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Developing knowledge management and internal communication through a virtual workspace. Case: Company X

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Ida Rutanen

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Laurea University of Applied Sciences
Laurea Leppävaara

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Rutanen, Ida
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Rutanen, Ida

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This thesis investigates improving knowledge management and internal communication in Company x, a communications and event agency. The objective of this thesis is to plan and create a virtual workspace for Company X and its different departments. The workspace was created with the Microsoft Office 365 web application. The theoretical background of this study is based on theories of internal communication and knowledge management.

Two types of research methods were used in this thesis, a quantitative survey study in two parts and qualitative in-depth interviews. All employees were included in the sample of the study. The survey was conducted for staff and the interviews for the directors of the company. The survey's first part was performed in September 2011, and the second part in August 2012 and the interviews in November 2011.

The information, which was collected from the data collection process, was used when planning and designing the structure and overall functionality of the virtual workspace. The finished workspace included features such as Outlook e-mail, Lync-instant messenger, and a SharePoint environment. The e-mail and instant messenger with the bulletin boards of the SharePoint were created to improve internal communication. The key factors in improving knowledge management of the company were the document libraries that were created. They aimed to improve a more reliable file sharing and a more structured way of organizing existing documents.

Table of contents

1   Introduction

As globalization has swept throughout the entire world, we have been forced to face new challenges and given a chance to come across new opportunities. The improvement of technology, communication and science, together with the growing market pressures are forcing businesses today to stay in a constant development process in order to sustain their competitiveness. New developments in technology have resulted in distances between physical places in the world are becoming irrelevant. It no longer matters where people, companies and their employees are situated. The technologies available for us today have allowed for these physical distances to disappear. People can now communicate with one another regardless of time and place via phone, e-mail, video calls, instant messengers and via a variety of social networks and communication platforms. Using such technologies has become an essential part of modern company structures and doing business, and as the world of business is constantly changing, developing new ways of communicating and new channels of sharing and using available information has become critical for their survival.

As many companies are now operating as global organizations, with employees situated in very different parts of the world, it is essential that their ways of communicating have developed to match this need and are working as well as possible. Without proper tools to allow information to pass through all employees, the quality of work produced will suffer, time will be spent on misunderstandings and searching for the correct facts.

The topic of this thesis is a small international company's internal communication and knowledge management. It aims to develop a customised new platform specifically designed to improve the flaws in the company's information structure. Communication in the business environment can be divided into external and internal communication. This study will focus on internal communication. It will be looked at from the perspective of a small company; however, many of the conclusions of this thesis can be applied to common business practice in spite the size of the company.

Small businesses often do not have resources to outsource their communication development. This is why this responsibility often falls on the managers and owners of the company. When the responsibility of developing communications is not handled as a whole by anyone in particular, its implementation can be lacking and slow. Many such small companies focus on external communication, as it is most important for reaching recognition and sales figures. It is often forgotten that external communication is built through successful internal communication. If all of a company's employees are equally aware of the goals, products, responsibilities, procedures and other such things, this will not only make the company function better

on a day to day basis, but also reflect positively to clients as all employees are marketing the company in a unified and streamlined way.

The target of the study is a company that wished to stay anonymous and will for that reason be referred to as Company X. Company X is a specialist sports event, public relations (PR) and communications agency based in Innsbruck, Austria. The company depends on the technical knowledge and expertise of their accomplished employees, as it provides a high-end service to its clients. To maintain this high quality, the internal communication of the 22 company employees situated all over the globe has to be effective and efficient. Company X showed interest in finding new solutions to improve their internal communication and knowledge management, which is what this study will help them with.

1.1   Background of the thesis

This thesis was made as an assignment for Company X. The company, founded in 2008, is a communications and event agency that established its roots in the Freeski field by producing a freeski website, online magazine, as well as a printed paper magazine. They later developed their services to include a variety of services for brands and athletes such as event creation, PR and communications packages. This thesis will focus on Company X's internal communication and information/knowledge management and accessibility within the organization.

This thesis topic was chosen as a result of a discussion between the author and the General Manager of Company X, Mr Smith (the name has been changed to ensure anonymity). It was discussed how the company currently operates, and how despite their many efforts, they still faced certain problems with their current communication channels. Company X expressed their interest in developing and discovering new improved channels for their communication and information sharing, which would solve their existing communications issues, make the functioning of the company's daily operations more effective, and thus enhance their general competitiveness as a business. The main challenges the company faced with their communication channels arose in the company's early stages, due to the fact that four out of 22 employees worked outside the main office and were spread across Europe in different countries, and more than half of the company's employees travelled extensively throughout the year. Information was constantly lost, misplaced and forgotten about. Finding a coherent and easily applicable communication channel that would reach everyone would be essential in the development of the company.

The thesis will start with a description of how the information is being shared in the business world today. Nowadays we have vast quantities of information available and it has fast become online based, changing the way information is being shared and stored in businesses.

Hence, in order to keep up with these changes there is now an ever growing demand for information management. Creating new information whilst also managing the old information structures is an important part of how companies can stand out as well organized and increase its staff's productivity. The biggest challenge is to be able to source the right information quickly when needed. It is vital for a company to have information readily available. Companies are now moving towards using different kinds of electronic aids and applications to serve both their clients and their staff.

As information keeps building up, its management and accessibility becomes an important role in an organization, because the information has no relevance if it is not accessible. Sharing and receiving information is excessively important in organizations that use virtual networks in everyday work. Company X is an organization like this. Due to the fact that employees are situated in different countries, and sharing information is very important for achieving goals and getting everyday work done. Accessibility to information is crucial especially when induction training for new employees is considered, so that the new employees can easily get involved in the company's operations.

The objective of this thesis is to plan and create a virtual workspace for Company X and its different departments. The purpose of the workspace is to develop availability of information and its management, as well as to improve the internal electronic communication of the company. The virtual workspace will be created with the Microsoft Office 365 software and making it an operational thesis that will result in a concrete product, which will be trialed. The thesis will not concentrate on the technical details of the Office 365 software; the software will merely be used as tool to provide a working virtual environment for the company.

The theory part of the thesis is found in chapter 3. The Microsoft Office 365 software is a virtual workspace and information management tool in which there is a new generation of network related possibilities and features. These features include for example outlook e-mail system, Lync –instant messenger for chat, video and conference calls, and many document libraries. As well as taking notice that organizations are constantly producing more information, it is important to notice that in our case study there is a constant change in physical locations of employees and offices. Everyday work in these kind of virtual organizations is not dependent on time or location, which in term creates a high demand for new network communication possibilities.

The content and structure of the virtual workspace was planned in collaboration with the employees and directors at Company X. This was done because the company at hand as a small business, meaning that the users will be everyone in the company. Methods of data collection used for this operational thesis were interviews with the directors and two differ-

ent questionnaires for employees. The interviews were conducted with each of the directors in order to access their point of view on the problems in the company. The questionnaires were done to collect the same information from the staff. The first questionnaire aimed to map out the problems in general, and the second focused on the problems of knowledge management, sharing and accessibility.

The finished product, the virtual workspace, introduced in chapter 5, will be taken into use at Company X. Its purpose is to replace earlier ways of storing data in the company, as well as, improve on earlier ways of internal e-communication in the company. After the virtual workspace has been taken into use, it should enhance the company's internal communication and information sharing and aid employees with finding information, thus enhancing their know-how. Additionally it will create a solid support with the training of new employees.

1.2   Objectives and scope of the study

This investigation takes an in-depth look into the knowledge management and organizational communication, and as its case study it uses Company X. Organizational communication can be divided into internal and external communication. The main focus is on the internal communication and knowledge management in Company X. The scope of this investigation is to map out the current channels of communication and information sharing used in Company X and to find development ideas from the staff for new possibilities. Based on this information the objective is to discover areas that the company could improve and develop and as a result improve their effectiveness in operations.

Internal communication affects an organization's employees' working motivation, comfort and productivity. This study will however not concentrate on those aspects, but will rather concentrate on how well the internal communication is at the moment and how currently used tools can be developed to improve it. The goal is to enhance to areas of communication that are strong at the moment and find new solutions for the areas that are not. Strong communication is built by frequent interaction. In the case of Company X many employees are located far away from each other and the communication is mainly virtual. When the problems affecting strong communication are discovered, the purpose of this thesis is to give development ideas for the company. Based on the results of this study the author will attempt to make a development proposal for the company on how to improve their internal communication and knowledge management.

This thesis is the first investigation made for Company X, and its role it to show the direction for future developments. The value that the company takes from this investigation is bringing out the problems that currently exist so they can be improved and fixed.

1.3   Outline of the thesis

The outline of the thesis was made in collaboration with Mr Smith, and it was decided that the research would include all members of Company X. This is possible as the company is small and all employees have significant contribution to the mapping out of needs. After the initial conversation with Mr Smith, it was decided that a questionnaire would be created and handed out to all members of staff to answer confidentially. When the questionnaires were returned they would be analysed and conclusions can be made, resulting in a development proposal for the company.

1.4   Research Questions

In order to achieve the objectives that were set for this investigation, the answer to the following research questions need to be discovered.

- What are the current needs for the company communication wise
- What are the factors that can be developed to enhance the company's communications
- How is information stored and shared in the company
- How can knowledge management be enhanced to reach employees

1.5   Research Methods

Empirical research can be quantitative or qualitative. The research method is chosen according to the purpose of the study. Sometimes different methods can be used together to support each other. The main differences of quantitative and qualitative research can be seen from Table 1. (Heikkilä 2005, 16)

Quantitative	Qualitative
Answers the questions: What? Where? How much? How often?	Answers the questions: Why? How? What kind of?
Numerically large, representative sample	Concise, discretionarily gathered sample
Studied through numerical data	Studied through soft data

Table 1: The differences of qualitative and quantitative research (Heikkilä 2005, 17)

The empirical part of the investigation will be implemented in two parts: quantitative survey-studies and qualitative interviews and will include all employees of Company X. The survey will be distributed to all members via e-mail. The interviews will be made by phone or Skype. The questionnaires are found in the appendices (Appendix 1-2).

1.5.1 Qualitative research

Qualitative research is used to gather an in-depth understanding of the research object and explain reasons underneath its decisions and behaviour. Qualitative research focuses on the why and how of phenomenon and can be focused on only a few in-depth topics, but does so analysing them very carefully. Subjects for the research are knowingly chosen instead of using random samples, and conclusions can thus not be applied to the general population. Compared to quantitative research, the results are collected in a less structured way in qualitative research as they are often given in a verbal form. Data is often collected using open and theme interviews, generally individually or in small group discussions. (Heikkilä 2005, 16-17)

The qualitative research method was chosen for this investigation in the form of interviews because it allowed getting a deeper knowledge and point of view from certain experts in the company. It aided in finding the main problems existing in the company, and what the future direction of the company will be. The interviews were only conducted with managers of the company, because it was the best way to target the most knowledgeable people in their expertise. It would have also been too time consuming to include all employees in the interview process. (Lotti 1998, 68)

1.5.2 Interviews

An interview is a purposeful discussion between two or more people (Kahn and Cannell 1957). Interviews help gather valid, relative and reliable data for investigations. Interviews can be used to gather information before formulating a research topic to help in its formulation, or they can aid with gathering necessary information when collecting actual data for the research (Saunders et al. 2009, 308).

Interviews can be differentiated according to the level of structure and standardisation adopted. Different types of interviews are useful for various research purposes and research design may incorporate more than one type of interview. There are also different types of interviewing methods. Two most common types are generally referred to as "in-depth" or "unstructured" interviews and "semi-structured" interviews, of which the unstructured interview will be used for this thesis. This will allow the interviewee the opportunity to talk freely about the topic area. In-depth and semi-structured interviews can be used in quantitative as

well as qualitative research. Using non-standardised (qualitative) interviews to explore topics and explain other findings. Qualitative research interviews can also provide an advantage when it is necessary to understand the reasons behind the decisions, reasons and opinions that your research participants have taken (Saunders et al. 2009, 321-324).

There are many ways of conducting interviews, apart from one-to-one interviews conducted on a face-to-face basis, the interviews can be conducted by telephone or electronically in particular circumstances. In addition, interviews may be conducted using group interviews such as focus groups. There may be particular advantages associated with group interviews, but these are considerably more difficult to manage than one-to-one interviews.

To ensure the quality of the data gathered through interviews issues such as reliability, bias and validity need to be taken carefully into account. However, when successfully implemented, the use of qualitative research interviews allows researchers to collect a wide and detailed set of data (Saunders et al. 2009, 352).

Interviews were used as one data collection method in this thesis. In order to map out the situation and needs of the company the managers of Company X were interviewed on an individual basis. These interviews helped to outline the topic for the thesis and set the goals. The managers were also the best and most precise at describing how the company works, what their processes are and what their limitations are. The freer and less structured data collection in qualitative interviews, not being limited to the specific questions and the given options for answers typical in quantitative research, allowed the author to ask for more information and clarification in the interview situation. It was also possible for the interviewer to go deeper into the matter, possibly gaining completely new insights into the research problem. Open-ended and unstructured questions allowed for revealing various perspectives and views about the current situation and the challenges.

1.5.3   Quantitative research

Quantitative research is used to investigate social phenomena through statistics. Quantitative research requires a big sample that can be considered representative of all population. The results are generally collected from standardized questionnaires with multiple-choice questions. Quantitative data is data in numerical form such as statistics and percentages, which can easily be visualized into tables and charts. Quantitative research methods can be used to investigate cases in a more general sense than qualitative research can, but it is still unable to explain reasons underneath the case. It can easily and undisputedly verify which hypotheses are true and which are not (Heikkilä 2005, 16).

There are many different ways of gathering data for quantitative research. They include desk research, postal surveys, telephone interviews, personal interviews, value and attitude surveys, online researches and mobile panels. The right method should be chosen based on the target group and what method is best suited for gathering data from this particular group.

The quantitative research method was chosen for this investigation in the form of two different questionnaires, because the objective was to discover what benefits or issues are important to the employees of Company X and how these issues and benefits had been dealt with in their point of view. In addition the objective was to include all members of staff in the investigation and this allowed doing so without being as time consuming as interviewing all members. (Lotti 1998, 68)

The method that was chosen for this investigation was a survey. This method was chosen due to it being a very efficient and cost-effective way for information collection. It will also allow a large enough scope of research information to draw conclusions of the issues affecting the company. The data will be collected using a questionnaire form, in an electronic form that was sent to all employees.

1.5.4 Survey

Survey research is very commonly used in quantitative researches. The basic function of a questionnaire as defined by Kinnear and Tailor (1996, 353) is to measure something. One identifying character of a survey is a standardized questionnaire with multiple-choice or open-ended questions. This investigation will use both kinds; part one is multiple-choice and part two consists of open ended questions. The strengths that surveys have compared to other quantitative research methods is that it can cover a big population and is relatively low in costs. The biggest weakness however is that this method of research that only limited information can be obtained from each respondent and the reasons behind these responses cannot be found out (Sundman and Blair, 1998, 154).

These two types of surveys were chosen to gather information for this investigation was that it was a cost-effective and time saving way to reach all staff member located in different parts of the world. It also allowed for easy analysis of the results and a way to get all members of staff heard. This was a key element for the aim of the study, so that the workspace that would be developed would serve all users as well as possible.

2   Company X

Company X is a communications, event and PR agency situated in Innsbruck, Austria that provides communications solutions to clients. They own their own media house, which produces

different products in the niche sport of freesking. The main produced products are an online community website, a digital magazine, a premium quality print magazine and online television. Company X mainly aims to innovate, produce and manage communication solutions for their clients, targeting especially the growing freeski market.

The company was founded 11.11.2008 and they now have a total of twenty-two employees. Four of these employees are situated in different countries from the head office in Innsbruck, Austria. One in Bourg St. Maurice, France, one in London, one in Garmish, Germany and one in Annecy, France.

3   Theoretical background of the thesis

One of the fastest growing office trends today is virtual teams and is in modern organizations regarded as being an important part of workflow. Virtual teams are those with "geographically dispersed members communicating primarily by use of information and communication technologies (ICT)" (Johnson et al. 2001, 1). This means that team members are not necessarily situated in the same office, area or even country and therefore communicate through various channels that allow them to work as a team. Staff members working in remote destinations solely rely on technologies such as desktop video conferencing, collaborative software and internet/intranet systems allow the existence of virtual teams (Johnson et al. 2001, 2). This study focuses on a company that this kind of virtual teamwork applies to, and next the terms knowledge management and different types of communication will be explained. They are key elements that need to be understood to reach the scope of the study to create a new workspace that will support the idea of working as virtual teams.

3.1   Knowledge management

Knowledge has become one of the critical success factors for businesses, and as a result corporations are now investigating the field of knowledge management (KM). As there is no universal definition for what constitutes as knowledge it makes knowledge management a difficult term, as it means different things to different people. However, a main aspect of knowledge management is that knowledge within an organization is treated as a key asset. Knowledge management today is more than simply managing material knowledge. It is also about realizing and using already exciting knowledge in the workforce. Sharing that knowledge properly can lead to success in both teams and at an organizational level (Introduction to knowledge management, 2005). Knowledge management is often associated with data processing. However, it is a much wider concept that refers to the existing internal and external information resources in use by organizations. The management of these resources aim to develop reaching the organization's goals (Huotari, Hurme &Valkonen 2005, 47).

Knowledge is not dependent on technology, but more so on people who have it, develop and apply it. If existing knowledge is properly exploited, it can allow a competitive advantage to companies (Introduction to knowledge management, 2005). The goal of knowledge management is therefore to increase an organization's strategic know-how and performance, as well as, to produce new innovations by exploiting the knowledge and expertise of the organization's members. (Huotari et al. 2005, 49)

According to "Introduction to knowledge management" (2005) the main challenge in knowledge management is to create an environment where KM will be continuously developed and used. This is why finding and creating that environment at an early as possible stage is crucial. Developing and implementing knowledge management has before only been taken on by major corporations, but its importance in small and medium businesses has now increased (Kuan Yew Wong, 2005). As KM should result in allowing a competitive advantage to organizations, it can provide a clear needed advantage for small and medium businesses to compete in a market with organizations of all different sizes.

One additional way knowledge management has been defined is as the management of databases, personal know-how or for example business information. Generally, it is considered that KM means the maintenance of information. (Kaario & Peltola 2008, 3) According to Otala and Pyösti (2009, 63) a major part of knowledge management is also finding the information that experts have. In their example knowledge management includes a system that defines what every employee in an organization knows about each subject, which projects they have been a part of and what documents they have written. A system like this would allow for easy access to important information or at least lead to the beholder of it. A general problem in designing a virtual workspace or network is the difference in point of view for the designer and the user. The space should be designed from the user's point of view and according to the information they wish to find. The spaces are often designed following the organizational structure resulting in it being difficult for users to follow that structure and find the needed information. (Samela, 2002, 160)

3.2   Organizational communication

This chapter will discuss the term communication through scientific publications and literature that studies the topic. Both internal and external communication will be looked at in general, with more focus on internal communication, as it is more relevant to this thesis.

A work community is a group of people working systematically and methodically together to achieve certain goals by utilizing and combining available resources. The operations of a work community are affected by cultural inheritance, which is formed by the interaction of its members and is based on the common conceptions and rules these individuals follow (Åberg 2002, 56). Hence, the way a work community functions becomes defined by the way they

harness each of its members ability to communicate to the other members, by making sure their internal communications are well planned in order to share the work and responsibilities (Åberg 2006, 50).

The communication of a work community is called organizational communication. It is a part of the planned, goal-oriented and managed operations of a company. Its goal is to build a tight knit community of employees, as well as, to ensure an open and interactive information flow within this group of people (Niemi et al. 2006, 23; Siukosaari 2002, 11 - 12.). Organizational communication means all the communication that is happening inside a company and is also includes the communication between the company and the outside world (Lohtaja & Kaihovirta-Rapo 2007, 13).

According to Andrew and Heschelin (1996, 14), organizational communications is a process in which persons who are dependent on each other create, exchange and interpret messages while trying to achieve the pre-set goals and visions. The members of the organization are constantly gathering information needed for their jobs, and by sharing this information to one another they are able to reach their goals faster and more effectively. In this process nothing is easy or automatic, and the sharing of information and know-how is crucial a working community (Eisenberg et al. 2009, 4).

Lohtaja and Kaihovirta-Rapo (2007, 13) write that organizational communication consists of both communication and notification. The difference between the two is that communication works two-ways and notification works one way, but both are important parts of organizational communication. Eisenberg et al. (2009, 4) and Juholin (2006, 17-18) agree with this in their writings. According to them a community is a perfectly operating entity, which has shared a purpose, goals and a need to announce itself and communicate with its surroundings.

Organizational communication can be considered successful when the right image has been created for the outside world, and when communication inside the organization is simple and functional. Successful communication will assure a good basis for the everyday operations of any company organization (Niemi et al. 2006, 238; Siukosaari 2002, 11 - 12.)

Organizational communication can be divided into internal and external communication. Internal communication means the communication between the members in the organization. External communication is the communication to the outside of the organization. The main thing in both internal and external communication is to recognize the right objectives and methods so that communication reaches the right targets (Juholin, 2006, 140; Lohtaja & Kaihovirta-Rapo 2007, 14; Niemi et al. 2006, 242).

3.2.1   External Communication

No work community can function alone; it is always a part of the surrounding society. Even when a one-man company is chopping wood in the forest, it too needs a buyer for that wood, meaning at least one customer (Siukosaari 2002, 131.). External communication is the outward directed communication of a company, to for example, existing and potential clients. It is the communication that is practiced with persons outside the organization. External communication is used to when announcing company information to outside parties, as well as when keeping in contact with them. It is also used in companies to build and create a positive image to the society around them (Niemi et al. 2006, 242; Lohtaja & Kaihovirta-Rapo 2007, 14.). External communication plays a large part in an organization and is often separated to smaller administrative sub-areas, like marketing communication and public relations (Salin, 2002). Marketing communication is a strong part of external communication and it includes advertising, sales, and promotion as sub-areas. The basic assumption is that an organization is the most successful when it has been able to get the trust and approval of the surrounding society. Companies must therefore carefully define all of the subjects of their communication and decide what information and how each of these outside parties will be communicated with (Siukosaari 2002, 131 – 133; Juholin 2009, 88).

The goal of external communication in companies is to develop their relations with the public. It keeps the company's external ties up to date on their current affairs. It is also a way of supplying important information about goals and developments to these outside parties. In order to achieve all this, external communication needs to be planned, focused and purposeful (Lohtaja & Kaihovirta-Rapo 2007, 14; Niemi et al. 2006, 242 - 243).

3.2.2   Internal communication

Internal communication in organizations supports their daily functions. This type of "everyday communicating" is the most important form of communication in all organizations. Internal communication supports and enables daily working by producing guidelines for processes and codes of conduct. It also informs all members of an organization about current affairs, for example new products and services (Juholin 2001, 30).

Internal communication is needed for such things as announcements, informing, motivating, creating a good atmosphere, as well as, developing ideas. The main target groups of this type of communication in companies are the staff, teams and departments (Nordman 2002, 125). Internal communication is considered to be successful when it is open, understood by all recipients and when everyone in the organization is capable of using all the shared tools of communicating (Niemi et al. 2006, 242). It should be constant and regular, deliberative and

interpretative, predictive and multidirectional. Therefore the backbone of internal communication needs to be a regularly appearing communication, such as a weekly bulletin. The job of the superiors in companies is to make sure that the staff has the possibility to discuss and ask questions in order to help interpret the written messages when necessary (Nordman 2002, 126; Lohtaja & Kaihovirta-Rapo 2007, 14; Niemi et al. 2006, 242). Multidirectional internal communication is actualized when communication is flowing freely between all members of the organization, which means from superiors to staff, as well as from staff to superiors.

According to Åberg (2000, 173), internal communication can be divided into the following three categories: Electronic, written and oral communication. By effectively combining these three ways to communicate to one another, organizations can create a functional network of internal communication. Electronic channels of communication in organizations are usually e-mail and intranet. Written communication channels include, for instance, announcements, internal magazines, guides, and information letters. Oral communication channels are management team, team meetings, conferences, and informational events and briefings (Åberg 2000, 173-174).

The significance of internal communication has constantly been growing, which can be seen in today's working communities by their continuous efforts of develop the channels for it. It is often stressed as being one the most important function of a well working organization. The internal communication of organizations includes internal marketing and, as stated before, contact operations and announcements. Internal marketing means making the visions, values, goals and services known to all employees. Orientation of new employees is also considered to be the main function of internal communication when companies hire more employees (Siukosaari 2002, 65). Internal communication has a significant role also in the success of external communication, because it forms the core of an organization's communication and external communication is built around it (Isohookana 2007, 15).

According to Juholin (2006, 140), internal communication can be looked at from the perspective of time. Juholin writes that Internal communication today, is a race against whether the organizations is able inform its staff about things before the information can be heard outside of the organization. She also defines internal communication as being, in all its simplicity, the sending and receiving of all sorts of messages. Communication is often thought of as a very broad phenomenon, and internal communication is no exception. Internal communication affects the whole organizations operations. It can provide an edge to the success of an organization, but it can also be the most critical factor resulting in its failure. Internal communication reflects the inheritance and set of values in an organization (Juholin 2006, 153).

4   Results

4.1   Survey part 1

A survey was conducted to gather information about the current state of the company's communication and ICT tools (see Appendix 1). The survey was passed onwards to all employees through the general manager of the company. There was a response rate of 82% as 18 questionnaires were returned from the 22 sent. Responses were received from employees working in different positions and in different countries.

The survey consisted of questions focused on how information flow works in the company and what were felt to be the problems with communication and ICT tools. It also inquired about the tools they currently used, how often and how important they found these tools in everyday working.

The responses of questions 5-7 were inserted into Excel-tables and analyzed based on the amount of same answers for each question. The rest of the questions were read through and analyzed to receive possible development ideas or pinpoint areas where an improvement was needed.

In the open questions about information flow and its current problems it could clearly be seen that the biggest problems were the lack of structure and common rules (standards) in the information flow, and reaching fellow co-workers during office hours. It was brought out that information is mainly passed on through Skype conversations or e-mails. In addition, a trend of similar concerns was apparent conveying frustration with not knowing what is happening in different departments and projects inside the company, and who was in charge of what. It was felt that current information on the company's on-goings was not clearly available in anyplace and that as they were only informed through e-mail and Skype the large quantity of e-mails made finding the right information chaotic. The main feeling respondents gave was that it was not the tools that lack but rather the communicators. Another area of development seemed to be meetings inside the company. Many respondents wished for more meetings, weekly in each department and monthly for the entire company. To improve reaching co-workers it was suggested that there would be either fixed days when everyone were to be available or a fixed hour when everyone should be online. Critique was also given to the current file sharing program Dropbox. It was felt that there was not enough room for all data, files were unorganized, it did not always work and it can get expensive.
The quantitative responses were made into tables to illustrate what tools the company used, what the features these tools offered, as well as how often and how important they were considered.

Table 2 shows that the most important channels of communication for the company are e-mail and Skype. This was a fact that also came across strongly in the open ended questions. The second most important tools used in the company were phone calls and face to face interaction. Additional forms of communication used were text messages, drop box, file share and Facebook.

Table 3 illustrates that the tools used most frequently are very similar to their rated importance. E-mail and Skype were used by nearly all staff daily. Dropbox (for file and document sharing) and phone calls were also used by more than half of employees daily also. It can be seen from comparing table 2 and 3 that the company works in a virtual environment even though face to face interaction was felt to be very important by so many, yet only six employees were able to meet this way daily.
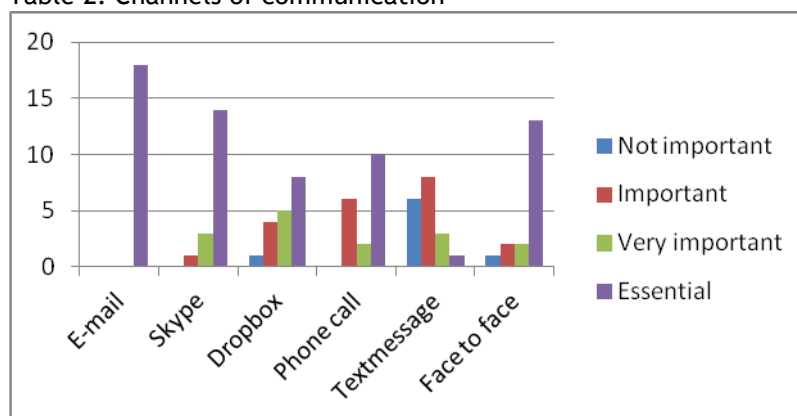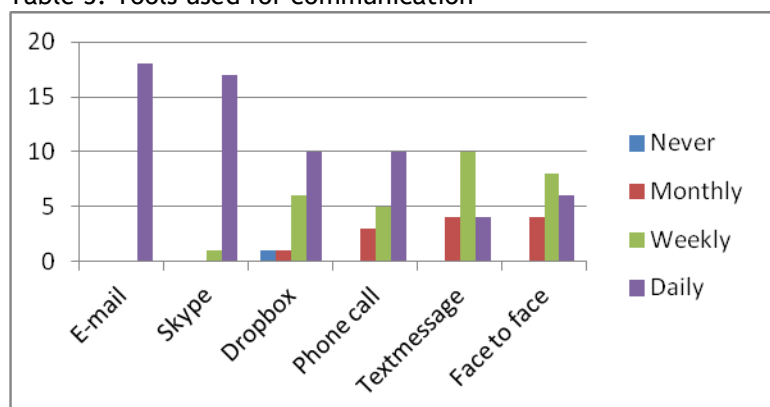
Table 2: Channels of communication

Table 3: Tools used for communication

In the last quantitative questions the staff was asked to rate the importance of different features of the tools currently used was asked. The results are illustrated in table 4. The three most important features were by far file/e-mail protection, ability to access all files and folders and having a coherent place to store and share these files. The next most important features were accessing co-worker's calendars and video and audio conferencing.

4.2   Survey Part 2

The second survey was conducted to find out additional information about the issues that were decided to take into closer development: internal communication and knowledge management. As it was discussed in the interviews with the directors of the company, the focus would be to create a virtual workspace that would enhance the two issues at hand. The staff, who would become the users, where prompted for more information about the actual needs were asked from the future users of this workspace. In developing projects it is very important to take the client, in this case the employees who will use the workspace, into consideration and as a part of the development process. This is why this part of the survey consisted of open questions. The employees would have the freedom to produce and pass on any ideas they have in mind without limitations. The main goal of the virtual workspace is to act as a tool in the company's internal everyday work, so involving the employees was necessary. The aim of the second survey was to find out what would be the employees' ideas about the ideal platform for internal communication and data storing and sharing. After these ideas were collected it was checked which could be implemented with the help of Microsoft 365. All ideas were collected, analysed and the possibility of implementing them with the help of Microsoft Office 365 was considered.
The survey was divided into two parts. One dealt with knowledge management and the other with internal communication.

4.2.1   Knowledge management

The main issues raised about knowledge management in the second part of the survey included that there was no clear written guideline produced by the company for employees. There was felt to be a lack thereof clear directions and instruction, as well as, common rules. It was commonly brought up that these facts needed to be clearly stated and that they need to be found easily and be available to everyone. It was requested that in the workspace, a specific area would be made for just this information.

The next big issue raised was induction training. Again, it was a consensus that there was no specific channel for it and instructions could not be easily found in one place. It was felt that this was a problem especially when looking for support after the training was over. A suggestion on saving time was made, in order to avoid running to colleagues with questions, if the answers to simple questions would be found in one introductory document library or FAQ Document (Frequently Asked Questions). This would also be helpful for older employees if they want to refresh their memories on certain issues.

Table 4: Application features currently used and their importance
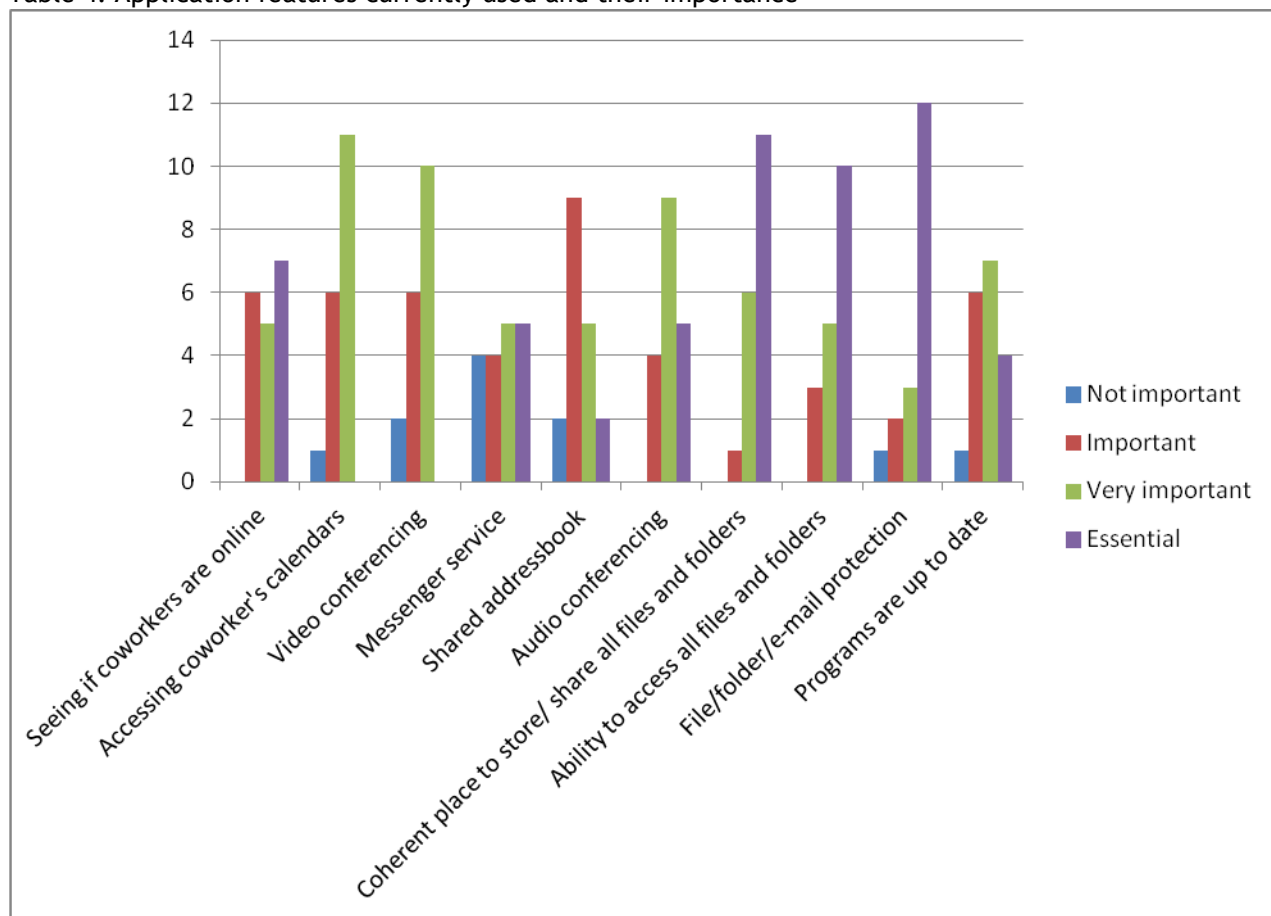
Suggestions and wishes on many different types of new channels of information was another important discovery. It was brought up that if there was a direct channel for giving development ideas they should also be possible to follow up on. If development ideas would be taken into action it was hoped that the process and announcement of progress would be clearly visible to everyone. This would allow for a more open atmosphere, as well as, keep employees up to date on the development front of the company.

Channels for links to work related articles, photos and magazines were also requested, so that they would easily be accessed in one place and would not cause trouble to find. They were regarded as helpful in everyday work situations and would save time if they were all gathered into one place.

4.2.2   Internal communication

The results of the second part of the survey gave many ideas on improving the internal communication of the company. Employees were keen to give ideas and suggestions for what they wished for from the new workspace. It was suggested that there would be a weekly or month-

ly bulletin or newsletter from the directors that would give some indication on how the company is doing, what some of the current projects were, what future projects were planned and other such things. It was thought of as a quick and easy way to keep the whole staff up to date on important matters from the directors' point of view. In addition, it was also suggested that in addition to the directors' newsletter, the on-going and new projects would be announced in a certain place visible for everyone. The time of general meetings could also be made visible here, as well as, all other important announcements concerning the whole company.

Another way that was suggested in order to improve internal flow of information from director to staff, was that there could be certain fixed days in a month when all directors would be available and that this would be a designated time when employees could get in touch with them. This would mean no meetings or other out-of-office work could be scheduled by directors on these days or times. This rule could also apply to the rest of the company as well, so that it would be the certain day to reach all members of staff at any time during work hours.

The idea of a channel for the development of ideas was again requested. As the company is still so new and growing, these development ideas could become an asset as all employees have different backgrounds and expertise. New visions can always bring efficiency to current ways of working. Employees also get a collective feeling when able to contribute to improve their company.

Lastly a pressing issue that was brought up by members of staff was that all teams and departments should come up with and announce their own team rules, so that there would be a general consensus about them. This would allow for no misunderstandings among employees about, for example, the use of social media during work hours, the use of company cars, or taking breaks. In case of any misunderstandings, they could be solved by checking the general guidelines set by each team.

4.3   Interviews

The second method of data collection used in the thesis was interviews. To map out the situation and needs of the company, the directors of Company X were interviewed. These interviews also helped in specifying the topic for the thesis, as well as, the goals. The directors were also the best people available to introduce the company, their services, processes and the challenges connected to them.

One of the directors, Mr. Smith, had been looking into the possibilities of building a virtual workspace for the company. The interview with him concentrated on this topic as well as the

general situation of the company. Mr. Smith had been working on doing a benchmarking, studying other similar companies and how their working environments were made. The basis of the benchmarking method is to observe how others are working and doing things, and how well they are succeeding in it. The process is generally based on studying already successful organizations and trying to learn from their processes and success factors. (Ojasalo et al. 2009,163). Due to having done the benchmarking, the interview with Mr. Smith gave a lot of insight to what the company was aiming for with their future in internal communication and knowledge management. The collected information was very valuable for it gave ideas on actual implementation, possible ways of organizing all the information that was going to be put in the workspace and its creation.

The interviews were conducted in a very free and open form, where the interviewees were able to reminisce and talk about their opinions and wishes of the future of the company. Hirsjärvi et al. (1996, 206) wrote that information can be gathered in interviews where the aim is to understand the interviewees' through the stories and recollections they produce on their own.

During the interviews there were several questions that were kept in mind in order to be able to pick out the important and relevant factors for this thesis. The most important points were written down and used as an aid in implementation and as a general guideline throughout the process of the thesis.

5   Implementation of Virtual workspace

The virtual workspace made for the company will be introduced in this chapter. The front page of the workspace (Picture 1) illustrates the main functions of the workspace. The most important and useful tools this workspace offers are listed on the front page that opens up to all users when they log in. The most important tools in this workspace for users are the out-look e-mail system, Lync – instant messenger and the document libraries. The purpose of all three of these tools is to replace the current programs that are used allowing all the necessities to be found in this one workspace and allow accessibility from all over the globe.

The team sites and documents part will be the feature of the workspace that will be the big-gest asset to users. This is where all teams/offices will gather information concerning the team, as well as, there being general guidelines and announcements. All users have been grouped into their own office/team that will be their priority to follow. This is where they will now move all their previous data and in the future all the new data concerning anything they do for the company. When opening up the link from the front page to the team folders, it will open into a SharePoint environment. Here there is a general bulletin board that will include information from the directors, for example new projects and times of general meet-

ings concerning all staff. Within each subfolder of each team there are bulletin boards where all announcements can be put up on, for example absences, vacations, late arrivals and other such important things concerning them. Before the workspace, all these announcements were delivered via e-mail which caused great challenges for staff due to the volume of information received. This resulted in important announcements getting lost easily among all other mail, as well as, being forgotten. If necessary, it is possible to order reminders to be delivered simultaneously to the employee's e-mail and the bulletin boards directly. This will guarantee that the announcement will be seen and that the important messages will remain seen in places where they are easily found later. The SharePoint programme has excellent features that allow the announcements that are put up to be automatically directed into the related bulletin boards.

Picture 1: Capture from front page of the workspace

Company X Logo

Outlook
Manage Outlook and Exchange settings.
Settings

Lync
Manage Lync instant messaging, audio and video calling, and online meetings.
Settings

Team sites and documents
Manage your team sites and document libraries with SharePoint.
Manage team sites

Website

In addition to the noticeboards, there is plenty of space for links to important tools and websites in this section of the workspace. The company's own internal guidelines are also placed in this area so that they are easily found. The actual document libraries can be found in this SharePoint environment, this means the storage of important files and folders such as guidelines to working, actual work files and documents and other such things. Here they are available and can be edited or updated by all users. When files and documents are edited, the date, time and user will be recorded in the system and can be seen by all, as demonstrated in Picture 2.

The reason behind the creation of the workspace was also to provide a helpful tool and source of information to new employees, so that they could find all the necessary information quickly and easily. This is why there was a special emphasis on providing a separate folder for in-

duction training. A general folder providing general information was created consisting of instructions about the company itself. Additionally, all departments will create their own information documents, as the jobs differ greatly and cannot always be generalized.

One of the staple features made available with the Microsoft 365 workspace is the outlook e-mail, which will be taken into usage by everyone, creating a coherent system for the company. This will allow for the program to always be up to date with easy maintenance when something goes wrong. The most important new feature will be the Lync messenger. Through Lync staff will be able to share files, chat, have video conferences or just make phone calls among each other. Lync will replace the current means of communicating via Skype, Facebook and Dropbox. This will enable all users to access all these features through one workspace which means, as wished, easier accessibility even for remote users.

Picture 2: Capture of the different document libraries for different offices
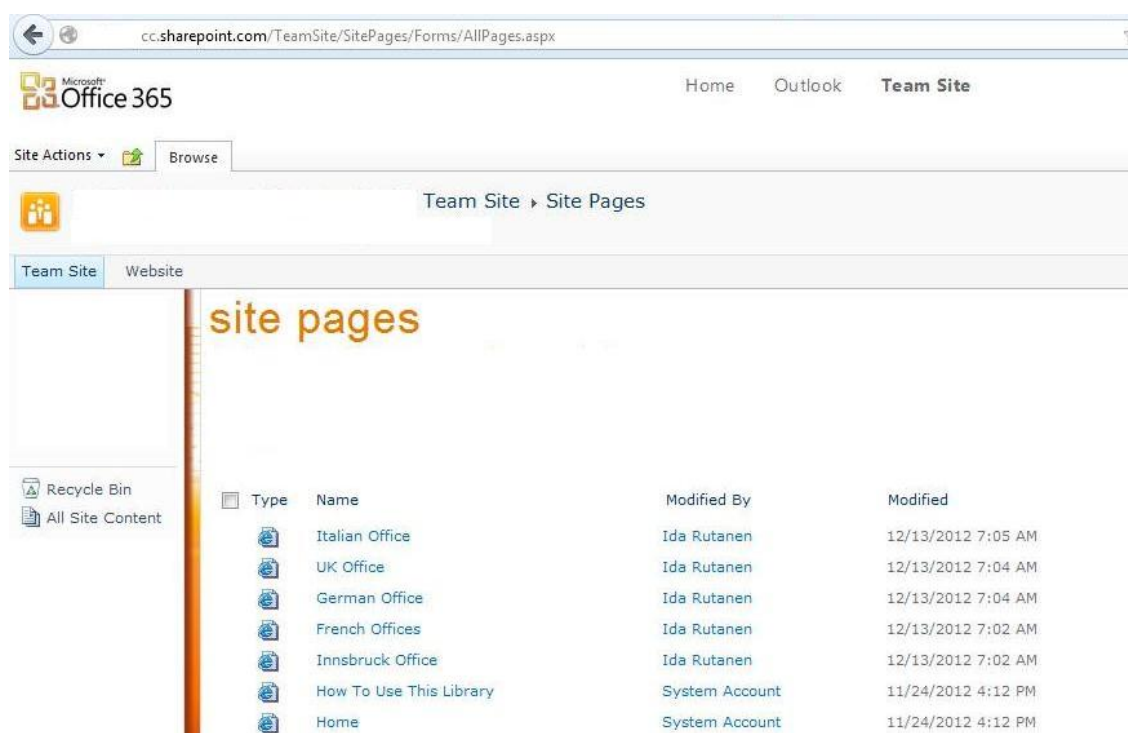
6   Discussion

The goal of this thesis was to design and create a virtual workspace for Company X. The purpose of creating this workspace was to enhance the information flow, knowledge management and internal communication of the company. The topic was related to the growing amount of information in the world and new technologies that can help cope with that. As it is an issue that the entire world is faced with, in this study it was looked through the point of

view of one company. Information is an important resource in all companies, and it can be an advantage in many ways. It can, however, also create challenges and decrease in productivity if it is not properly managed.

Today, written information is almost always in electronic format. Even those fields traditionally based on paper, such a s newspapers and magazines, now offer in addition to a paper version an electronic online version. Ipads, mobile phones and laptops are selling hot off shelves, and in most developed countries information is being passed through these devises. Electronic format is nowadays used as the primary way to store information, as electronic documents do not wear down in time and there is no risk of fires or other such things. The readily available solutions for storing information online in a virtual space diminishes the need for physical memory devices and give an ease to access the information from any corner of the world. For businesses this means no large paper archiving rooms are needed, however, electronic documents do face the risk of viruses, as well as the fast paste of development and change of formats that needs to be up kept. Electronisation of documents can be seen in organizational communication as everything is moving into network form, the amount of remote workers is growing and work is done in different cities and even countries. E-mail has become a big part of this internal communication in organizations. These changes have created a new demand and new type of networking. Before, the documents that were put into the network were somewhat controlled, but with the current new forms of social media this fact has changed and today everyone is connected to each other through these networks allowing them to work together to create new information and innovations.

Organizations have finally awakened to the new needs of network communication and have started developing different kinds of virtual workspace programs. In this thesis one of the most popular and current software solutions, Microsoft Office 365 was used as it offers an easily adaptable personalized workspace that does not depend on the company's size. It showed to be a great way for Company X to upgrade their information management and network communication technology, and the functions of this workspace were easy to pass on to the company directors. Due to its flexible nature, the company will be able to modify it along to fit their own ever changing needs, and as the uses of the program evolves. The program is easy to keep up to date with current changes of the world of technology. Modifying documents is clear and transparent as all versions and their user information is recorded into the system. Microsoft Office 365 even offers tools for social media, such as blogs, discussion boards, instant messenger, file sharing as well as video and conference calls.

The employees of Company X have in the past been using these same kinds of tools, however, they have been ones that are freely downloaded from the internet and offer only limited features. With the introduction of the new Office 365 workspace these tools would be consoli-

dated into one interface and replaced with a specific set of coherent and efficient functions that have been designed specifically for the international staff of the entire company. While creating the workspace the input from the staff throughout the process was invaluable and aimed to enhance the features available for their specific use, as well as, making sure that what they had wished to get out of the new workspace was fulfilled in a practical way. The two main goals of this thesis were to create this coherent virtual workspace for the company improving their internal communication and to make all the company information currently available easily reachable, and easy to find when needed, as well as, creating a clear structure for the knowledge management to the old and new information. In addition, there are several smaller problems that the workspace will help solve, for example, its clever use of noticeboards will decrease the amount of e-mails sent and lost. Another add on key feature was to provide a section in the workspace for the induction of new employees that ensures that the knowledge is passed on to new staff from their very first day of work. The biggest challenge of the workspace in the future will be up keeping the information that has during this process been uploaded, as it may become old or even useless unless constantly updated. A suggestion was made that one person in the company should take on this task.

Surveys and interviews were used to gather information during the development process. Employees were taken carefully into account during the process because they are the future users of the workspace and needed to be a part of the development process. Interviews were held for the directors of the company to map out their opinion of the situation and needs, but it was felt important also from their point of view to listen to the staff on the real content of the workspace. These methods turned out very successful and idea-rich, although also generating ideas that could not be utilized in this thesis.

The actual designing process of the workspace was done in collaboration with one of the directors, Mr. Smith. It began with designing the structure using the results of the surveys and the current data bases of the company. Throughout the process of developing the structure minor changes were made, but much of the initial structure remained in the final virtual space presented to Mr. Smith. It could have been useful to have an expert of the workspace as a part of the developing and designing process. In the case where this workspace will be developed in the future would be strongly recommended by the author of this thesis, in orders to maximize the use of the various features of the program.

When the workspace was finished it was presented to the director, Mr. Smith in a meeting in December 2012. It was well received and will be taken into a general meeting to be presented to the entire board of directors in February 2013. After this it will be decided if this workspace will be taken into use for the company. There will need to be some changes made in

the future, but that is the beauty of the virtual world, a constant change and evolution, something that this workspace will be able to respond to.

Time will only tell what the future will bring us with the wonderful world of virtual technology.

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Director 2. Interview. 23.11.2011
Director 3. Interview. 25.11.2011
Director 4. Interview. 23.11.2011

List of tables

List of appendices

Appendix 1: Questionnaire (part 1)

Appendix 2: Questionnaire (part 2)

Appendix 2: Questionnaire (part 1)

Organizational communication and communication tools in Company X
The purpose of this questionnaire is to map out the current communication channels and tools used in your company. The goal is to find areas that need improvement that will later be used in making a development proposal. All information will be handled confidentially and used anonymously. Information gathered in this questionnaire will be used in a thesis for a student at Laurea University of Applied Sciences.

1. **Background information**
   - Name:
   - Location:
   - Position:

2. **Contact information**
   - E-mail address:
   - Telephone number:
   - Postal address:
   - Skype:
   - Permission to contact if follow-up questions (answer yes or no):

3. **Organizational communication**
   How is information passed onwards in your company?

   How do you receive important information inside the company?

   Is information available and easily accessible to all employees?

   How could the information flow in your company be improved?

4. **Communication Tools**
   How satisfied are you at the moment with the ICT products available for you?

   How could they be improved?

   What kind of problems have you faced with the communication tools?

   What should be developed in the communication of your company?

5. **Mark the following tools on the scale of importance they have in doing your job.**
   ***Please select one option and mark with "X" between the lines: _x_**

	Not important	Important	Very important	Essential
E-mail	__	__	__	__
Skype	__	__	__	__
Dropbox	__	__	__	__
Phone call	__	__	__	__
Text message	__	__	__	__
Face to face	__	__	__	__
Other (what):				
_____	__	__	__	__
_____	__	__	__	__

6. **How often do you use the following tools**
   *Please select one option and mark with "X" between the lines: _x_

	Daily	Weekly	Monthly	Never
E-mail	__	__	__	__
Skype	__	__	__	__
Dropbox	__	__	__	__
Phone call	__	__	__	__
Text message	__	__	__	__
	Daily	Weekly	Monthly	Never
Face to face	__	__	__	__
Other (what):				
_____	__	__	__	__
_____	__	__	__	__

7. **Mark the following features of tools used on the scale of importance they have in doing your job.**
   *Please select one option and mark with "X" between the lines: _x_

	Not important	Important	Very important	Essential
Seeing if coworkers are online/available	__	__	__	__
Accessing coworker's calendars	__	__	__	__
Video conferencing	__	__	__	__
Messenger service	__	__	__	__

Shared address book	__	__	__	__
Audio conferencing	__	__	__	__
Coherent place to store/share all files and folders	__	__	__	__
Ability to access all files and folders	__	__	__	__
File/folder/e-mail protection	__	__	__	__
Programs are up to date	__	__	__	__

Other (what):

_____   __   __   __   __

_____   __   __   __   __

Thank you very much for your time and answers!

Appendix 3: Questionnaire (part 2)

Internal communication and knowledge management in Company X

The purpose of this questionnaire is to follow up on issues raised by the first questionnaire that you have answered. The goal is to use ideas that result from this questionnaire when making a development proposal of a new virtual workspace for your company. All information will be handled confidentially and used anonymously. Information gathered in this questionnaire will be used in a thesis for a student at Laurea University of Applied Sciences.

1. What type of written documents provided by the company do you use daily?

2. What type of written documents provided by the company (that would help you in your daily work) do you feel is missing?

3. Is there any information or documents that you find yourself trying to find daily, for example from Google?

4. Is there any form or channel of communication you are currently missing?

5. What type of information, announcement, documents or other such things do you wish the company would provide for you on a regular base?
    a. Daily:

    b. Weekly:

    c. Other, what:

6. How would you solve the issue of not being able to reach your colleagues?

7. If you have any other thoughts, suggestions, or anything related to this survey and ongoing workspace project please share them here:

Thank you very much for your time and answers!