to each research question in part and compare the results of the research with our expectations and also we dedicate a special paragraph for general discussion issues, debating upon such aspects of Enterprise 2.0 as its drawbacks & critics and its possible application within the collaborative innovation networks.

6.1. Major factors influencing innovation activities inside an organization and the relationships between them

The main reason in answering this question was to better understand the broad concept of Innovation and later to try to decompose it in major factors and sub-factors which influence innovation activities within the organizational context. This helped us at a later point to build a bridge to the Enterprise 2.0 dimension and ultimately connect these two concepts.

In answering this question we have mainly used the literature related to innovation. This typically represents a deductive research approach, in which we have used logical reasoning to derive the main concepts, models and theories related to this question, after conducting an extensive literature review.

As expected we have identified a lot of factors which exert a direct or indirect impact on innovation related activities. There are also a lot of theoretical views and frameworks which address these factors from different perspectives and thus make it quite difficult to fully grasp the overall picture of the factors’ impact on innovation. To some extent all these views can be perceived as situational, since different factors have sometimes a completely different impact on the overall innovation process and that is why it is so difficult to analyze this subject (Tidd et al, 2001). Despite all the complexities and difficulties related to innovation theory, we have made a synthesis from the available literature and grouped innovation factors into the following form (Smith et al, 2008, Tidd et al, 2001 etc.):

- Technology (Utilization of technology, Technical skills and education, Technology strategy);
- Innovation process (Idea generation, Selection and evaluation techniques, Implementation mechanism);
- Corporate strategy (Organizational strategy, Innovation strategy, Vision and goals of the organization, Strategic decision making);
- Organizational structure (Organizational differentiation, Centralization, Formality);
- Organizational culture (Communication, Collaboration, Attitude to risk, Attitude to innovation);
Employees (Motivation to innovate, Employee skills and education, Employee personalities, Training);

Resources (Utilization of slack resources, Planning and management of resources, Knowledge resources, Technology resources, Financial resources);

Knowledge management (Organizational learning, Knowledge of external environment, Utilization of knowledge repositories);

Management style and leadership (Management personalities, Management style, Motivation of employees).

At the next step we have tried to understand how the above mentioned factors are connected to each other, or in other words what relationships exist between these factors. In order to understand that we have reviewed a number of different models and frameworks suggested by different authors (Smith et al, 2008; Tidd et al, 2001; Johannessen et al, 1999; Johannessen & Olaisen, 1993). We have come to the following conclusions:

- At the basis of each innovation activity most often authors see the Knowledge and Ideas generated and shared by the Employees;
- In order to support knowledge & idea generation, sharing and dissemination within the organization several critical sub-related activities should be met. Specifically, this concerns such dimensions as Organizational Structure, Communication and Collaboration. Typically, these factors are considered to have the most direct impact on the innovation processes;
- Additionally, there are other vital but more general organizational factors that also impact innovation processes. These are Technology, Management, Organizational Culture and Vision & Strategies.

Further on we have decided to assemble all these factors into a preliminary research model (Figure 3-11, see page 37). We decided to connect all these factors into a model of a pyramidal shape, as in our view it was an appropriate way of displaying the relationships among these factors and also it represented a good foundation for connecting with the Enterprise 2.0 concepts. All these are described in the following paragraph.

### 6.2. The impact of Enterprise 2.0 tools on innovation factors

In order to better tackle this research question we have decided to use both theoretical and empirical findings of this research, using the abductive method (combining both deductive and inductive approaches) (Ezzy, 2002).

Firstly, we have consulted with the available literature and online resources related to the new emergent concept of Enterprise 2.0. By reviewing the literature we have tried to understand Enterprise 2.0’s main characteristics and also determine the relationships which might exist between this new concept and Innovation. We have analyzed the main tools which are embedded in the Enterprise 2.0 philosophy and later on tried to determine their impact on innovation factors. Particularly, we have found that there are sets of tools which have a direct impact on major innovation factors, such as communication, collaboration, co-creation and cooperation (Cook, 2008). Additionally, we have found that Enterprise 2.0 has a major influence on the organizational structure (Cook, 2008; McAfee, 2006; Tapscott, 2006 etc.), by making it more loosely structured, promoting group affiliation, enabling greater cross-functional interaction, supporting decentralized decision-making and so on.
Considering Enterprise 2.0 in itself a socio-technological support for enhancing innovation activities (Cook, 2008; McAfee, 2006) and summarizing the literature findings in that sense we have completed the preliminary research model by placing Enterprise 2.0 at the fundament of this conceptual pyramid. With this research model (Figure 3-14, see page 37) we have completed the theoretical preparation for investigating our case study, from which we hoped to obtain practical evidences in support of the theoretical aspect of the research.

In general, the results of our practical investigation have confirmed most of the assumptions and theory findings in relation to Enterprise 2.0’s impact on Innovation. At the same time the empirical study has delivered additional insights and views, by unveiling which Enterprise 2.0 tools are the most “influential” over innovation activities. Let’s discuss them in part:

**Wikis** – according to the literature and case study results this is considered by far to be the most widely used tools, which enhances particularly the collaboration aspect within the organization. It is also considered to be an efficient way of storing organizational knowledge, which can be enhanced and updated continuously over time by those who are editing it and adding new content. Having its own “Wikipedia” within the firewalls, as it was mentioned by case respondents, is a very important thing. It fortifies the knowledge base inside the organization, thus enhancing knowledge sharing and dissemination across all the departments, which was not so obvious with the old intranet specifically at IBS. Basically, this process is adding new perspectives to the knowledge management systems and even sometimes is perceived as a replacement for the later. Wiki is also a tool that connects most of the employees within the organizations, and it also stands for the most of the contributions within the Enterprise 2.0 platform. Partially, this can be explained by the ‘impersonal’ contribution of each member. This fact often encourages people to contribute with new content, as in contrast to Blogs, which exposes people to the public and creates some sort of fear barriers inside employees’ mind.

**Blogs** – are efficient tools for sharing personal information and knowledge with the public. In that way it is possible to transfer unique, sometimes even tacit experience to everyone across the organization. This tool brings a lot of benefits, for instance some specific questions and requests can be found in a certain blog and therefore reduce the pressure on the knowledge holder. Additionally, it saves a lot of time for searching for the right expert inside the organization who can help in answering some specific questions. There are some big barriers to have this tool working well. Specifically, they are: the fear of being wrong in the eyes of the whole organization; the fear to share personal thoughts with everyone; unwillingness to share personal knowledge with everyone; people don’t realize that their knowledge might be useful to somebody and so on.

**Social-networking** – is an aspect which has also a great influence on interaction between employees within the organization. The Enterprise 2.0 platform enables deeper and more frequent cross-functional relations and people tend to make more connections than previously. This in turn has a positive impact on such critical innovation aspects as communication, collaboration, cooperation, co-creation, organizational structure, organizational culture etc. To some extent this feature makes the organization more unified and even, as suggested by our respondents, strengthens the retention rate, as employees are afraid to lose their professional networks. Social-networking encourages employees to create informal groups inside the organization, which, as it is known, are more creative and tend to generate more innovative ideas.
Forums and discussions – are also contributing to innovation activities by creating a cyber-space where employees can share their ideas, or post questions, or give feedback and so on. It is also beneficial in sense that all these discussions are centrally stored within the system and can be at any later point searched and used by others who are experiencing similar problems or who are looking for similar answers. This in turn empowers the knowledge sharing and dissemination processes, and, as it was mentioned by the case study respondents, these processes are “flowing in a natural way”. This tool is also reducing the pressure on other communication channels such as email, yet again having a time saving impact.

Search engines – is also an essential element of the Enterprise 2.0 system which supports innovation in the end. The search time for the necessary information and knowledge, as stated by the case study respondents, tends to decrease as a result of the implementation of the Enterprise 2.0 platform. There is more ‘professionally related’ content created and therefore it is faster to search for it as compare to external search engines from the web.

Micro-blogging – is a good medium for promoting informal communication, which as a result has a positive impact on collaboration activities. This tool is very useful for small and medium sized project based groups, like software development groups, where informal communication is likely to generate more innovative ideas and solutions. This tool also reduces the pressure on the email channel and generates content that is stored and searchable inside the Enterprise 2.0 system. From a management perspective this tool allows to follow what kind of atmosphere exists within the collective and intervene when it is needed.

Tagging – this tool allows the stored information to be easily indentified and searched at any time by anyone. It is a good way of structuring most important information according to the needs of most of the employees. Tagging again has a positive impact on ‘searchability’ and time saving issues which as a result fine-tunes innovation activities.

The analysis of the Enterprise 2.0 concept has shown that its tools are exerting a significant impact on various aspects related to innovation activities. Some tools (Wikis, Blogs, Micro-blogging, Social Networking etc.) are influencing several factors at the same time. Therefore it is hard to attribute solely the impact of these tools to just some specific innovation factors. That’s why we decided to group these tools into 3 sub-sets of tools, which may contain tools from the other sub-sets, since they are influencing different innovation factors simultaneously.

Given the results obtained from the interviews and literature review and after several iterative revisions we have decided to update our research model to a final state. This model represents our attempt in portraying the overall relationships that exist between Innovation as a process and Enterprise 2.0 as a supporting platform in that sense (Figure 6-1).
6.3. The management perspective in relation to Enterprise 2.0 and Innovation

As it was frequently mentioned in the literature, related to both Innovation and Enterprise 2.0, the management impact on these activities is very important and often decisive. The interview results have confirmed this fact. Case study respondents have acknowledged the great importance of the management when it concerns Enterprise 2.0’s impact on Innovation. First of all the management team is one of the main factors that triggers the adoption of such a system inside the organization. But it is most often not enough to just give the employees the tools they need in order to cooperate, collaborate and co-create better. The management team is responsible for many crucial aspects for a successful implementation of the Enterprise 2.0 platform, which eventually should spur organization’s innovativeness. Let’s analyze these aspects in part:

- **Motivation** – is a very important aspect when talking about the implementation and use of the Enterprise 2.0 system. It always takes time to get used to new things, especially to those which are changing, sometimes radically, the usual way of working. Some employees are more open to new things and embrace new technologies easily, others are more conservative and take it slowly and some are even very resistant to any sorts of change. The management’s responsibilities at this point are to fully explain the new concepts and try to motivate employees to use the new system as much as possible. There is always the ‘fear factor’ which is stuck
in people’s minds and managers have to overcome it by supporting those who are using the system and do their best to convince those who are not using it yet or are against it at all. As it was stated by the case study respondents, it is very important for managers to communicate as much as possible in the beginning when the Enterprise 2.0 system is implemented. Mr. Oskar Ahlberg, which is the top management representative responsible for the Incentive implementation at IBS, is regularly writing in his personal blog within IBS and by that he is trying to encourage people to follow his example and also to receive feedback from them. This and other similar actions are very important in motivating employees. At this stage employees are usually experiencing an informational gap which creates invisible barriers and fuels their fear to the new system. This gap should be fulfilled specifically by managers as they possess the necessary authority in that sense;

- **Coordination and control** – are other important managerial aspects to be considered when dealing with Enterprise 2.0. It is essential for managers to efficiently coordinate all the activities related to the Enterprise 2.0, particularly at an early phase when this system is being implemented. As it was mentioned by one of our respondents, Mr. Rickard Hansson, CEO of Mindroute Incentive AB, in the beginning there is a great need for a more top-down flow in relation to Enterprise 2.0, when managers should be highly involved in this process. By coordinating Enterprise 2.0 managers should try to trigger more activities within the new platform, in order to attract most of the employees from the organization. Since Enterprise 2.0 is a relatively open system, often without a strictly defined structure, all these enabling more informal things, coordination is also needed to have a reasonable level of control over these processes. Openness, informal atmosphere, frequent communication, unclear structure is beneficial for innovation activities, but if these ‘ingredients’ go out of any control it may become counterproductive and disrupt the working activities within the organization;

- **Leadership** – embracing the Enterprise 2.0 philosophy is a brave act. Beside the numerous benefits, this new concept also brings a lot of risks. Even at the managerial level there is a big resistance towards this concept. As suggested by our respondents, Mr. Rickard Hansson and Mr. Oskar Ahlberg, there are managers within the organization who are actually opposed to this new platform and this new way of working. They fear to lose control over their subordinates. This situation is quite characteristic for most of the big and especially international organizations, where a lot of ‘hidden agendas’ are very common, even at the top level. In that sense there should be the so called Enterprise 2.0 ‘evangelists’ within the top management team. These ‘evangelists’ or ‘champions’ have to be very convincing and persistent in their struggle to implement the Enterprise 2.0 philosophy. They should continuously advocate this concept at all levels and for that you need to be very self confident, open minded and fully believe in what you are doing. If an organization manages to identify and support such ‘champions’ the Enterprise 2.0 platform is likely to deliver its maximum outcome.

### 6.4. General aspects related to the impact of Enterprise 2.0 on innovation processes.

Beside the research questions on which we have debated previously, we would also like to discuss some general aspects related to the highlighted topic. During our research, we have...
been constantly mentioning mainly the advantages of the Enterprise 2.0 concept and paying less attention to its possible drawbacks. As any new system, Enterprise 2.0 obviously has some minuses, which, if not addressed correctly, can be quite harmful for the organization. In their race to achieve a higher rate of innovativeness organizations are ready to embrace such technologies as Enterprise 2.0, but not always this system can be suitable for that specific organization. As mentioned earlier, this concept makes the organization more open, informal, loosely structured, gives more freedom to the employees, reshapes working processes etc. All these things can have both positive and negative impacts on the organization so it is extremely important to have a decent level of control over these processes. Additionally, Enterprise 2.0 represents a significant change for the organization and hence you should be ready to expect all the challenges related to this issue. Here are some of the disadvantages of the Enterprise 2.0 which we have found while reviewing the related literature and from the answers of our respondents, Mr. Rickard Hansson and Mr. Oskar Ahlberg:

- E 2.0 may reduce the control within the organization;
- E 2.0 sometimes has a negative impact on productivity;
- The openness of the system raises some IT security & privacy issues;
- The system may be rejected by the employees resulting in waste of time and money;
- E 2.0 brings challenges related to the change processes;
- Possible leak of private and confidential information outside the organization, etc.

In order to address all these challenges an organization should be well prepared in many areas. Also, optimal conditions and premises should exist before the implementation and use of an Enterprise 2.0 platform. Specifically, organizational culture was an aspect often mentioned in the literature and confirmed by our respondents. Enterprise 2.0 is most appropriate for organizations which have an open, democratic and flexible organizational culture, where this philosophy can be easily embraced and where employees have the ability to exploit its potential to the maximum. Some organizations might not be ready for such radical changes, but the overall trend is showing that these principles are being adopted by an ever increasing number of companies world-wide. Some authors suggest that for some cases organizations should adopt only some Enterprise 2.0 tools and not the whole system at a time. This constitutes a transitional process and reduces the possible negative impacts of such platforms.

Another important issue related to Enterprise 2.0 and Innovation was touched in the context of the so called collaborative innovation networks (COINs). The later concept has become quite popular in the recent years and in that sense Enterprise 2.0 represents one of the most fitting platforms that might bridge organizations who are engaged in innovation networks. In discussing this topic with our respondents we have found that strategically IBS is considering the option of extending its Enterprise 2.0 platform with other partner companies, suppliers and even customers. They are already working together with one partner organization which has full access to their Enterprise 2.0 platform. The issues related to Enterprise 2.0 and COINs definitely represent an interesting area for analysis, which can become an interesting topic for further researches of Enterprise 2.0 and Innovation concepts.
7. Conclusions, Reflections and Future Research

This chapter summarizes the main conclusions from our research which give the answers to our research questions. Reflections of authors and some suggestions for further research related to the analyzed fields are also presented.

7.1. Conclusions

The main purpose of this research was to investigate the correlation that exists between the well established field of Innovation and the new emergent concept of Enterprise 2.0. In order to better understand this relationship three research questions had to be answered, trying to build a logical chain of thinking in sense that each question was supposed to support the next one.

By answering the first question we have tried to identify pertinent factors that are most commonly influencing innovation activities from an organizational perspective. In that sense, after conducting a thorough and extensive literature review, we have found that such factors as employees, organizational culture, organizational structure, technology base, management approach, vision & strategies, knowledge management are considered to be the most essential when it comes to innovation activities within the organization. All these factors enable such critical processes as communication and collaboration, which eventually have a decisive impact on overall organizational innovativeness.

The next step of our research was to understand which tools related to the Enterprise 2.0 concept are affecting innovation factors. Using both theoretical and empirical findings from the case study we have identified that such Enterprise 2.0 tools as Wikis, Blogs, Social Networking, Micro-blogging, Forums & Discussions, Search Engines, Tagging etc. are considered to be the most weighty when it comes to the impact on organizational structure, collaboration and communication activities and therefore, via these processes, having a significant influence on organizational innovativeness. All these findings are later assembled into a generic model, in order to obtain a clearer picture that would show a roadmap of the Enterprise 2.0 tools’ impact on critical innovation factors. This can be considered as one of the main contribution of this research and an attempt to bridge Enterprise 2.0 and Innovation perspectives.

Additionally, the interview discussions have unveiled the significant influence of the management aspect in relation to both Innovation and Enterprise 2.0. Especially, at an early stage of adoption and implementation of the Enterprise 2.0 platform the managerial role is crucial. At this point managers have to overcome a lot of obstacles, among them being: the fear of the employees to new technologies and new working processes, resistance from the employees and other managers, the impact on organizational structure, numerous risks associated with security & privacy issues, low participation rate etc. In order to efficiently deal with these challenges managers have to put even more emphasis on such managerial aspects as leadership, motivation, coordination and control. Another important indirect factor that is worth to be mentioned here is organizational culture. Enterprise 2.0 is a philosophy that does not fit all organizations, for that you need first of all to have favorable premises and a decent level of openness, democracy and transparency within the organizational culture.
Overall, the results of this research have shown that Enterprise 2.0 system is an appropriate platform which can significantly enhance communication and collaboration activities and therefore intensify innovation activities. Specifically, the findings of this research as well as the final model can be applicable in large or middle sized organizations which focus particularly on knowledge intensive activities, such as: consultancy, information technology, software development etc.

7.2. Reflections

Researching an interdisciplinary area, as in our case Enterprise 2.0 and Innovation, is always a challenging task. In our strive to achieve the most representative results we have tried to use as many approaches and techniques as possible in order to obtain an objective picture and provide a better understanding on how the mentioned concepts interact and influence each other. Still, we have to acknowledge that this research has parts which need proper consideration and its results should be adjusted to other specific contexts.

Since we have chosen to investigate a case study, the qualitative approach was considered to be the most appropriate for this research. There are though some limitations related to this type of research, which we have mentioned previously in the methodology part and throughout the paper. Overall, regarding this we have to say that our research findings have to be perceived as situational. Many factors, which differ significantly across organizations, are influencing Enterprise 2.0 and innovation activities, therefore some findings may not be applicable or have a completely different effect in some organizations. Still, many of these findings can be considered as benchmark examples and might be useful for general understanding on how to manage Enterprise 2.0 activities when it comes to innovations.

This research has focused primarily on qualitative interviews and extensive literature review as the main informational resources and less attention was given to statistical and quantitative data analyses. In that sense we have to admit that different insights and conclusions most probably could have been obtained if a quantitative approach was used as well. Due to certain limitations and constraints it was not possible to use quantitative methods and determine numerically some correlations between Enterprise 2.0 and Innovation. We strongly advice to consider quantitative measurements in this direction, as it can unveil some hidden insights which are hard to spot in a qualitative study. For example a survey among the employees, which are using Enterprise 2.0 tools, can deliver additional valuable information and can help in better grasping employees’ perspective when talking about Enterprise 2.0 and Innovation. All sorts of other numerical measurements, such as Google analytics, are also very welcomed but this requires a high level of understanding and interpretation of the obtained data.

Generally speaking, we believe that this research has achieved its initial goals and its findings can constitute a valuable source of information, especially for managers which have to deal with Enterprise 2.0 related activities.

7.3. Future research

While conducting this research we have intersected with a lot of areas which in our view seemed a bit unexplored and may represent interesting areas for future researches at the

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crossroads of Enterprise 2.0 and Innovation. Both qualitative and quantitative research designs are needed to better understand this interconnected area. There is though a more pronounced gap in quantitative studies in this direction and these unexplored fields can be tackled in future studies. Here are some of the ideas in that sense:

- Since the interconnection between these two concepts seems to be rather profound more analyses from a technological perspective would be beneficial to determine more specific and detailed relations between some tools of the Enterprise 2.0 and Innovation;
- More quantitative or statistically oriented researches are needed in order to estimate numerically such aspects as: the strength of some Enterprise 2.0 tools and innovation factors, the overall impact of Enterprise 2.0 on innovation rate etc.;
- Managerial aspect in relation to Enterprise 2.0 and Innovation must be further explored as it proved to be extremely important for a successful use of such a system;
- Researches describing the impact of Enterprise 2.0 on such areas as communication, climate in the organization and collaborative atmosphere should further continue;
- More attention should be dedicated to the analyses of the risks and drawbacks brought by the Enterprise 2.0 platform. These risks can be hidden and difficult to spot in the beginning and particularly the management team should be fully aware and prepared to deal with them when the situation might go wrong;
- A very interesting area for future researches represents the studying of the impact of Enterprise 2.0 within the collaborative innovation networks (COINs). Presumably, Enterprise 2.0 constitutes a perfect bridge to engage partner organizations, suppliers and even customers in innovation networks, which eventually can produce great innovation effects. But this area is extremely complex and involves deep inter-disciplinary aspects and therefore it is so hard to investigate it.
References


## Appendix 1

The Classification of Enterprise 2.0 tools

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Concepts</th>
<th>Definition / explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMMUNICATION</td>
<td>Discussion forums</td>
<td>Discussion forum is an instrument that allows employees to initiate discussions for others reviews and contributes to.</td>
</tr>
<tr>
<td></td>
<td>Blogs</td>
<td>Blog is the online equivalent of journal. Blogs are used by employees to communicate information and keep the whole network. Blogs can be commented and linked by others bloggers, so all the intellectual capital still remains after the original authors have moved on.</td>
</tr>
<tr>
<td></td>
<td>Instant messaging</td>
<td>Instant messaging allows employees to communicate with another or with groups in real time using software installed on computer. Normally is text-based but the new software allow real-time audio and real-time video conversations with no cost.</td>
</tr>
<tr>
<td></td>
<td>Social presence</td>
<td>Social presence applications allow employees to send updates to all those who wish to know what they are doing. There are three kinds of social presence: informational, temporal, geo-location.</td>
</tr>
<tr>
<td></td>
<td>Virtual worlds</td>
<td>Virtual worlds allow employees to meet and interact with others in a computer-based environment. They allow holding meeting, conducting training or socializing with colleagues in a different way.</td>
</tr>
<tr>
<td>COOPERATION</td>
<td>Media sharing</td>
<td>Media sharing occurs in online social networks and digital communities with a comprehensive platform and diversified interfaces to upload, aggregate, host and share images, text, applications, videos, and audios. But, effective media sharing requires more. Everyone need to be able to share, to tag, to comment and also voting other media. These should be allowing people to filter media for themselves and for others.</td>
</tr>
<tr>
<td></td>
<td>Social bookmarking</td>
<td>Social bookmarking is an instrument that allows collective intelligence strategies and knowledge management. In a social bookmarking service, employees can save links to web pages that they want to remember and/or share. These bookmarks are usually public, but can be saved privately, shared only with specified people or groups or only inside certain networks. The allowed people can usually view these bookmarks chronologically, by category or tags, or via a search engine.</td>
</tr>
<tr>
<td></td>
<td>Social cataloguing</td>
<td>Social cataloguing helps its contributors to build up databases of information about specific topics.</td>
</tr>
<tr>
<td>COLLABORATION</td>
<td>Wikis</td>
<td>Wiki is a website whose pages can be edited colla-</td>
</tr>
</tbody>
</table>
Human-based computation

Human-based computation is a new way to solve problems. This method relies on technology that allows humans to contribute solutions to specific problems as part of an evolutionary process. Those solutions in turn inform the software, enabling it to provide better information to the next person. It’s not the computer that solves a problem. It only collects, interprets and integrates people solutions into its own knowledge base.

<table>
<thead>
<tr>
<th>CONNECTION</th>
<th>Social networking</th>
<th>Social network services enable people to connect online based on shared interest, hobbies, or causes. These services allow employees to create a personal profile and become friends with other users. Inside the corporate social network is valuable when organization rewards individual efforts but needs to encourage knowledge sharing and connection with others.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tagging</td>
<td>Tagging is an instrument that makes information easy to search, discover, and navigate over time. Employees can create tag and see the other tag that a colleague created. These tags need to reflect three features: content, context, structure.</td>
<td></td>
</tr>
<tr>
<td>Social search</td>
<td>Social search takes a different approach to the problem of searching information. Through the process of tagging, this kind of search relies on human beings to select the content that are important and index it using keywords that mean something to them.</td>
<td></td>
</tr>
<tr>
<td>Syndication</td>
<td>RSS (really simple syndication) may publish frequently updated works in a standardized format. An RSS document (which is called a “feed”) includes full or summarized text, plus metadata. This allows employees to subscribe and receive update from their favorite sites. RSS can be used for internal communications, information aggregation and enterprise 2.0 collaboration.</td>
<td></td>
</tr>
<tr>
<td>Mashups</td>
<td>Mashup is a website or an application that combines content from more than one source into an integrated experience.</td>
<td></td>
</tr>
</tbody>
</table>

Table 1 Enterprise 2.0 tools under the 4Cs categorization (Cook, 2008)
Appendix 2
Interview with Incentive Live representative

Interviewers: Agne Mackeviciute, Stanislav Iacubiţchi
Interviewee: Rickard Hansson, CEO of Mindroute Incentive AB
Type of Interview: Online interview using Skype
Date: 2010 March 29
Duration of the Interview: 70 minutes

1Q: Could you tell us about the Enterprise 2.0 platform implemented at IBS? What are the Enterprise 2.0 tools you have implemented there? Which of them are the most popular and most widely used? What is the intended purpose of the platform and the tools?

A: The platform is called Incentive. It is primarily focusing on collaboration features and not so much on social networking features. If you look at what tool is most widely used – it is the wiki part. It stands for about 90% of the communication. Blogging and other tools are in this sense way behind. About the intended purpose: the problem within the IBS was that each country had created their own intranet in some way or another and some countries chose to create wiki-like platforms and others classic communication intranets, so the intention from the head office was to kill the local intranets and replace them with ideal global intranet but to get that in place they needed to enhance and upgrade collaboration: so the local officers would not run out and get again their own local solutions across intranet but instead each office and each individual would contribute and create their own intranets within the intranet.

1.1Q: IBS has many subsidiaries in many countries and all of them had their own intranet?

A: Yes, prior to our platform they all had their own intranets in all the subsidiaries in 21 countries. There was a huge problem for them because they had no way of sharing the knowledge and information between the different companies. Their main group is consultancy and there was a huge deficit of wikis and collaboration so they wanted to speed up the implementation.

1.2Q: As we understood, there are two main tools implemented at Incentive, namely, wikis and blogs. What are the other tools?

A: There are also micro blogging, like twitter, but again within the firewalls. We have also implemented widgets and Business Intelligence informal feeds. They can set up subscriptions for different feed over the intranet and set up them as mutual package that co-workers can subscribe to. Instead of subscribing to hundreds of different feeds they can instead subscribe to one feed and assemble quicker the sub-feeds. But the most breakthrough we have so far is the wiki part. We are waiting for other things to brake through as well.

2Q: What are the drawbacks of Incentive Live? How do you think an organization should address them?

A: There are no drawbacks, I don’t get it (laughing). We have been running this platform for 5 months only and the only problem we had yet is that we have a very low participation level. What I mean by that, we have attracted almost every employee of the company to go to the intranet and try its new version, but we have only reached about 15% of them to ac-
tually contribute and create comments or create a new outcome. That is way too low figure for the company; I think you have to reach minimum 30-50% to be participants. 15% is way to close to the use of public collaboration platforms such as Wikipedia and that is ok there, because there are huge amount of users, but in the organization like IBS with 1100 employees, 15% of participation is a too low level. But the main issue we have is the communication issue, I think. We have managed to launch the new intranet but we forgot to tell people that it is an open intranet that everybody can participate in. So the main experience is that it is used as the classic intranet where you just read the information and don’t participate, don’t co-create. It is a rhetorical issue, actually, to inform people that it is ok as well to create it in your own language, because we have decided to let each country to use their own language, instead of, for example, using corporate English, because we didn’t want them to feel being forced at it - to speak correct language or having perfect English. So that is the main drawback for the moment – getting the higher volume of participation in order to gather more contents.

2.1Q: What has been done in the company to increase these levels? Did company motivate employees to use Incentive?

A: Yes, we have done it on department level, meaning that we began this in marketing and information department, which was a small group of people, around 40 or 50 employees around the globe, working at that department. What we did, we did a so called launch, we invited all the officers around the globe to have live feeds and live streaming and did inspirational talk, we launched the concept, we introduced the tools and told it was ok to contribute and it was successful, but this hasn’t been done in each department, we only had this for marketing department. And that is, I think, also why the participation level is low, because the other ones were not introduced to this way of working. In any case, we solely focus on the concepts rather than tools. Why are we doing this? It is important for us that the users would understand what the benefits for the company and what the benefits for the individual are… They will work out the usage of tools by themselves.

3Q: Now we have some more specific questions. Can employees join specific networking groups (formal/informal) inside IBS using Incentive Live? Are those groups project-based, or specific interests, or with other social interests purposes?

A: Not for the moment. We gonna launch social networking tools in new version in May, we have done some research among our clients, what are their networking needs and the main need is actually for the informal networking. They want to find people with same interest, like technique geeks and people who are very interested in movies etc. And if you look at the company like IBS, they have such a big problem to set up a wiki for the company, which is all around the world, in different locations. Lots of the employees spend like 6 months in the customer’s offices than in their own office and to create a good refill there is to actually put forward employees and what they are interested in so they could create their own social networks. We have seen this successfully implemented in one of our Swedish clients. Though it was not a social networking, but we allowed employees to blog just about anything they wanted to. Many personal blogs came out there, not work specific, but what we achieved there was a refill, of course, but also a possibility to find people with mutual interests. The result there was that people were more eager to stay at the same company, rather than to leave for next, because by leaving the company they would have lost their social network, which was behind the firewalls. So, it created higher employee retention rate. As for today we are mostly focusing on collaboration and the next version of Incen-
tive in IBS will be coming with the social networking tools which concentrate more on connecting people and include more specific features such as twitter like.

4Q: Is there any evidence that organizational structure has modified (at least on the informal level) and if it has any positive or negative effects?

A: We haven’t seen yet any modifications, except that the informal networks actually merge. The informal networks become more or less formal, because they become visible all of the sudden. Prior implementation, you had no idea actually whom to ask the specific question. But after the couple months you see specific competence, interests emerge, you see how to influences the customer, the decision maker etc. So Incentive has modified the organizational structure – it has made it more visible than before. The huge negative effects we have not seen yet. Maybe it is too early to say. The huge positive effect is the extent of searched information, because in a successful platform you get huge volume of information published and the search than give better results. If you search for specific business related information it is nothing that will help you better in this. In this way you are adding value to the existing information.

5Q: In regard to this, do you think that Incentive Live supports decentralized decision making? Which Incentive tools support it?

A: It absolutely supports decentralized decision making, especially through blogging. We had to put efforts to get blogs on the road, because in the wikis and collaboration tools you don’t see people working on the same issue and you are not so exposed but in the blogging you are actually exposed – you reveal your opinion or you state your point. That is why blogging is harder to get going. But if you get them going, you get positive effect on decentralized decision making. What you see is that bad managers come to life, because bad managers often create silos, which means that they get the information from the group they work with and then he presents the information up to the higher managers. So the groups have no saying, employees don’t have the possibility to express their own feelings and ideas, because they are always halted by bad managers. And what we have seen is that now knowledge workers can go around the bad managers and speak directly to the higher management or directly to their co-workers. And also in that way you are tearing down silos. Information is more easily spread between departments. There is more mutual information between service and development. All of the sudden everyone knows everyone. When you approach the client, the developer says my role is to work for the company and your role is to sell and it was not possible before because the structure was different. So this is how it affects decentralized decision making. The greatest fear, however, of the top level managers is that they will loose the control they never had. They think that they control the message and that is true, they control the message, but they don’t control the opinions, they don’t control the discussions. And if you succeed, you make the discussions emerge and you may approach them better than in a coffee room or whatever.

6Q: So as we understood, the communication between the employees increased both vertically and horizontally since the implementation of Colin strategy? How do you know (measure) it?

A: We can’t get any figures on that, we have the figures only on people who create the wikis and come doing the commenting and reading the information. That is the information we can get. To get to know about the other things there is only one way – by asking. In one other client, which is a Swedish bank, we see a 10% increase in the efficiency and that is mainly because of the communication being better between the employees. And that is be-
cause they have the rule to avoid e-mails in their work if possible. So if it is not the most specific mail about my salary, it may be published and it should. And they try to do this on all occasions. And this gives you an easier search and better search results. And you see, again, knowledge emerge. And you get to know who has the best knowledge in excel or whatever. It is a gasp thing to say that the communication between the employees improved. It maybe most notably improved communication between two different departments, because to the other departments you usually used to mail information. And you have the feeling that communication is working ok, but you have no idea what other department is doing. And spontaneously customer will say: they don’t care, they have nothing to do with information, that is like saying, ok, then you don’t have to reach their information, because they have much information published that you don’t need today. BUT maybe in 6 months you will need it.

7Q: Is there a possibility of instant contact in Incentive Live? Do employees use it?

A: No, we don’t have any IM within Incentive Live, if you refer to such as MSN, Skype or Office communicator which is used within the firewalls. IM is done through 3rd party software. But it is absolutely part of the Enterprise 2.0 concept. The main objection I have is that IM again creates information silos because it’s one to one communication and it’s not saved or shared. I think it’s a huge benefit for all to have a wiki or blog commenting and formalized communication because it is stored over time and can be searched at a later time, and to me this is the real power of the Enterprise 2.0 that you can search for any information created at any time by anyone. IM can be also done by micro-blogging instead, which will let people communicate in real time but the discussion will be stored centrally. And again it’s up to people to decide in which way to communicate.

8Q: Does communication between managers and employees increased since Incentive Live was introduced? How employees may reach managers using Incentive Live? Do they do it more often than in past?

A: Absolutely! They can properly reach them. It’s merely just commenting on the blog posts or directly communicating with them through the blog post.

8.1Q: Do people do that? Aren’t they shy or something?

A: They do it more often than in the past, but this highly depends on the E 2.0 strategy within the organization. I’ve seen a lot of CEO’s from different companies saying ‘This blogging thing is great! We are going to blog! I’m going to do it by myself once or twice a week’ or whatever, and after that CEO’s are saying ‘I want opinions! I want to know what you think about it’ and so on. And that mostly fails because you have to more or like lobby this thing, you have to appoint people who should have opinions and say ‘If I blog do bring that opinion through and comment on my blog’. It actually takes a lot of courage to stand in front of 1100 employees and say your opinion, but if one does so, commonly a lot of people will follow, because that one has taken this first step. It’s exactly same thing with these tools. Someone has to start commenting to get other people to follow the comment or say their own opinions. But again that is a strategic work; there is nothing that happens by its own. I have never seen this happening before, in very very open companies in the begging maybe it may happen but you have to have this attitude as part of your strategy. But when you get that in place overtime it makes more people to comment and eventually creates a more open atmosphere within the company.
Us: You have partially answered our next 2 questions, so if there is anything to add could you please comment on them:

9.1Q: Do managers follow (are interested in) the discussions held inside Incentive Live platform?

9.2Q: Do managers in any way spread/share values, ideas, visions, future plans etc. using Incentive Live? Do they use blogs or some other tools in that sense?

A: Yes, absolutely! In some way or another. In some cases with some clients we urge the management to say ‘the hell out of it’ and that’s because it motivates employees to begin with it and that they are allowed to say what they think. In other cases we encourage management to make the first attempt. In this case Oskar Ahlberg is part of the management team from IBS. Since the company is listed on the stock exchange, all the communication within the company is more or less adjusted to the stock owners rather than employees. There are a lot of official reports and press releases that doesn’t bring too much to ordinary employees. So what he has tried to do was to create a blog where he explained what they were doing in a more ‘human way’ and it’s working really well. Employees were eager to give instant feedback to what he suggested and better understand new management proposals. Also he has a ‘light’ tone in his communication which supports a ‘normal’ communication with lower level employees. So blogging is the most commonly used tool by managers in that sense.

10Q: Do you think that organizational culture has changed after the introduction of Incentive Live platform or that the culture was the main factor that triggered the adoption of such a system? How would you in general describe the influence of organizational culture in relation to Enterprise 2.0 philosophy (from other experiences)? What role it plays in this kind of situation?

A: I know several companies with very specific organizational culture, like patent bureau. This concept works very differently in different companies. I’ve met couple of companies like law firms, with particular organizational culture, and for them it was very hard to grasp this idea. The main philosophy inside their company was to move up within the hierarchy, starting your career as a trainee and finishing as a senior partner. So it’s kind of tricky to adopt such a system in these kinds of environments. Anyway, I consider that sooner or later those companies will go for E 2.0 as they are at the same time the most knowledge intensive organizations with huge amount of information and knowledge stuck into the heads of their employees. The main objective here would be to unlock the knowledge from these employees and be able to search it at any time. And of course if these organizations adopt E 2.0 this will eventually change company’s culture.

11Q: Can people make complaints through Incentive Live? Have you had any complains so far? How are the complaints dealt by management?

A: Yes, of course, but again it’s up to the company’s approach. For example there is such notion as ‘executive hijacking’. For instance management can suggest some new idea or proposal and the minute criticism comes from employees they put them into silence and you have the initiative killed. That is how ‘executive hijacking’ works. In our case we hope that these things (constructive criticism) will happen and the management will support it, because it’s a powerful tool. If you go to Twitter.com today you will get an overview of what exactly is happening in the world. You can see what are people talking, complaining or smiling about and all of that stuff. But within the company you cannot see all that stuff.
You maybe can hear something during the coffee break but you can’t see it everywhere or search for it. If the company succeeded in the way of using it, that it is OK to criticize, then a company can see when people are not satisfied with bonus system or coffee machine or whatever and then management can approach all these problems. You can only speak to one person at a time and not always you can be sure that this complaint is relevant. But when you deal with 900 people then you understand that maybe something is wrong and requires more attention. In long term this kind of attitude increases the trust within the organization. But at the same time this is a thing that managers are also very afraid of, that criticism will occur more often. There is always a lot of criticism but you didn’t have any tools in the past to actually see it and manage it.

12Q: Do employees suggest more ideas/solutions on how to improve working processes or how to deal with specific problems using Incentive Live? If yes, how can you compare these results with the previous intranet? Are managers more favorable to the ideas emerged in such environment?

A: Both Yes and No. Of course if an E 2.0 is implemented successfully in an organization a lot of comments will appear in a short period of time. In this case it’s very hard for CEOs to be part of every conversation or idea, but often these issues are handled in small groups. You always have middle management or a decision maker nearby in the organizations and these issues are handled on that level. If a team has collaborated through wikis and blogs and came up to some ideas they can ask for managers to either comment on the blog or send them some feedback through the link where ideas are stored. And this is a huge difference between the new and old intranet, because in the old intranet you had the information department which decided on what information to publish and which one to skip. They considered which information was relevant or not. Now anyone who has a problem can publish it on the intranet and receive feedback. People are contributing all the time regardless the fact if it’s ‘relevant’ now or later or whenever. I have to say that good managers favor these types of ideas more than the old ones. If for example in past many ideas came from top or middle management it was much harder to sell this ideas to the employees and in that sense it’s easier to all the way around. When such ideas are suggested by employees they can be executed in no time, because they have created these ideas and made them emerge and they believe in these ideas. If such ideas are accepted by the company they are definitely more favorable to be executed and management has to spend so much less time in getting people to work.

13Q: How do you think does Incentive Live better enhance organizational learning objectives compare to previous intranets? Why? Which tools are the most effective in enhancing organizational learning?

A: By organizational learning you mean knowledge management or something similar?

13Q: Something like that. It’s like a concept of spreading the knowledge across the organizations and helping employees to learn new things faster.

A: I think it absolutely enhances organizational learning, because you are writing the type of content that was within the firewalls and you don’t have any obstacles in terms of permissions. If you see an article you can edit it instantly or if you are within a specific subject you can easily create entirely new one. In that case you give a chance for employees to publish their best practices and find the right people who can help solving the problem. For example if someone needs an expert opinion from someone else he has to find and ask that person, and maybe that person doesn’t know the answer and he has to look for another and so
on. And if you get that things going (E 2.0) you can easily find the people who actually have the knowledge for that specific question you have. So it is absolutely enhancing O.L. compare to previous intranets, because there was much less interaction. We saw examples of firms which tried to make their intranets more social by simply adding commenting, but you can only comment on the information which is highly uninteresting for you. The most effective tools enhancing O.L. is by far the wiki tool. Wiki is like a white board. Anyone can write some notes, to add or remove information, mark what is done and what is not done etc. And it’s a global-wide process. If you work in a global company like IKEA or SonyEricsson or whatever you can have a global ‘white board’, which can preserve information that can be searched later.

13.1Q: You mentioned that this platform can have many languages, but about wiki you still need to have one language to create it.

A: Yes, exactly. What we have in Incentive Live is that each company in this case can create their own wiki. If you look at Wikipedia, each language has a wiki. For our cases we have wiki for each country. And we also of course have a central wiki. Nonetheless, it’s not that important because you can search for information regardless where it was published, but within the company we encourage to use their own language, because we don’t want to create language obstacles. We also use Google Translate which is good enough to translate it. But local language helps people to actually collaborate and share more information because they are not hindered by language barriers.

14Q: In what way (using what tools) employees get (give) feedback on their work or ideas using Incentive Live? Do you think that this kind of feedback if useful in such a work environment? Why?

A: Yeah, they get feedback through people commenting their good work or not so good work, so they get feedback through discussion. It’s like if you have a blog of your own where you can share some thoughts and ideas and get feedback. In that way you can get your feedback naturally if I can say so. You can also grade information, if you like it you can put 5 stars or if you dislike it you can put 1 star. You can do both comment and grade and also see how many views my blog had, so it’s a self-driven process like in everyday life.

14.1Q: Maybe sometimes we get more feedback using these digital tools than in real life?

A: Yeah, you are talking to a broader audience. If you are talking to a co-worker next desk you only get that opinion or feedback. But if you blog it you more or less communicate to 1100 other employees and you will get a higher impact on your opinion.

15Q: Do you consider that the use of Incentive Live saves or consume times? Why? Which tools do you think are most time saving?

A: In the beginning it will consume more time because you have to learn the new tools. We don’t want to create new time consuming things but we want to move the time. Everyday people are writing emails, they are writing things in a notepad, or notebook or whatever so we want to move that to the wiki environment. For example we had a case with a bank where we have implemented E 2.0 and every time they had a board meeting they had real time protocol writing so the minute the meeting was over the protocol was published. They had to write it anyway, but instead of emailing a lot files to different people, and then merging all the files with new corrections again was a time consuming thing. In this case you just mail the link of the protocol which is placed in a wiki and say to correct if something was
missed. So in the begging it might be time consuming but when you get over these obstacles it definitely saves time. It saves time in 2 ways. Maybe it doesn’t save so much time on the contribution side, because you have to write it down anyway. But it absolutely saves huge time on the search side. People spend more or less half an hour a day to search the information they never find. They end up going to some persons asking ‘where I can get this information?’ If we could lower that, for instance we could say ‘every day we will save 38 minutes on your search time’, then you are saving a lot of time and then you will see the efficiency going higher. And also the frustration will leave employees because there is a lot of information they want to share but in a traditional intranet there is no natural place where to do this. But in a wiki environment it’s just information inputting and tagging and then it’s searchable. It’s has no structure or context, except the wiki context where you can publish anything. It’s a frustration for a lot of employees to get rid of the information. And we can see people using wikis for all-purposes.

15.1Q: In the context of that question do you think that people are spending more of their free time using these tools, like staying at home and searching for information or writing blogs or something like that?

A: It’s not that fun. It’s more business oriented. A lot of companies for instance have chosen to shut down Facebook in their workplace, because people are spending too much time there and all sorts of viruses are attacking their system. But anyway, what we try to do is to encourage these companies to create their own Facebook, which means that instead of turning their eyes outside employees can turn their eyes inside the organization, creating social networks within the firewalls, creating collaboration tools for everyday work life, because most of the tools are created for the company’s sake not for the employees’ sake.

16Q: The main subject of our master thesis research is the effect of enterprise 2.0 tools on innovation. Since now we have been asking questions about the factors, which in our opinion directly and indirectly influence innovation in the organization. Maybe you could tell us something more directly about the experiences you had related to Incentive and innovation in IBS or your other clients. Can you give us an example of successful innovations achieved using Incentive Live platform?

A: I cannot say about the IBS yet, but I have a story from our bank client again. There was a guy who was a master in excel – every detail and he could create any formula in two seconds. Everybody was, of course, going to his desk and asking him: how can I solve this problem? He soon got quite tired of that and created some kind of blog. As soon as some people came to ask him something again he asked them to come to his blog in 5 or 10 minutes and the answer will be posted there. He never mailed them, he never called them, he just created a blog. And over time he got less and less people coming to him and asking him directly questions. Most people googled the intranet and found those excel solutions. The main innovation was that this blogging saved much time. Additionally, people found the information, they didn’t know existed. The person quit after some time, he left the company and went to work for other employer. But the knowledge is preserved. Even if the person is not there, that excel blog is still there and is highly used still. This couldn’t have happened in a classic internet world – in mail to mail conversations. This is innovation in itself. I think it is too soon talk about the direct outcomes, and plan something like: we gonna shape the way we work, or we will improve our sales by 15%, or expand our production line by 10%. This is too soon to expect such direct effect both in IBS and other companies. But there is other kind of innovation going on – process innovation – you see
new solutions to the problems and the problems are solved by many people, not only by me and those who are related to that problem.

16.1Q: So you basically believe that the Incentive platforms helps the innovation in the company.

A: Yes, absolutely. But it also again is related to the atmosphere of the company. There is this case of not being afraid to be wrong, this one major issue. And manager should always be flexible. It is better to have 100 crazy ideas than one great idea. But for that you have to have a right atmosphere. How you address and deal with your employees, whether you call them Human Resources or Talents, it makes a huge difference.

17Q: One of the last questions. You mentioned in the beginning this rate 15% of contributors. We wanted to ask if though not all employees are actively contributing for Colin but are rather passive consumers of its benefits, do you still think that Incentive Live indirectly supports innovation by providing access to passive consumers so they can get inspired, use shared knowledge/information and help them independently develop their own ideas and later transforms them into innovations? In that sense do you have any evidence that overall innovation performance has increased even though it cannot be directly attributed to Incentive Live?

A: Absolutely. In the public platforms like Wikipedia there is 90%, 9% to 1% rule. This means that only 1% are creators, they offer completely new article from sketch. 9% are contributors, who edit the text, make it more accurate etc. And 90% are lurkers who only read those articles and don’t contribute. And we have the same within the walls of organization – we also have the creators, contributors and lurkers. And in IBS we have a goal to increase the participation at any cost. We would like to reach 40% to 50% and it is a very good figure, because you will never reach 100%. However, what we have seen, we reach 100% in one way or another. We treat the communication differently. In the previous intranet we said – read, or you are not doing your job. But in this case we created a platform where we earn attention and earn respect from the peers. Like on the web-page you get the visitors attention. And we try to create the environment that would catch co-workers attention. And if we succeed in that, we will reach 100%. We gonna reach 100%, because over time we will get a great searching engine which could answer more or less any question you have. Not only business ones. From that you will probably be inspired, but more importantly, you will be more efficient as well. So to answer the question, yes, they will be inspired, not to create and contribute but they will be more efficient, because they will find the information they cannot find anywhere else.

18Q: Most articles we have read about innovation and collaboration are usually mentioning collaboration with other people outside the organization, like partners, customers or suppliers. Do you believe that these platforms, such as Incentive, should be shared with these partners? Would it be beneficial somehow?

A: Absolutely, because then IBS could have collaboration with the customers and partners and that is a good idea. However, there is always the question concerning security. How do you share internal information without exposing yourself? And that is always a big problem, because security and ease of use have never worked hand in hand. Either there is high security and there is no ease of use, or it is easy to use, but it is not secure enough. But what we believe is that other separate platforms may be used to communicate to the customer. It is technically impossible to do it any other way, it is so hard to make infrastructure to work: behind the firewall and outside the firewall and so on. But the benefit is there
absolutely. Would be great to have all within the same platform, it would be totally transpa-
rent if you communicate with you consumer, with you partner, with your reseller. This
would be very beneficial, because no one knows the needs better than your customer, of
course, and within the firewall we have a problem of getting our heads out and hear what
the customers want say and so on. I see the benefits, but I also see the problems with the
infrastructure.

Us: These are all the questions we wanted to ask. Thank you very much for the interview.
We will send you the transcripts as soon as possible. If you have any comments, you are
welcome to share them with us.
Appendix 3

Interview with International Business Systems (IBS) representative

Interviewers: Agne Mackeviciute, Stanislav Iacubitchi
Interviewee: Oskar Ahlberg, Senior Vice President for Corporate Communications of IBS
Type of Interview: Online interview using Skype
Date: 2010 May 12
Duration of the Interview: 40 minutes

Q1: So we would like to start with some general question. What is your impression of Incentive? What pluses and minuses do you see in it? How do you address them?

A: OK, so the overall impression is very good. I think it’s obvious that it has been designed from the scratch to be what it is, a tool designed for collaboration inside a company or an organization. It is clear that it has been designed specifically for that purposes and not just being an ‘add on’ to for example a content management system or to some sort of a web system. It is purely a social networking and collaboration service, so that’s I think is the main impression and I think that the biggest plus is that all they do is very good for that sort of things. And on the minus side, perhaps, it’s a very new tool, it has some minor bugs, it has some difficulties, there are things that don’t work they should be working and all sorts of little things. It’s clear that it is a new tool or a young immature tool. There are a lot of support requests, we often ask for little fixes, or little updates, or little enhancements.

Q1.1: So do you get these requests from your employees?

A: Yes, right. So we have about 1150 employees, and I think about 900 of them have logged in at least once already so it’s very widely used as a tool.

Q2: Also related to previous question is the next one. Do you consider that the use of Incentive Live saves or consume times? Why? Which tools do you think are the most time saving?

A: I think most people say it consumes time, but in my view it saves time. People spend more time on a new tool, so people feel they have to go to a new place. But I think the time they spend on Incentive means they save it in other areas. Particularly, people send less emails and they spend less time searching with Google or other search tools.

Q2.1: How much do you estimate these time savings? Approximately for example.

A: It’s very difficult to say. Depends also on what function you have within the company. We did a survey last year, so if you are a consultant (our biggest source of revenue and the biggest number of employees are consultants providing professional consultant services) that’s where you have the biggest time savings. The survey results said that about 10% of what we call ‘billable time’, the time that we can bill the customers, is actually spent for searching information and this is a huge cost for us if you take the cost for a consultant. We hope to get that at least 25 to 50 % off that cost down, to take away at least 25% of the search time at least for the professional services. Obviously, not everybody in the company works with professional services so if you work in the HR department it is a little bit different, but for the consultancy, which is the biggest revenue for us, we want to say that it saves at least 1-2 hours more every week that they can deal with customers. And if you av-
verage that, we can say that our average speed to a customer for a professional service guide is saving about 1200SEK.

Q2: So you have pretty much time expressed in money?

A: Yes! I guess that’s what you are after.

Comment: Yes, of course! :)

A: So, I can’t prove that we have gotten to that yet, but that was the ambition when we bought the Incentive tool. I also should say that we are not there yet. We still need to have a lot of information in the systems that isn’t searchable yet so, you know, it’s something we are still working on to get Incentive to help consultants to search for information everywhere not just within the Incentive tool. But the ambition is to save more time. So saving 1200 to 2000 SEK per a consultant per a week is our goal.

Q3: Do employees suggest more ideas/solutions on how to improve working processes or how to deal with specific problems using Incentive Live? If yes, how can you compare these results with the previous intranet? Are managers more favorable to the ideas emerged in such environment?

A: Yes, employees suggest a lot of ideas and constantly I would say they come with lots of ideas. Mainly, I think they come with ideas for content. So they say “This specific content should be available”, “I want to search for customer projects” or “I want to search for contracts”. So the main suggestion is that they want more content inside Incentive. We are getting requests or suggestions for improvement in working processes as well. The previous intranet didn’t have working processes at all. The previous intranet was a pure working database. The only way to work with was to send an email to me and say “I would like this to be posted on the intranet” and I would say yes and I would send it on to someone to do the technical converting so it can be posted on the intranet. So it was only a one-way process. You can’t really compare. It is like comparing an airplane with a bicycle. :) Managers… hmm… it’s a good question. Definitely I would say employees are the most favorable for this, they are the ones to accept the new principles or the paradigm more quickly, and they really really quickly pick up new things and they have lots of ideas. Managers are slower and they don’t use it so much, they don’t have so many ideas and they are worried. I definitely know managers that are worried that they will lose control, so they are less favorable, initially at least. For the wrong reasons but that’s the fact and the employees are more favorable to Enterprise 2.0 than managers.

Q4: Do you in any way spread/share values, ideas, visions, future plans etc. using Incentive Live? What tools do you use for this purpose?

A: I’m using it. My job is “communication director” so I use Incentive to spread values and visions and plans. But what I typically use, I guess, the ideas and points of view of other managers as well. I use the blog mainly; blogging regularly 2-3 times a week in Incentive and some of it obviously being my thoughts and ideas but a lot of it is borrowed from other managers. For example last week I met with the CEO and he said this and that and other and I decided to write about it in my blog rather than him doing it himself. He is more old-fashioned so he doesn’t like or understand things like blogs and content and so on. :)}
Q5: Does communication between managers and employees increased since Incentive Live was introduced? How employees may reach managers using Incentive Live? Do they do it more often than in past?

A: Absolutely! There is a lot more information. If you compare to a year ago it’s a completely different environment. There is a huge amount of information shared from management to employees but also more importantly the other way around. So for employees it is a much easier way to communicate to management if they have a concern, if they have an idea, if they have a problem, if they have done something good etc. It’s a lot easier for the employees to communicate to managers, not only to their personal manager but also to another manager from another part of the company, either another geographical part or more importantly I think from another functional part. So a consultant can come with an idea to the marketing department much easier. It’s a big risk that departments create their own silos or their own islands and a tool like Incentive helps to break those islands up. Yeah, it can be said it’s a great tool for bridging those islands.

Q6: Do you think that the use of Incentive Live became a connection link for a deeper cross-functional communication between employees from different departments?

A: Yeah, absolutely! And I try and my department tries to help employees in this sense. They often post a question to me or my department and it’s very easy for me to say that ‘It’s a great question, but it is a question for HR department’ and I can just forward it to them or alert the HR department. So absolutely, it’s a great connection link between main functions and departments. I think for us the main advantages are between the professional services and product development department and also between product development and marketing department. Marketing and product development need to communicate a lot because marketing knows what the customers will want in the future and product development needs to tell marketing department what they are building for the future. So they need to communicate a LOT! And it’s often difficult because they have very different cultures and very different fields, so we always have to help these two departments to communicate.

Q7: Do you think that the rate of collaboration between employees from different levels, departments and groups has increased after the introduction of Incentive Live?

A: Yeah! As I said we only started to use the tool in November and really in a big way only in January/February but already I can see a better inter-departmental collaboration between product development and marketing particularly and the professional services is coming as well.

Q8: Do you think that organizational culture has changed after the introduction of Incentive Live platform or that the culture was the main factor that triggered the adoption of such a system?

A: Not yet! I wouldn’t say there is a cultural change yet. I could see this change at individual level, but individuals work differently. But to say that there is an overall cultural change I think we will have to wait a little bit, I can’t say we have a cultural change it’s too early for that. But that is going to be on the individual level and hopefully that will trigger a cultural change over time.
Q8.1: But how would you describe the cultural aspects of your organization. Is it like more open or maybe more closed. As we heard you have many subsidiaries in different countries so is there any pressure on your organizational culture, as there are different nations and different people?

A: Yes, we definitely have that problem. We are a big organization geographically and we have quite a lot of small offices, like 20-30 people in one office. And it’s always a challenge for us. We try to have offices where customers are and customers are spread all over the world. So that’s also a struggle or a challenge for us to get employees to share their problems, to share their solutions and to come with new ideas. And that was for me definitely the biggest driver for purchasing the Incentive platform, in order to increase the collaboration between these employees, because we are a “100% people company”, we don’t have any factories, we don’t have any warehouses, we don’t have anything except people and those people’s mind and experience. And you know, I can look at two people whether from sales or consultancy and one can be 10 times more productive than a person sitting next to him, so it’s so important to help everybody to be more productive. You can get so much benefit from raising the productivity level of those who don’t have the right information, or the right motivation, or whatever it is. It is not like in a factory where you can increase the output of a machine by 10 or 20%, but if you motivate a person you can produce 10 times or have a 1000 % increase, which is a big difference between a machine and a human being. So for me motivation and access to information are the most critical drivers for a company like ours.

Q9: We are writing about the impact of Enterprise 2.0 impact on innovation. In that sense can you give us an example of successful innovations achieved by the IBS employees using Incentive Live platform? Do you have evidences that innovation rate at IBS has increased after the introduction of Incentive Live?

A: Well, I wish I could say that this person had this idea and it became a patent and we earned 10 millions out of it (laugh). But I can say we definitely have a lot of small ideas and good ideas that come up, for example what we are doing now is the coming up of a new release of our main software the “Enterprise 7”. When you are in a software company everybody knows that there is a new release coming and it’s all sort of a ‘big unknown’ and for some people it’s a scary things, they don’t know what is coming next and if they need to do a lot of training and if their knowledge is going to be old and for some it’s a great opportunity. And now for that we have a product development blog, which means it becomes less of a mystery and it’s easy for everybody to understand what is coming in the release 7, rather than just being a ‘some time in the summer’ ‘something that we don’t know’ but we call release 7 is coming and everybody makes their own idea. I wouldn’t say that I can see that innovation rate has increased, not yet, but it definitely helps, it helps sales people, it helps consultants …

Comment: We wanted to say that by innovation we not only mean inventions or something like that, but we also mean some improvements of processes, maybe some better solutions to everyday problems and things like that, because we think that these are also innovations in some way.

A: I would say that in the product department they are now with Incentive much better at sharing information inside the department, so what was developed in one area of a system can be used in other areas of the system. So they share code much more easily with Incentive. We are writing computer code and share computer code and by having code examples
available I think is a huge step forward, I think, for the product development department. We haven’t formalized it yet, it’s not a 100% that everyone is doing that, but I definitely reward if some people do that and it has a positive effect not only in their but also other departments as well.

Q10: We talked with Mr. Hansson about the rate of participation in Incentive and he told us that there are about 15% of contributors and 85% - users. Maybe you have more fresh information. Has this rate increased, decreased or remained stable?

A: I think that we are such new users that we don’t have 15% contributors yet. I think from the start we had maybe 5 contributors out of 1100, and that is 0,5% of contributors, now we have about 50 who contribute regularly. So during the first several months we went from 5 to 50, so 10 times more, but we are still long way from 15%. I think there still is big fear in a lot of people, they are afraid to contribute, because they don’t speak English very well or they are not very good at spelling, they also think “I don’t have a complete idea of it”, or “I don’t want to put it on big Incentive platform before it is finished and well thought through and before I have to talk to some of my colleagues”. So I think people are waiting and they are a little bit intimidated of sharing idea with all the employees. They don’t use it to share everything completely. So that is something what we were working on and every time I meet people, I get this question – can I share it only with some people, can I share it with only my team, and it is not because they want to be secret, but because they don’t have enough confidence to share it with everybody. So it comes from both the language prospective and, I guess, knowledge perspective. Not everybody has confidence to say – I wrote this code and it’s fantastic and everybody should use it. Some people are like that, but not everybody.

Q11: How do you help those people to get confidence? Do you somehow encourage them to use Incentive and share their ideas?

A: Yes, I talked about the gardener aspect. We talk about contributors, but there are different types of contributors – some of them are creators of contents, others are amendments of content – they fulfill a gardener role. This is something like Wikipedia – you have to realize, that not many people create new contents, some of them go and do, for example, spell check, or add facts. Someone writes something in wiki and someone else can confirm that it is true, saying like “I can confirm for I have read this in this other article”. So we talk about that to people – don’t think that your colleagues will say this is bad, take this opportunity to say – this colleague has this great idea and I can add to it by saying this, or I can correct this little mistake in the bigger idea. The best of this is the spell check. I’m Swedish and I write English ok, but I’m not a perfect writer or speaker, and I do many spelling mistakes, grammatical errors and so on. And it’s fine. I point out, look at my blogs. They are full of spelling errors and that’s ok, people still understand what I’m trying to say. And my blog with hundreds of spelling errors is better that no blog at all. It has much interesting information. And I ask my colleagues if my blog is useless for it has many spelling errors, and they say, no no no, we think it’s interesting.

Q12: Mr. Hansson told us that the platform, depending on the country where it is used has different language, which helps to fight this lack of confidence of writing in English. Is this true?

A: Yes, we have contents in Finnish and Flemish, and Swedish, and other languages as well. And we say, if you are really uncomfortable writing in English, write in your own language. I myself sometimes link to Swedish newspaper articles and write several sentences in Eng-
lish, like: this article is in Swedish, it is about this and that, if you are interested, you can read full article here. And it has happened on several occasions that someone read the article and translated the whole thing, because they thought that this is a really good article and everybody should read it. And in the cases that were interesting but not fantastically interesting, I just wrote several sentences, it didn’t take much time for me to do it. If it is interesting, someone can use google translator to translate it into English and then some gardener will correct it to proper English. The Swedish text will become very good English text eventually. That is why we are encouraging people – write in Danish, Italian or whatever you language is.

Q13: One of the last questions we have is: How is the feedback system working in Incentive platform? Is it useful?

A: We haven’t had it before, so it will always be better than nothing. We are trying to encourage people to use Incentive to give feedback. But mainly people still use e-mails. So they will call Jill or me, or they will send an e-mail saying, this should be in Incentive, and I always e-mail back, saying yep, you create the article on Incentive and I’ll make sure that someone will solve your problem, so I always encourage people to post their question in Incentive before calling or writing e-mail.

Q14: We have one last question, we asked it Mr. Hansson as well. Most articles we have read about innovation and collaboration are usually mentioning collaboration with other people outside the organization, like partners, customers or suppliers. Do you believe that by including more actors to Incentive would be beneficial to IBS?

A: Absolutely! One of our partners is an Indian company, called HDO Technologies. They are our development partners, and they already have access to the intranet, so they can use it the same way all the IBS employees do. We are definitely discussing the using of Incentive or similar tool with our customers, to give them access as well. That would be probably not the whole intranet, but more connection to the website, where customers can go and log on and have the customer environment. I think we need to separate employee environment from the customer environment, because in the employee environment we have many things, such as pricing, fee rates for consultants, salary policy and many other things we don’t really want to share with customers. But the principle, I think, works very well for customers and we are thinking how to better improve communication and collaboration with our customer base. We already have one technology partner, which has access to Incentive, and customers would be a great addition, but we have to think a bit about how to do this the right way. Today it is difficult to separate employee and customer content, you have to set a completely new server and completely new database and duplicate data and so on. So I come back to the fact that Incentive is a young tool, which does not have more complex functionality yet, so I don’t know if Incentive would be perfect for doing that or we would do something else. From a critical perspective, yes, we would like to have the collaborative tools with our customer base, absolutely.

We think that it is all we wanted to ask, thank you very much for your time. We appreciate a lot your contribution. We will send you the transcripts of this call and our thesis as well, when it will be finished.
## Appendix 4

### Process of data collection

<table>
<thead>
<tr>
<th>Date</th>
<th>Contact</th>
<th>Company</th>
<th>Mean of communication</th>
<th>Purpose of communication</th>
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<tr>
<td>2010.03.04</td>
<td>Rickard Hansson</td>
<td>Incentive Live</td>
<td>e-mail</td>
<td>Master thesis proposal</td>
</tr>
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<td>2010.03.17</td>
<td>Gustav Jonsson, Rickard Hansson</td>
<td>Incentive Live</td>
<td>e-mail</td>
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<td>Incentive Live</td>
<td>msn</td>
<td>Postpone planned interview, add each other on skype</td>
</tr>
<tr>
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<td>Incentive Live</td>
<td>e-mail</td>
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</tr>
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<td>2010.04.15</td>
<td>Oscar Ahlberg</td>
<td>IBS</td>
<td>e-mail</td>
<td>Forwarded from Rickard Hansson, present thesis research, ask for interview with someone related to the Colin case</td>
</tr>
<tr>
<td>2010.05.06</td>
<td>Gustav Jonsson, Rickard Hansson</td>
<td>Incentive Live</td>
<td>e-mail</td>
<td>Get additional information about the Incentive Live</td>
</tr>
<tr>
<td>2010.05.11</td>
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<td>IBS</td>
<td>telephone conversation</td>
<td>arrange interview, agree upon details</td>
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<td>Present thesis and results</td>
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<tr>
<td>2010.06</td>
<td>Rickard Hansson</td>
<td>Incentive Live</td>
<td>e-mail</td>
<td>Present thesis and results</td>
</tr>
</tbody>
</table>

Table 2 Process of data collection