Defining a framework for knowledge sharing in a dynamic sales oriented organisation

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I certify that this dissertation which I now submit for examination for the award of MSc in Computing (Knowledge Management), is entirely my own work and has not been taken from the work of others save and to the extent that such work has been cited and acknowledged within the test of my work.

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ABSTRACT

The analysts of Datamonitor describe the knowledge management and collaboration as 2009 trends to watch. Why is collaboration and KM so important? It can be managed for unstructured business processes through sharing knowledge, best practices and experience on the business process context, soliciting feedback on problem resolution, seeking support from colleagues or communicating with other partner and customer communities.

The challenge for organisations, especially for sales oriented teams is finding a way of structured managing and supporting the combination of the benefits based on the exchange of information in already existing unstructured activities in collaborative environments.

This research aims to show how an approach of bringing knowledge sharing to a sales oriented team in a dynamic organisation can be realised with familiarising the reader with an understanding of the concepts of knowledge management and existing ideas and concepts.

The organisation in this context will be represented by a team that is part of the overall organisation. The author will show how a framework of methods can be established as the beginning of implementing a solution for knowledge sharing into the team. The intention of this work is to use existing approaches of knowledge management to analyse the team at the beginning and demonstrate how – based on the findings and the results of the analysis – the implementation of a framework for knowledge sharing with the goal to eliminate or reduce the identified issues within the team and to elicit participation to improve the quality of work.

This work is used to define a method of how to introduce starting points of knowledge management into a team with using best practices and gathered information out of this project.

Key words: Knowledge Management, Knowledge Sharing, Framework, Sales

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IBM	International Business Machines Corporation
SPL	Service Product Line
SPG	Service Product Group
KM	Knowledge Management
i.e.	id est

1. INTRODUCTION

"As globalisation and shifting demographics reshape competitive ground rules, companies that fail to treat knowledge management (KM) as an initiative of the highest importance will lose intellectual assets, suffer from employee turnover, exacerbate security threats, and ultimately lower valuations. It's time for enterprises to exert control over KM and treat it as an issue of the highest order." (Murphy & Verma, 2008)

The fact that knowledge is often crucial to keep a competitive edge is nothing new; from their inception bakeries kept their recipes secret and the recipes were passed down from father to son, and so on through the generations. The difference today is that knowledge has become increasingly important, for example, operations may need to be shifted to other countries, or expert knowledge can be viewed as the main asset of a company's business model. Thus for an organisation to be successful, being better than the competition in obtaining, developing and sharing knowledge is key, or in other words being better in knowledge management (KM) results in being successful in the market. So the new thing about KM is the perspective of how organisations look on the topic Knowledge. Nowadays knowledge finds more and more attention and is looked at as a resource in business terms and use of knowledge is explained scientifically and examined systematically (Keller and Kastrup 2009, p. 7).

Knowledge management has gained practical reputation as a strategic initiative (North 2005, p. 170) and it is often considered to be a key enabler that creates the opportunity for businesses to use their knowledge assets to improve their own ways of doing business (Probst *et al.* 2006, p. 235). The reasons for that are global competition (Menken 2009, p. 105) location factors of high-wage countries and the availability of knowledge and information, because of the technological achievements. These points are used to assess businesses in terms of their profitability and the investments to reach decisions where to invest and where not to invest in. This discussion connects to a decision about where core competencies within a company lay in and create hard

decision about transferring work to other resources – cheaper resources (North 2005, p. 276).

Having identified the importance of KM, there is still uncertainty as to how to be successful in KM. In many companies KM is implemented with a strong focus on information technology and with a top-to-bottom approach. This often leads to a low level of acceptance in the targeted user group and the KM tools are therefore sometimes not as effective as they could be (Richter 2008, p. 88). To address this issue, this research will attempt to define a knowledge sharing framework based on the theoretical findings and the experience of one of the leaders in practical KM – IBM – and the example of a dynamic sales organisation.

The first part of this dissertation will introduce the work with an overview. Beginning with an overview of the research problem the thesis will then explore the intellectual challenges related to the project, as well as the research objectives, the methodology and the resources used for this project. The latter part of this chapter will highlight the scope and limitations of the project, followed by the presentation of the organisation of the work.

1.1 Background

The obviously increasing importance of knowledge as a business resource and the growing need for a structured knowledge management strategy has led researchers to elaborate on methods and tools by which knowledge management can be elicited, verified, organised and socialised. But despite these efforts knowledge management is still often considered an academic discipline, which results have only limited impact on the business – a "nice to have" complement to the core business. The practical relevance of knowledge management often was not realized.

So even though companies are working for a long period of time on ways to capture and disseminate experience and information, during the 1980s and 1990s a wave of knowledge management initiatives developed a lot of methodologies and software tools, but the results of previous knowledge management projects and engagements were not really established as a basis for an industry wide adaptation. One of the

reasons for that was that knowledge management efforts were driven by corporate mandate delivered by the management. It was professionally and literally removed from the challenges and reality of the target user community. The past knowledge management initiatives placed limited value on the individual's skill and value and, rather narrowly, were focused on rigid knowledge elicitation technologies. These initiatives ignored the human impacts and potential adverse aspects of the utilisation of these systems on the affected user community (Friedman & Barkai 2008, p. 5).

With changing ideas to the implementation of knowledge management initiatives in organisations the approaches were changed in a way that knowledge management was not seen as a matter concerning technology alone. Rather, it is a discipline that allows organisations to capitalise on the expertise and experience of their people by facilitating the sharing and distribution of knowledge. Cultural, organisational, and process considerations are more fundamental and important factors for building an effective knowledge management strategy than technology. But technology still plays a significant and undeniably growing role, whether it improves or degrades knowledge management success (Murphy & Verma 2008, p. 4). Nonetheless, it is the human element of KM - the positive impact that KM has and that can deliver quantifiable business benefits today.

According to Murphy and Verma (2008, p.4) the characteristics that are seen in companies that succeeded in knowledge management reflected this change of perspective and can be used to formulate ideal conditions for successful implementations of knowledge management are:
- Earnest and ongoing commitment, with appropriate executive recognition and sponsorship;
- The focus on developing a KM culture through the encouraging of innovation and participation among the widest array of people;
- An enduring KM framework as a key component of a well-defined IT and business architecture:
- A performance point of view that ensures KM goals contribute to business goals and that offers measurements;
- Incentives, and accountability visible to all participants;
- An ability to sense and respond to changing demand;

- Constant communication which not only pushes and promotes changes to participants, but openly listens and responds to feedback and suggestions.

This research will take a closer look on a sales organisation where the need for fast improvements with measurable results is enormous and the "sales force" of a company is analysed explicitly to take a closer look on one sales organisation and their capabilities and approaches towards knowledge management in general and to improve the ways of how knowledge is shared at the moment.

1.2 Research problem

This work will further emphasise the above mentioned aspects of people, process, and technology, and will focus specifically on the problem of sharing knowledge. Sharing knowledge for many organisations has been a major issue and especially in two situations - first when people join the organization and second when people leave it. In these situations the organizations are dealing with the following issues, how they are enabling new employees to fit into the teams, and how a system of knowledge sharing can support the gathering of knowledge from the people who leave the organisation.

As we know, tacit knowledge is only known by an individual. The complexity is in finding a way of communicating it to the rest of an organisation. It is personal knowledge that is rooted in individual experience, and involving personal belief, perspective and values. Explicit knowledge is knowledge that can be articulated, codified, and stored in certain media.

Considering the tacit knowledge of an organisation as one key for the efficiency of it, knowledge becomes a vital and tangible asset. To facilitate the sharing of knowledge thus can highly improve the efficiency of the whole organisation by leveraging the existing knowledge. The implementation of a knowledge management process that aims to target, transfer and organise this knowledge is obviously especially important for companies that have to face a high number of people leaving and joining.

This work will analyse, based on the results of theoretical research, how one of the knowledge management leaders in the IT industry tries to address the problem of knowledge sharing. Starting from this knowledge management insight and referring to

theoretical findings the practical investigation of this project will formulate a new framework with the dedicated consideration of the aspect of knowledge sharing that takes on the existing ideas of integrating knowledge management in an organisation and applies them from a different point of view. To assess the knowledge management of the organisation this research uses a Telesales team in that organisation, because it has high turnover rates and therefore it is to believe that it has a high demand for knowledge transfer.

In addition sales teams are strongly focused on sales numbers and with the loss of knowledge, this can often mean a decrease in sales numbers, the importance of knowledge management is immediately visible and directly related to the company's success. In other words in a typical sales team the management and the employees have the need for a structured approach to get new team members ready to work quickly to increase the sales numbers, to use existing approaches to improve the performance within the team and by all team members to increase the overall business performance within the organisation and to find inhibitors that are existent and reduce or eliminate them, because for all of them good results pay off.

With the help of IT knowledge management was able to support people, so that they could contribute their knowledge into a data store that could be easily accessed and searched when someone had a question or problem to be solved. Documenting explicit and tacit knowledge would lead to the creation of large, reusable sources of insight and experience. The question is hereby on how to select the right technology that supports embedded knowledge management, such as collaboration tools, awareness tools, tools that build trust, and tools that allow people to advertise what they know. In relation to IT both sides of knowledge management come up – the supply side and the demand side. The question is of how to support the identification of knowledge sources, capture, the general approach, different knowledge types, categorisation and organisational aspects, maintenance, the valuation of the knowledge on the supply side and how to support discovery, access, creation, integration and trust on the demand side, when talking about the right technologies for knowledge sharing.

The author will take the view on selection the right technology for the solution design of this project.

This telesales team in its organisation, structure, management system and other aspects that can be understood as a typical sales team not only within the organisation under consideration, but in wide parts of the industry. Findings in this work will therefore have relevance for a larger audience. Thus the key aim of this research is to investigate one of the key knowledge management problems - knowledge sharing - by defining a pragmatic, structured approach to enable a group of persons to share knowledge to improve their work results.

1.3 Research objectives

The author defines following research objectives for this project:
- Giving an overview of the idea of knowledge management with a definition of the related terms;
- Providing an insight on knowledge management in the organisation;
- Analysing of the sales organisation:
  o A general picture of the organisation and its knowledge management approach;
  o The definition of a structured assessment for the organisation;
  o An insight view developed on the base of the assessment to demonstrate the current status of capabilities towards knowledge sharing.
- Developing of the framework for knowledge sharing based on previous gathered insights:
  o Short-term, midterm and long-term solutions and their outcomes to define the overall framework;
  o The assessment of the framework with a strong alignment to the needs of the assessed part of the organisation;
  o Future elements of the framework and necessary elements;

The author will demonstrate in this work how these objectives were achieved during the project phase and the documentation will be reflected in the following chapters.

1.4 Research Methodology

An important part of such a project is the definition of the used research methodologies used. The following overview provides the details on this topic

Research Methodology	Details
Qualitative Research	This work will have the basis of a critical review of literature available in the respective field to give an insight into the research done and developed theories. This includes the examination of the bandwidth of KM literature from the basis of the standard books to the new references and with including papers and resources available on the internet.
Interviews	The author used interviews to get an insight on the topics related to the current state of capabilities in relation to knowledge sharing in the assessed organisation.
Quantitative Research	The collecting of primary data using self-administered questionnaires will be combined with the results conducted from the qualitative research. To gather the input for the assessment one survey was designed to gather the information about the capabilities for knowledge sharing in the team from the participating team members and to understand the outcomes of implemented solutions, which are part of the framework for knowledge sharing
Experimentation	The experimentation was used to gather insights of solutions as part of the framework to knowledge sharing and to get feedback from the team members about the acceptance of such defined solutions. The experimentation was based on the previous research topics and especially taken from outcomes based on qualitative research, interviews and quantitative research.
Observation and expert insights	The method of observation and the insights of experts on this topic were used to gather information that is related to the evaluation of the outcomes of the experimentation phase of the project.

Table 1.1 – *Research methodologies in this research*

All these research methodologies were used to reach the research objectives and to work on this project in a scientific manner.

1.5 Scope and limitations

At the heart of this project is a single team of the whole organisation, but this does not limit the scope of the project to just this team, but the larger organisation will be

incorporated into the analysis to provide a more general picture on the organisation. As already mentioned the selected team sufficiently represent a broader class of teams in this industry. The project is used to implement a framework for knowledge sharing matched to the requirements conducted by analysing the team and providing a deeply targeted insight on existing approaches that can be related to knowledge sharing, views on technology, the management perspective and the investigation of prohibitions of knowledge sharing within such sales oriented teams.

As the literature and the theoretical foundation of this work will show – such a project and the related benefits normally cannot be initiated on a company-wide level with a bottom-up approach and should normally start on a management level. The uniqueness of the project is that the general idea of knowledge management and knowledge sharing in the organisation is existing within the overall organisation, but as improvements are still to be claimed as necessary the scope is taken on one team and the limitations is related to the need for general support in all matters of knowledge management when pushing this topic.

Therefore the project and its outcomes can be understood as a starting point for enabling knowledge management within a small team and the results must be understood and aspects of future work must be taken into consideration for future projects, but can definitely be used to gather an insight on the needs of an organisation.

This project will not focus simply on human behaviour in a sales organisation, but on implementing a framework for knowledge sharing that can be divided in different parts. The evaluation of long-term and outcomes in relation to mid-term benefits will be mentioned in the structure, but can not be explicitly evaluated as of time constraints of the project.

1.6 Organisation of the dissertation

In Chapter 2 of this dissertation the basic terms in the context of this research will be defined and then an overview of the relevant literature will be reviewed to establish an understanding of how knowledge management should be implemented. The focus in this overview will be on knowledge sharing.

Chapter 3 explores views on knowledge in an organisation elaborating on the interaction between a knowledge sharing culture, knowledge management and the information technology in an organisation. It will further investigate collaboration and take a look on the role of people in the organisation.

As Chapter 4 will present the organisation and the observed team, Chapter 5 will pick up the findings of Chapter 3, especially on knowledge loss and on how to overcome knowledge barriers, with the analysis of the sales organisation that is in the centre of this project. It will assess the organisational knowledge management out of the perspective of the targeted team.

The results of the theoretical assessment amended by the outcomes of the evaluations of the current knowledge management by the employees will than, in Chapter 6, help to define the framework for knowledge sharing and provide an overview about technologies supporting the framework especially considering Web 2.0 within IBM.

Chapter 7 will provide a critical evaluation of the in Chapter 6 presented new framework for knowledge sharing.

Chapter 8 will conclude on how the research objectives and the expected elements of the project were achieved and take a look on future work and research.

2. THEORETICAL FOUNDATION

2.1   Introduction

This chapter will provide the theoretical foundation in relation to the topics knowledge management (KM) for the definition of a framework for Knowledge Sharing in a dynamic sales oriented organisation. Additionally, the chapter will provide an overview of knowledge and KM in the research literature. This process will begin by defining knowledge management as it is used in this work. It will build the basis for understanding what needs to be considered in relation to KM, the parts that are essential for KM - organisation, human and technology and will build up the foundation in relation to the specific parts of this dissertation in terms of Knowledge Sharing, Knowledge Loss, Knowledge Barriers in relation to the management of an organisation, the employees and the technology.

2.2   The idea of "Knowledge Management"

The question "what is KM?" can be answered in different ways. Different organisations and different individuals within those organisations define the term in many ways. To find a common understanding it is useful start with a definition of the terms "knowledge", "management" and "managing of knowledge". The use of these basic terms can be lead to misunderstandings that often define the discussion of the topic KM (Keller and Kastrup 2009, p. 11). It is therefore essential to find suitable definitions and stating it upfront to clearly point out the understanding.

The term knowledge management is multi-faceted and at the same time hard to conceptualise (Keller and Kastrup 2009, p. 11). The goal of knowledge-oriented management is the generation of knowledge out of information to use the gathered knowledge as competitive advantage, which can be measured as business success (North 2005, p. 31). The fundamental terms in this view can be represented in North's "knowledge step".

The knowledge step is a model that tries to show all the elements in this context. Keller and Kastrup (2009, p. 11) interpret the model as product of several building blocks that follow a process. The smallest parts of the model are symbols, which become through order rules (syntax) to data. Data are symbols, which are not interpreted. The creation of information based on data is possible when the data are brought in relation to something. Information is therefore the representation of data in a context and could be used for the preparation of decisions from an operational point of view (North 2005, p. 32).
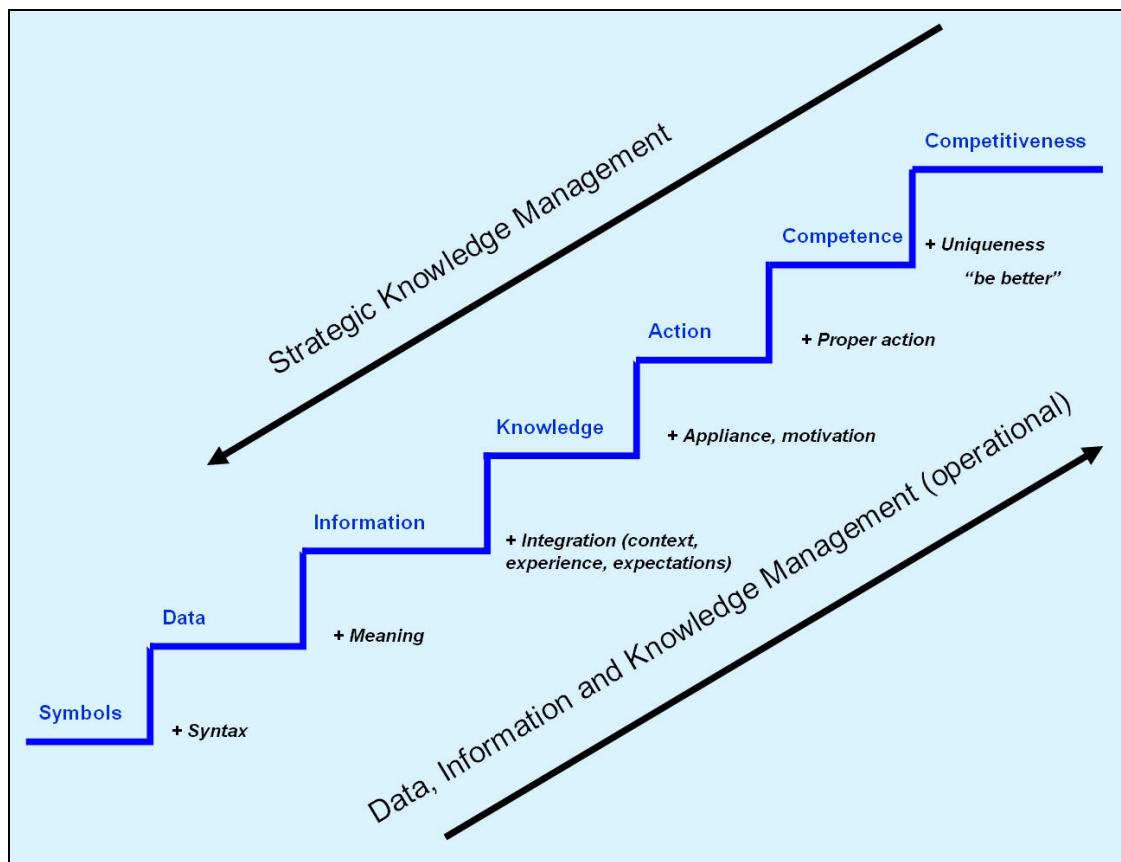
Figure 2.1 – The Knowledge Step (North, 2005)

2.2.1 The Term 'Knowledge'

The term 'knowledge' in this context is therefore the process to the purpose of linking information (North 2005, p. 33). Knowledge originates as a result of the processing of information by awareness (Albrecht, cited in North 2005, p. 33). The interpretation of information and the impact to knowledge is affected by individual experiences. Probst *et al.* (2005, p. 22) define knowledge as following:

> *"Knowledge is the entirety of proficiency and skills that individuals use for problem solving. That means all theoretical skills, as well as rules on how to act. Knowledge uses data and information, but is always connected to individuals. Knowledge is developed from individuals and represents the expectations about cause-and-effect relations."*

To connect the previous thoughts the organisational knowledge is defined by the Carnegie Bosch Institute as:

> *"Knowledge refers to the tacit and explicit understanding in a form about relationships among phenomena, structured in a more or less scientific manner. It is embodied in routines for the performance of business operations, in organisational structures and processes and in embedded beliefs and behaviour. Knowledge implies an ability to relate inputs to output to observe regularities in information, to codify, explain and ultimately to predict (CBI, cited in North 2005, p. 33)."*

North's "knowledge step" points out the value of the human in the process. To create new knowledge, information has to be combined with contexts based on experience, so humans are interacting with information (Keller and Kastrup 2009, p. 12). The model shows the relation of each step towards to goal of KM to be competitive. The value of knowledge is visible for the company, it is transferred to a "competence". That means to transfer the "what" into "how" and – to speak in practical terms – to gain knowledge by implementing steps of permanent education, but also to use the education to transfer it to skills (North 2005, p. 34).

The step "action" is explained by North (2005, p. 34) as how the organisation is able by adding value trough motivation to generate knowledge out of information and how the knowledge is used for problem solving. The capacity is the "competence" of an organisation or a person. Krogh and Roos (cited in North 2005, p. 34) see "competence as an event, rather than an asset. This simply means that competencies do not exist in the way a car does, they exist only when the knowledge (and skill) meet the task." The difference makes transferring knowledge into a purposeful action. Competiveness is defined with the core competencies in a company (Hamel and Prahalat, cited in North

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2005, p. 34). The core competencies are a construct of skills and technologies existing on explicit and tacit knowledge distinguished by stability in terms of time and influence on other products. Core competencies generate a value with customers, are unique compared with competitors, provide the capability to access new markets and are not easy to imitate or to transfer. The core competencies of a company are representing its competiveness (North 2005, p. 34).

The model helps organisations to identify where links between each of the steps are missing. It shows three types of KM:

- – The strategic KM;
- – The operational KM and;
- – The data and information KM.

With the combination of the model with the North's approach of determining the degree of maturity of knowledge oriented management he defines four types of degrees, which are represented in the following figure.
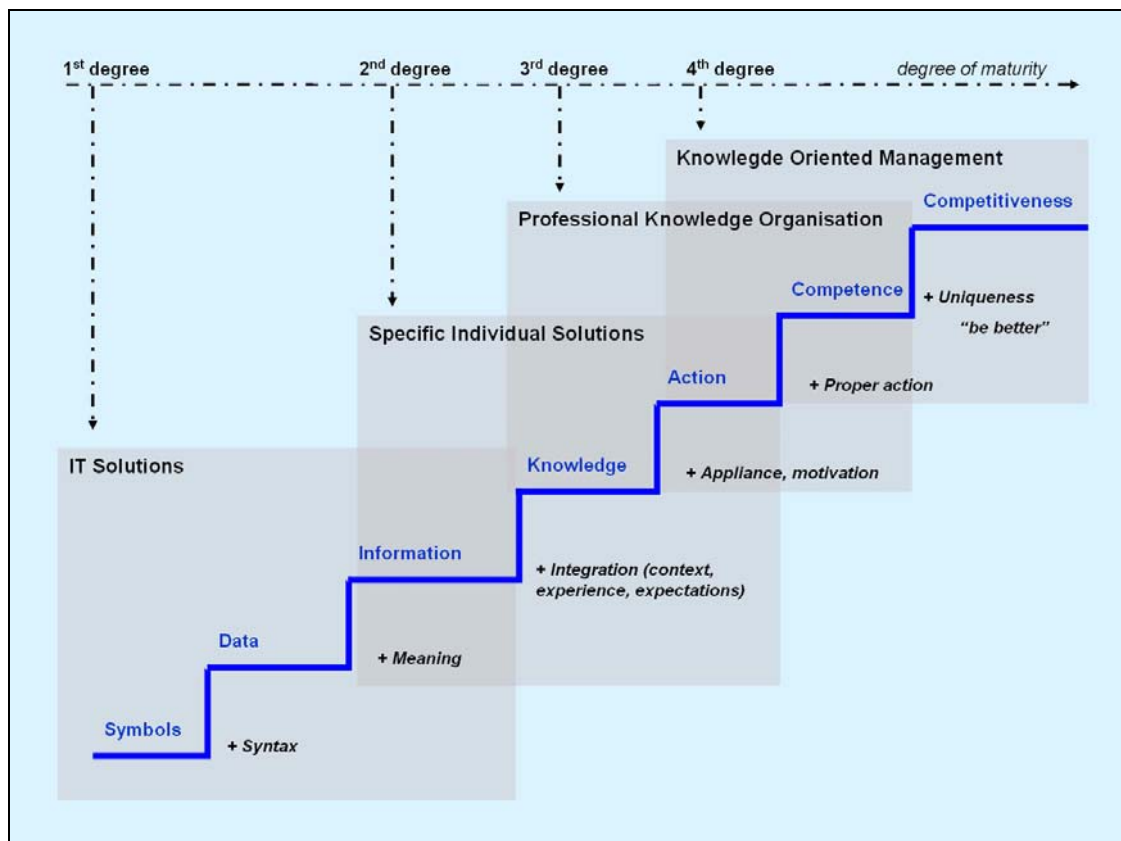
Figure 2.2 – The Knowledge Step (Keller & Kastrup, 2009)

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Organisations on the first degree of maturity are focused on their data and information management. They typically implemented infrastructures to support the transparency of information. Organisational measures are not in place to support the knowledge transfer. The first degree of maturity in the model is normally represented by an organisation which justifies KM on a technical level. Organisations on the second degree of maturity know already that building up the technical aspects is not enough to enable KM. The support must be established in form of rules and a framework must exist. Individual solutions are the examples for solving the specific issues in some of the knowledge related areas. Knowledge in several forms is developed and enhanced.

Organisations of the third degree of typically characterised by following points:

- Integrated information and communication infrastructure with a common organisational responsibility for the content;
- Incentives for employees for knowledge sharing;
- Integration of KM in business processes or the project organisation;
- The knowledge transfer is supported by Communities of Practice and Centre of Competencies;
- The KM is measured in terms of the benefits.

The fourth degree of maturity towards the knowledge oriented management of an organisation is represented by organisations which use collaboration, knowledge transfer over all kinds of organisational boundaries and are characterised by an open, trustful organisational culture that is exemplified by the management and the employees. A typical characteristic is the approach of learning from the outside (markets, technologies, competitors, suppliers, customer etc.) and from the inside. Organisations in the degree of maturity are supported by a mature information and communication infrastructure, media like Communities of Practice, Centre of Competencies. This degree represents the knowledge oriented management (North 2005, pp. 37-38).

2.2.2   Kinds of Knowledge

There are several approaches to characterising knowledge. Von Krogh *et al.* (2000, p. 6) highlight that knowledge itself is mutable and can take many faces in an

organisation – first, knowledge is justified true belief – meaning that "*the creation of knowledge is not simply a compilation of facts but a uniquely human process that cannot be reduced or easily replicated*". Knowledge in this context is a "*construction of reality rather than something that is true in any abstract or universal way.*" One of the most important kinds of subdividing the term knowledge is the differentiation in tacit and explicit knowledge. "*Knowledge is both explicit and tacit*" (Von Krogh *et al.* 2000, pp. 6). Knowledge can be documented on paper, formulated into sentences or captured in drawings. Other kinds of knowledge are tied to the senses, skills in bodily movement, individual perception, physical experiences, rules of thumb, and intuition.

Tacit knowledge focuses on the knowledge of a person, which comes from experience that is shaped by the beliefs and values of the person. Between tacit and explicit knowledge, tacit is the most valuable for action it derives. Any new knowledge is created from tacit knowledge. Explicit knowledge is a representation of tacit knowledge in the form of an "artefact". An artefact can be a document, an image or a video. The purpose of explicit knowledge is to communicate. Organisational effectiveness[1] increases when the powers of both forms of knowledge are harnessed. Knowledge is created through interactions between tacit and explicit knowledge (Menken 2009, pp. 15-16).

"*Knowledge is dynamic, relational, and based on human action; it depends on the situation and people involved rather than on absolute truth or hard facts*" (von Krogh *et al.*, 2000, p. 7). And to close the connection between the kinds of knowledge and organisational knowledge creation von Krogh *et al.* (2000, p. 7) define that "*effective knowledge creation depends on an enabling context*", which is a shared space that encourages emerging relationships. The last point towards effective knowledge creation when talking about the kinds of knowledge are the five steps: "*(1) sharing tacit knowledge, (2) creating concepts, (3) justifying concepts, (4) building a prototype, and (5) cross-levelling knowledge*" (Nonaka and Takeuchi, cited in von Krogh, Ichijo and Nonaka 2000, p. 7).

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[1] Organisational effectiveness in this context can be used to define a state in of general idea of KM in relation to achieving the highest step in North's knowledge step model and the therefore an optimal situation.

2.2.3   Knowledge Conversion

Nonaka and Takeuchi (1995, p. 61) say that the knowledge conversion process is a social process between individuals and not within a single individual. Nonaka concludes that through this social conversion process "*tacit and explicit knowledge expand in terms of both quality and quantity*" (Nonaka, cited in Ihlenfeld 2007, p. 18). Nonaka and Takeuchi regard knowledge conversion as a spiral referring to an interactive transformation process, i.e. a process that is not unidirectional, but considers all possible directions of knowledge conversion. (1995, p. 61). As a result they distinguish between four modes of knowledge conversion.

- **Socialisation – tacit to tacit**: This describes the interaction between people as they share knowledge. It means sharing experiences, mental models and technical skills through observation, imitation and practice. This is the starting point of organisational knowledge creation (Nonaka and Takeuchi, cited in Ihlenfeld 2007, p. 19). "*Socialisation is a limited concept of knowledge creation, as tacit knowledge is not externalised, but remains within the individuals working for the organisation*" (Ihlenfeld 2007, p. 19).

- **Externalisation – tacit to explicit**: "*The hardest interaction for creating knowledge, requiring the ability to conceptualise, elicits, and articulates*" (Marwick, cited in Menken 2009, p. 16). According to Nonaka and Takeuchi, this phase is "*a quintessential knowledge-creation process in that tacit knowledge becomes explicit, taking the shapes of metaphors, analogies, concepts, hypotheses, or models*" (Nonaka and Takeuchi 1995, p. 64).

- **Combination – explicit to explicit**: The foundation of most KM systems is to store, manage and search knowledge resources. This idea implies that different bodies of explicit knowledge are brought together via media, such as documents, meetings, telephone conversations and computerised communication networks (Ihlenfeld 2007, p. 20).

- **Internalisation – explicit to tacit**: Converting information into something actionable requires understanding and internalising by an individual or group.

According to Nonaka and Takeuchi (cited in Ihlenfeld 2007, p. 20) it can be compared with learning by doing. "*When experiences trough socialisation, externalisation, and combination are internalised into individual's tacit knowledge bases in the form of shared mental models or technical know-how, they become valuable assets*" (Nonaka and Takeuchi 1995, p. 69).

All these interactions occur in different combinations in a business situation. The modes of knowledge conversion are considered to be a spiral as the creation of knowledge is a continuous process of dynamic interactions between tacit and explicit knowledge. The basis for the whole spiral is the single employee and her skill to create knowledge. Through the communication between employees, the employee shares her knowledge (externalisation) and transfers her knowledge to others. The individual employee on the other side internalised the knowledge of the collective (internalisation). Though this continuous exchange between knowledge externalisation and knowledge internalisation through all existing entities employee, group, and organisation and across the boundaries of the organisation the knowledge is made available and the organisation is able to grow knowledge. The requirements are the communication on individual level on the one hand and the use of information and communication technology on the other hand (North 2005, pp. 45-46).

2.2.4   Knowledge Management

The term knowledge was already described in the previous chapters, but the term "management" needs still explanation to find a common understanding. Managing is defined as leading, organise cleverly and to be in charge of something (Gerhards and Trauner 2007, p. 11). It is the sum of the creating and setting goals and visions, organise, decide, control, and develop and support humans (Malik, cited in Richter 2008, pp. 20-21).

Defining KM is just as difficult as defining knowledge (Menken 2009, p. 12). Probst *et al.* (2006, p. 23) define KM as an improvement of organisational capabilities through an organised and better implemented approach to work with knowledge. "*If knowledge is the sum of experiences and information from an individual or group, than KM is a program for increasing that sum*" (Menken 2009, p. 13). The goal of KM is finding

value in activities that have potential for embedded knowledge to be identified. As a consequence the definition of KM, Kilian *et al.* (2007, p. 16) explains that just building up the knowledge without using it for concrete actions, is not a measure in the sense of knowledge management.

To take a broader view on KM it could be defined as "*a set of practices that maximizes the business value of knowledge by gathering, structuring, and delivering it at critical points of customer interaction*" (Knowledge Management for Customer Service - Ingredients for Success 2004). The following diagram from Wissensmanagement-Forum (2003) shows the "Basic model of KM" as the "*targeted coordination as a factor of production and the management of the organisational environment to support individual knowledge transfer and the subsequent creation of collective knowledge*" (Wissensmanagement-Forum 2003, p. 7). A clear definition of KM can be found in the management of the organisation with a particular focus on knowledge, rather than the management of knowledge itself.

The Wissensmanagement-Forum (2003, p. 7) describes that there are two fundamental levels – the data level and the knowledge level, which are based on the traditional differentiation between knowledge on the one hand, and data and stimuli on the other. The three main aspects to knowledge:

- Individual knowledge – i.e. the sum of an individual's capabilities and experience), "determines the possible actions open to an individual and, consequently, the contributions they are able to make to a particular project or task", the individual knowledge is made up of the knowledge of the individual members of the organisation and their interactions;

- Data – internal and external data sources, which means that all available documented knowledge (explicit knowledge);

- Action – includes physical and mental actions (e.g. problem solving) and the results to complete an individual task often result in large amounts of data, both previous mentioned aspects provide input for the action level – here the business processes are enacted and the value creating processes are represented.
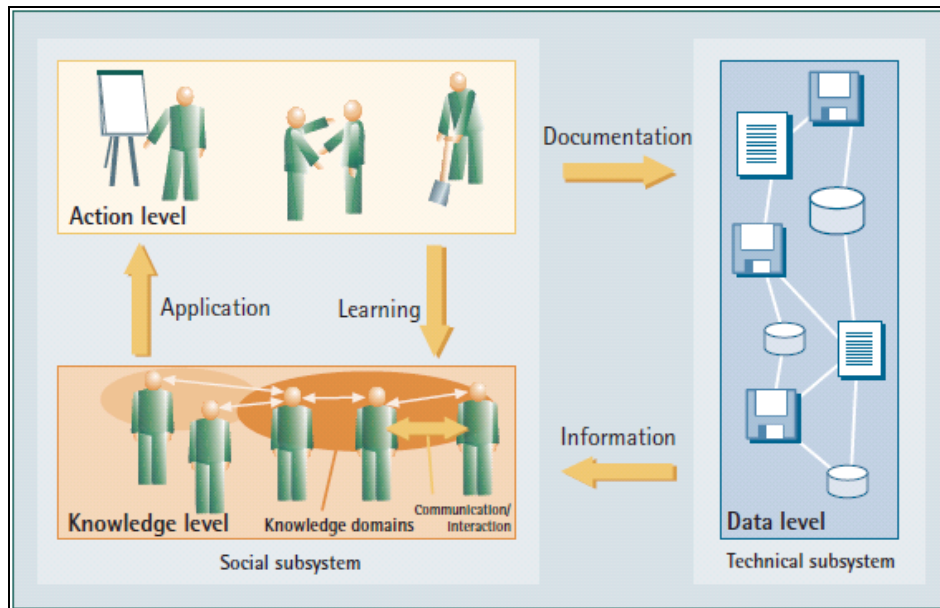
Figure 2.3 – Basic model of KM (Wissensmanagement-Forum, 2003)

Interestingly and in addition to the previous definitions are the critical points of Peifer (2009, pp. 120-121) in relation to the term KM. He states that several authors doubt the manageability of knowledge and therefore the term KM. KM is a trend term, introduced by consultants to merchandise something that is already known and to state as new and innovative (Wilson, in Peifer 2009, p. 120). "T*hus, data may be managed, and information resources may be managed, but knowledge (i.e., what we know) can never be managed, except by the individual knower"* (Wilson, in Peifer 2009, p. 120). Sveiby for example thinks (cited in, Peifer 2009, p 121): "*I don't believe knowledge can be managed. KM is a poor term, but we are stuck with it, I suppose. 'Knowledge Focus' or 'Knowledge Creation' (Nonaka) are better terms, because they describe a mindset, which sees knowledge as activity not an object.*"

2.3   Conclusions

This chapter provided the theoretical foundation for the whole project and this document. It demonstrated the general idea of KM in the context of this project with an explanation about the term knowledge, the different kinds of knowledge, and the knowledge conversion and provided a view on how to define the term KM.

To build up the structure for the whole project the author will use parts of the shows definitions of KM and explain KM in the following way for the further chapters of this work. KM is the effective utilisation of methodologies and tools, which are used to gather structure and create knowledge with the goal of generally creating benefits and value in an organisation by managing an organisation with the understanding of knowledge as a factor of production.

3. ORGANISATIONAL KNOWLEDGE MANAGEMENT

3.1 Introduction

The following chapter will demonstrate how KM is handled in organisations in general and therefore explain the view on knowledge within an organisation, elements of the knowledge sharing culture and take a look on KM and IT. It will reflect on the topic of how the transformation of looking at knowledge as an object to looking at it as a process is implemented in an organisation. Further the involved elements regarding the topic KM will be described. This chapter continues the themes created in the previous chapter and will guide the way towards the examined organisation by explaining the view on KM and knowledge sharing in the organisation in general. This will be used to complete the work in proceeding to the analysis of the sales organisation.

3.2 View on knowledge in the organisation

KM was initially developed to meet two threatening challenges that have been identified by large businesses looking at a competitive edge in an expanding and information-intensive marketplace. The first one was intended to work better with information that was quite unstructured by establishing ways of taking control over the sources of information with the intention not to lose that located and captured information. The other one was to find answers to typical business questions that rose based on increasingly complex and fast changing requirements (Figallo & Rhine 2002, p. 30).

This approach was called 'knowledge as object' path, "*with the goal to collect key data and configure them in ways that tell the organisation how to proceed toward whatever it defines as success. It starts with data collection, storage, and management and applies the searching and parsing skills of virtual librarians and economists to the various data streams associated with purchasing, production, sales, marketing, and human resources*" (Figallo & Rhine 2002, p. 30).

This kind of development led to the development of increasingly sophisticated software platforms (some of them were called expert systems) that were used to combine various data streams to be more efficient.

So these first waves of KM theory that treated knowledge as content with the result that the initial technology approaches tried to implement solution to store knowledge just like digital containers. The problem with this development is that information that many organisations collect is often beyond the interpretation abilities of their own employees. The view on knowledge as a process was the result of the existence of practical limitations by treating knowledge as an object. There is no chance to take in advantage communication capabilities and "*it cannot uncover, store, or distribute the human intelligence possessed by the people in the organisation. This intellectual capital is much more fluid and accessible through person-to-person interaction*" (Figallo & Rhine 2002, p. 30).

Knowledge sharing takes place on a deeper and more customizable basis, where the focus is on people and how they communicate rather than on information and how it is handled. People are more complex and more difficult to manage than information, so it is easy to understand why most organisations have spent more money, time, and resources on developing their capabilities for information handling than on developing those for interpersonal collaboration (Figallo & Rhine 2002, p. 31).

3.3 Knowledge Sharing Culture

"*Information and knowledge are strategically important resources because these many types of organisational capabilities are a direct result of sharing, integrating and applying them. The effective maintenance, communication, transfer and sharing of information and knowledge is the ubiquitous supportive framework that is needed for the creation and maintenance of strategic-organisational outcomes and, if it is not already in place, requires a culture that encourages, supports and values the efforts of the members of the organisation in achieving them.*" (Hart & Warne 2008, p. 108)

Regarding the creation and the maintenance of such a culture Figallo and Rhine (2002, p. 114) define the under their topic of 'Creating the Ideal Conditions' that three essentials of a sharing culture must be in place:

- Trust: What I share will not be exploited or used against me;
- Tolerance: What I contribute will not be criticized unfairly or bring personal attack;
- Reward: I will benefit from the exchange if I contribute to it."

In their deeper explanation of the three points Figallo and Rhine (2002, p. 114) say that trust is meant to be recognise for the initiative of sharing knowledge. That means on one side it is essential that no one else will take credit for the knowledge. On the other side an expressed opinion shouldn't get them in trouble. If these trust aspects are not implemented the expected participation will not follow. Trust should be underlined by following clear and fair rules and policies and that 'incentives for contributing' will be real. Tolerance means that the organisation must be open to criticism and supporting the truth. The question of "What's in it for me?" should be clear answered in the sense of the reward of participation. Participation should bring value to each other. Therefore a satisfaction in participation of people should be initialised.

Taking a close look on the ideal conditions the question why such knowledge sharing culture isn't established in several companies brings up the point of Figallo and Rhine (2002, p. 104) and the example where these conditions are already essential for the use of creating the competitive advantage. Their example of consulting firms, where there is a big need of an "*express purpose of sharing internal knowledge, findings, and generating new knowledge, and packaging and selling that synthesized knowledge*" is on the contrary to most organisations. A quiet simple explanation is that the reward of individual specialisation has always been in place and collaboration has not.

Hart and Warne (2008, p. 108) define the operational challenges of many organisations in the context of explaining the need to make better use of information systems (and especially knowledge-based systems) as "*climate of uncertainty, dynamism and interdependence*". The involvement of IT comes up in this topic as the need for better user requirements analysis and an understanding of the organisation's work culture for

making those systems work. As shown in the previous chapters the view on knowledge as a process brings up the point that the organisational challenge, the work and the problems that organisations face are dynamic and the wrong approach coming as an answer from the IT would be building largely static systems, which seems to be done in most of the situations (Hart & Warne 2008, p. 109).

The point of the culture is to be existent in a supportive structure (Senge; Warne *et al.*, in Hart & Warne 2008, p. 109). In a culture that values knowledge, managers recognise not just that knowledge generation is important for business success but also that it can be fostered with time, and space (Davenport & Prusak, in Hart & Warne 2008, p. 110). The other side of low morale and the consequence towards knowledge sharing, can lead to a lack of understanding that not only affects morale, but also has an impact "*on trust, organisational cohesiveness, goal alignment and common identity, and consequently, on opportunities and motivation for learning and innovation, and on general productivity*" (Hart & Warne 2008, p. 110).

One important example lies in appreciating the ways in which an organisation's formal rules and processes can be bent to achieve a desired outcome. This class of knowledge can empower people to solve problems by expanding the range of solutions that may be available, and by giving them a lack of knowledge or incorrect perceptions will constrain the types of solutions that can be found (Warne *et al.*, in Hart & Warne 2008, p. 110). Hart and Warne say (2008, p. 110) that trying to "overcome" resistance to sharing is not the ideal solution, as it is important to recognise the sources of resistance. Furthermore the acceptance of this kind of behaviour is not only endemic to but also more than likely inevitable in many if not all organisations. It is vital to take the needs of individuals and groups into account to manage their own choice of information and knowledge resources. "*They should be supported in their management of them, which includes enabling and making it easy for them to share with other people and groups in the organisation as their understanding, discretion and willingness dictates, rather than attempting to force them to do so.*"

The following table outlines the main standpoints defined by Hart and Warne (2008, p. 113) by general topic area, put forward in the two perspectives outlined above. Hart

and Warne focussed on two perspectives: the organisational culture-based perspective and the organisational politics-based perspective.

Topic Area	The Organizational Culture- Based Perspective	The Organizational Politics- Based Perspective
Sharing and the coordination and integration of organizational work	Information and knowledge sharing are necessary for the effective coordination and integration of organizational work	Coordination and integration of organizational work are best effected by directed and selective information and knowledge sharing
Shared understanding and common identity	Information and knowledge sharing are both enabled by and improve shared understanding and common identity amongst organizational members	Context is all-important so, other than in a limited and local sense, shared understanding and common identity are unachievable ideals
Sharing and organizational alignment	Information and knowledge sharing lead to goal alignment and common purpose amongst organizational members	Information and knowledge sharing occur between organizational members who perceive their goals and purposes are already aligned
Sharing and organizational culture and politics	Information and knowledge sharing depend on the creation of an organizational culture that fosters and recognises the value of such sharing, thereby avoiding or reducing political problems	Changing culture is a long tedious and difficult process and, in any case, sharing (if it occurs) is more the outcome of normal organizational political motivations and assessments than it is of cultural characteristics.
Sharing and the communication of meaning (Sensemaking)	Information and knowledge sharing will enable the free flow of meaningful communication throughout the organization facilitating sense-making	Meaning and sense-making is the result of a process of contextually mediated interpretation; and information does not, in itself carry any inherent meaning
Unwillingness to share	Information and knowledge sharing are inhibited by indefensible motives (such as self-interest, power and politics) inimical to proper organizational functioning	Unwillingness to share information or knowledge may be driven by genuine and valid concerns for better organizational functioning as well as by less defensible motivations
Approaches to sharing	Wider and more effective information and knowledge sharing can be achieved by better understanding organizational work and system requirements definition, as well as the fostering of a sharing internal culture	Supporting individuals and groups in the management of their own information and knowledge resources, but at the same time enabling and making it easy for them to share with whom and when they see fit, is the way to approach the sharing issue

Table 3.1 - The Organizational Culture-Based Perspective and the Organizational Politics-Based Perspective (Hart & Warne 2008)

It can be added that according to the power and political view, organisations are best understood as "*sites where people and groups interact in pursuit of a range of interests*" (Dunford, in Hart & Warne 2008, p. 112). These interests may be compatible or complementary, so that limited collaboration may occur. It is also possible that these interests on the other hand conflict. Different objectives with different grades of complexity and multiplicity within organisations lead to this political perspective, Political interests in terms of power, the mobilisation of support and negotiation are not always aligned with the general focus of the organisation. In this case it might become very difficult to establish information and knowledge sharing.

3.4 Knowledge Management and IT

"*The goal of KM is to encourage and control the knowledge sharing*" (Menken 2009, p. 17). The change from looking at knowledge as an object that – taking now the IT into consideration – needs to be stored and be made accessible is manifested in most solutions for KM. These solutions focus mainly on the outcomes of externalisation and combination, as the outcomes of both interactions are tangible and measurable. "*The mistake for many KM efforts is focusing on the creation of explicit knowledge while ignoring the creating of tacit knowledge*" (Menken 2009, p. 17).

Menken describes furthermore (2009, p. 17) that there is a flaw in the thinking that the created number of documents is showing the KM initiative is working, because explicit knowledge is measurable and tacit knowledge is actionable. Taking the point of increasing the effectiveness and efficiency as the result of better decisions driven my KM is one part, but the main part in this context should be action. "*Ignoring the creation of tacit knowledge does not promote action from knowledge.*"

The approach of knowledge as a process is leading to the idea that IT must first of all support the idea of encouraging the knowledge exchange on the people level. Looking at IT and the purpose of it, it can be stated that the overarching purpose of information technology (IT) is to increase productivity in the workplace. The right systems provide context and control to all interactions of knowledge creation. As knowledge sharing is already happening in a typical business environment (Menken 2009, p. 18), the question is coming up of how the people responsible for the information technology in an organisation communicate to the needs of those seeking for knowledge sharing or to improve knowledge exchange and transfer through computer technologies (Figallo & Rhine 2002, p. 86).

Until the IT is able to implement the technology to be in place so that it can co-evolve with the organisation's changing business models and cultures, with the behaviour of people and their habits of knowledge sharing, companies will go through periods where the design of the information interface is out of sync with operational needs. If something like that happens the acceptance of the systems is missing as the logical result and people refuse the use them. The same can be adapted to the introduction of

systems that are not supporting the people in an intuitive and efficient way (Gerhards & Trauner, 2007, p. 86).

IT and knowledge exchange stays in focus as technology "*can only do so much, and it can be deviously simple to provide what look like the right solutions only to find that they don't fit the process needs, work habits, or social culture of the people meant to use them*" (Figallo and Rhine, 2002, p. 97). These researchers prioritise the fulfilment of needs in the following areas:

      1. Integrating knowledge resources

      2. Organizing relevant information

      3. Providing the most appropriate basic tools to support the knowledge exchange conversation

Based on a KMPG report (in Figallo & Rhine 2002, p. 99), in which 400 companies were analysed regarding the use of the KM systems the question "Why do you think the benefits failed to meet expectations?" was answered with following responses:

Issue	Percentage
1. Lack of user uptake due to insufficient communication	20%
2. Everyday use did not integrate into normal working practice	19%
3. Lack of time to learn or system too complicated	18%
4. Lack of training	15%
5. User could not see personal benefits	13%
6. Senior management was not behind it	7%
7. Unsuccessful due to technical problems	7%

Table 3.2 – "Why do you think the benefits failed to meet expectations?" (KMPG 2002)

85 percent of the analysed companies reported that the KM system failed to meet their expectations. Coming to a conclusion it can be said that "*knowledge is so dependent on human perception and context*" (Figallo and Rhine 2002, p. 97), the suggestion would be that a group of targeted individuals that are going to use the system as knowledge workers must be involved in the design process of the technical knowledge-sharing environment. The IT cannot depend on a purely technical, automated solution to meet the learning needs of this group or the organisation. This effort in itself is a knowledge sharing activity. An optimal teaming approach would be the introduction of IT as the technical advisor and consultant of the group. One already identified and the most

critical capabilities that IT provides is collaboration, which is highlighted in the next chapter.

3.5 *Workhorse of Knowledge Management – Collaboration*

The term "team" comes to a deeper meaning in this context. As very few people work alone and achieve results just by themselves. In a team people are interacting across different areas of responsibility. The power of the team is that the understanding of different members of the team is different, but this can cause potential barriers also, so to work together it is helpful to understand what everyone wants to achieve by looking at what there are doing, why are they doing it, how they are doing it and what the expected results look like. This implies the need to specify and build information systems that give effect to this collaboration, enabling the sharing of information and knowledge as it is required (Hart & Warne 2008, p. 113).

Collaboration is the formal sharing of ideas, thoughts, and opinions centred on arriving to agreement. The agreement doesn't have to be formal, such as a contract, nor does the environment hosting the collaboration have to be formal. The point of collaboration is that most individuals are invited to share their knowledge as it pertains to a specific topic with the end result being an artefact that shows the success of the collaborative effort (Menken 2009, p. 31). Collaboration practices within a given organisation can be complex, with shifting, overlapping processes, tools and requirements across innovator classes, business segments and activity domains (Gerhards & Trauner, 2007, p. 88).

Collaboration is the springboard into innovations (Menken 2009, p. 108) and can be the result of many reasons and be found in following models (Menken 2009, p. 109):
  − Collaboration by chance – the team is randomly built up from the available persons and with no regard to the skills and the needs of the team members;
  − Collaboration by interest – usually a problem occurs that needs to be solved and a team whose members have a similar interest in the subject in general;
  − Collaboration by leaders – teams can be formed by a leader looking for members with compatible values, schedules, interests and acuity.
  − Collaboration by acuity – teams that are formed with all four acuities present:

- Conceptual – drive the generation of ideas, concepts and plays the visionary of the team;
- Formalised – the results are quality, conformance to requirements, and organisation of content;
- Operational – it provides the professionalism required by the team, as well as driving documentation of processes and articulate communication;
- Technical – stands for the reliance and proficiency in research and technology.

As collaboration is the workhorse for KM, the role of KM is to recognise the many ways collaboration is initiated. The IT and the KM idea coming with it should provide the tools to document the knowledge as well as build the basis infrastructure for enabling collaboration and therefore KM. The benefits of collaboration vary from building high performance teams to reducing costs and waste in the organisation. The best collaborative environments are those that provide individuals the opportunity to sufficiently review points as they are introduced and come to a conclusion knowing that most of the pertinent issues have been identified if not addressed. Normally communication technologies are in place to share and create new knowledge. For the most part these technologies aid the collaborative effort and the usage in the right way requires education of the users (Menken 2009, p. 32).

For the past half century, the business world has watched IT take on an increasingly central role in practically every organisation – slowly at first, but with increasing speed and ubiquity in recent years. Nearly all organisations, across industries and around the world, now rely on IT for the operation of fundamental business processes. Collaborative environment can be active or passive. Whether e-mail, instant messaging, wireless connectivity, virtual workspaces or videoconferencing, technology dramatically shortens distances between people and frees up the flow of intellectual capital, enabling employees to work and respond much more quickly (Harris 2009, p. 4).

The benefit to these collaborative tools is the creation of an environment from which individuals can share experiences and develop trust. By sharing information across

separate lines of business, employees naturally tend to drive business innovation from the ground up. "With trust comes depth to the conversation" (Menken 2009, p. 32). Just implementing collaboration technologies, such as instant messaging or videoconferencing and not considering their practical use and the value for the business could lead to more harm that it could cause good. If a technology is unsuited to employees' need or the support in terms of facilitation during the transition phase, the intended user group may never choose to adopt the tool (Rozwell 2009, p. 5).

3.6 The role of people in the organisation

"*The most important competitive assets for most enterprises are the skills, expertise, and experience of their people, and it's incumbent upon them to offer people the facilities they need to better gain, retain, use, and convey their knowledge*" (Murphy & Verma 2008, p. 3).

The human in the context of KM plays the central role with identification, gaining, creation, saving, structuring, transfer and assessment of knowledge. The knowledge in the heads of employees in an organisation is the most important factor in an organisation. The challenge of KM is – as defined in the previous chapters – the use of this kind of knowledge. If the human is not considered enough in the strategy of KM, barriers will come up and the success of every KM initiative is in risk (Richter, 2008, p. 79). The reasons or influences on these points are mainly laying in the approaches of the organisations knowledge sharing capabilities and are therefore part of the knowledge sharing culture or the possible prohibitions.

People may be natural knowledge sharers, but within organisations there are competing motivations between loyalty to the organisation, loyalty to the team, and loyalty to one's career. There are many different contexts for collaboration depending on the structure of the organisation and the task at hand. There are cultural issues, professional issues, and there can be technical competence issues (Figallo & Rhine 2002, p. 31). As previously described the way of working involves the people in the organisation. In this case working collaboratively is essential to organisational success and for successful problem solving (Hart & Warne 2008, p. 108).

We can identify different kind of people in the organisation with different kind of motivations that can be recognised in following individuals needs driven by power and politics, as well may even be corrupt or dishonest in their pursuit. But Warne *et al.* (in Hart & Warne 2008, p. 110) define that most "*people, by contrast, enjoy the experience of working in teams towards shared goals and, provided with the right environment (organisational culture) and means (e.g., technological information or KM systems) that are based on their real needs, through effective requirements analysis for example, will willingly engage in sharing their information and knowledge resources to solve organisational problems and give effect to their work.*"

Looking at the human and all related influences Richter (2008, pp. 79-84) defines the possible barriers as follows: In addition to the knowledge sharing culture and the political view presented in the previous chapters; Richter adds: cultural influences – especially the "not-invented-here-syndrome", which is based on the composition of lack of knowledge or ignorance, uncertainness, distrust, vanity and the overestimation of one's own capabilities to develop own solutions. Richter describes further that a typical behaviour in this context is that knowledge isn't usually accepted coming from lower instances in the hierarchy (Linde, in Richter 2008, p. 80).

The fear of losing power is another example. Richter (2008, p. 80) brings up the term "head monopoly" and the related attitude to work with knowledge. The view on this term is explained by the opportunity of someone, who has a specific knowledge and is able to use it to influence something in the organisation. The other person is not given the opportunity as the knowledge is detained (Probst 2006, p. 91).

Personal fears and uncertainness is another reason defined by Richter, where he states the example of somebody adapting the knowledge from somebody else for the own advantage to achieve the personal goals, i.e. to distinguish oneself. On the other hand inexperienced employees could feel this uncertainness by questioning their own knowledge towards usefulness (Comelli; Vroom, in Richter 2008, p. 82).

Another influence factor is inadequate motivation, which is stated as one of the most important and most comprehensive barriers to KM (Przygooda, in Richter 2008, p. 82). The quality and the quantity of work of an employee are influenced by mainly two

important factors: the individual skills and willingness to use them. Therefore it should be in interest of each organisation to encourage both of them especially through motivation. The motivation can be differentiate in two kinds of motivation – the intrinsic and extrinsic motivation. The extrinsic motivation is used to satisfy indirect needs, which in a work environment can be related to the compensation. The intrinsic motivation is following the activity directly as it is used as challenging and satisfying (Mergel, in Richter 2008, p. 83).

3.6.1   The role of the employee

The essential role of employees of an organisation in the context of KM is then following: employees use their knowledge to develop, share their knowledge (or not), document knowledge or take part in education sessions to earn new knowledge (Keller and Kastrup 2009, p. 72). As every individual in an organisation needs information and other resources to solve problems, the individual's network is one of their most important resources. Both personal and social networks are an important means of acquiring, propagating and sharing information and knowledge (Hart & Warne 2008, p. 110).

The Wissensmanagement-Forum (2003, p. 8) describes the role of the employee in the organisation in the following picture.
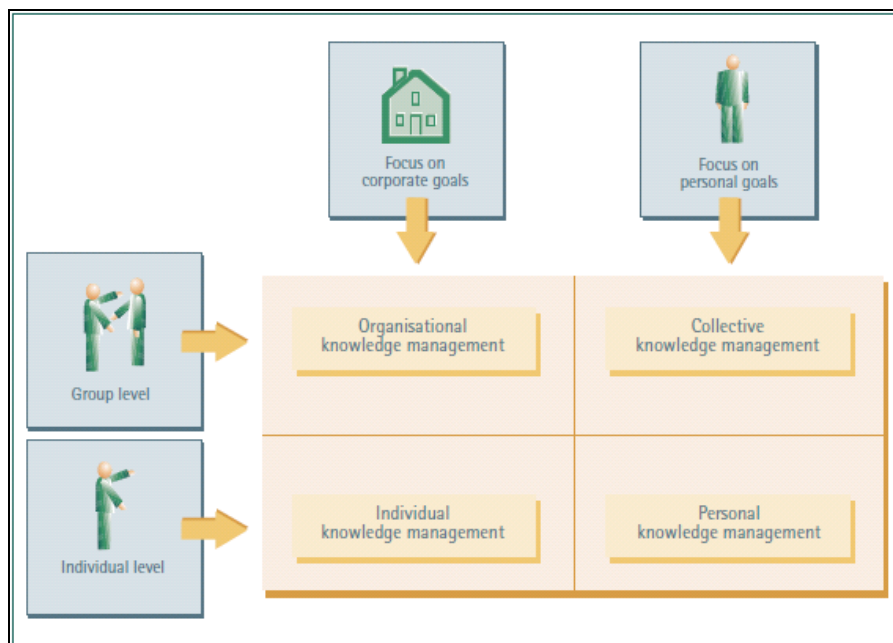
Figure 3.1 – Actors and goals in KM (Wissensmanagement-Forum, 2003)

The role of the employee can be described as an actor in the concept of organisational knowledge management, where the group and the individual with dedicated goals work together. Organisational knowledge management mainly deals with the KM by and for groups of employees. The activities that take place at the each action level within organisations can lead to conflicts of interests. These conflicts can have a deeper root, which can be exemplified by using the example of an individual looking for training to improve personal skills. The individual goal is hereby to improve the value of on the employment market. If such training doesn't have relevance to the corporate goals, a conflict of interest is described. There is no implication that personal knowledge management should be seen as diametrically opposed to a KM focus on corporate goals. Another example is of the hoarding of knowledge by experienced employees to protect personal interests.

The challenge is these scenarios and the interests of individuals and the organisation to work with these non defined boundaries between personal and work-related interests.

The amount of effort a person is prepared to invest in knowledge that is important for the organisation, yet of no personal interest, is primarily a question of motivation, and can thus only be influenced indirectly (Wissensmanagement-Forum 2003, p. 8).

3.6.2   The role of managers

To establish and maintain the surrounding conditions is the task of the management of an organisation. Ideally the guidelines for collaboration are defined together with the employees and the management is responsible to ensure the compliance to the guidelines and rules. In addition to such "weak factors" the responsibility for the knowledge oriented process, the efficient use of IT in this matter and the successful work in these projects lays within the management (Keller and Kastrup 2009, p. 72). In this context Keller and Kastrup define leadership as the essential success factor of good KM. It can be stated that managers should become more and more Knowledge Managers (Keller and Kastrup 2009, p. 72).

Human resources with the task of employee education and skill development should support the management in terms of deciding which ways should be followed for

further education. The overview of core competencies in the organisation is therefore the essential part to decide what should be done in terms of education and what needs to be managed when employees leave the organisation. The general task of KM is bringing the transparency to the organisation about core competencies and the development of how this knowledge can be transferred within the organisation.

The knowledge transfer within the organisation must be organised and controlled. This can be managed through learning on the job approaches (that are efficient in this way that knowledge becomes genuine ability only under application and through practice), yellow pages, Communities of Practice or Innovation and Ideas Management. Changes in the management and in relation to employees are representing a risk in terms of:

 − Important projects must go on;

 − Important and sensible customer relations must maintained;

 − And strategic developments in the organisation must be continued.

3.7   The knowledge loss in an organisation

The knowledge loss in an organisation can be represented by various causes, but a common one is the leave of an employee. If an employee leaves the organisation the chance of the loss of valuable experience and knowledge (implicit knowledge) is high. Even documented knowledge (explicit knowledge) can become useless if the employee (manager of staff) leaves. Possible reasons for changes in the personal structure of an organisation can be diverse (Keller & Kastrup 2009, p. 73):

 − Age-related retirement;

 − Finishing of a project;

 − Assignments;

 − Maternity leave or parental leave;

 − Job rotation;

 − Fluctuation.

All the reasons seem to imply that the need for an action against the threat of knowledge loss is a normal factor in an organisation. The task in relation to that threat must be the structured and effective way of transferring knowledge and to enable the

successor of leavers. The overall goal should be in general the structured preservation of organisational knowledge.

Keller and Kastrup say (2009, p. 74) that the main reason for missing knowledge perception and knowledge transfer is often related to an unstructured approach. The implementation of processes and activities in the organisation should always be enabled by a pragmatic approach that braces these processes and activities within the organisation. An approach could be the process of knowledge perception and knowledge transfer developed by Keller and Kastrup and presented in the following figure.
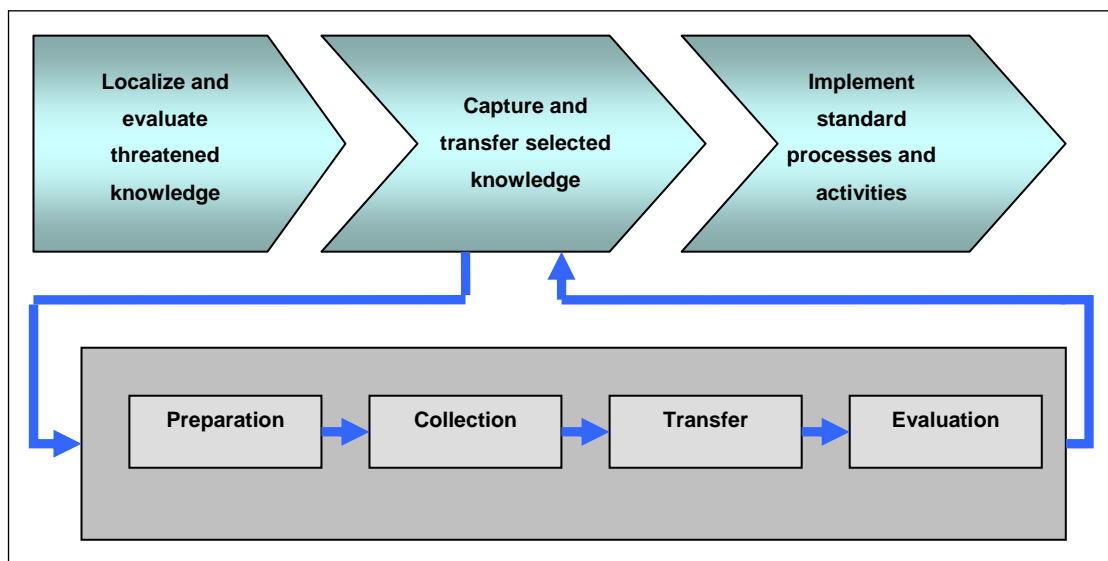
Figure 3.2 –Knowledge Perception and Knowledge Transfer (Keller & Kastrup, 2009)

The first step for the structured perception of knowledge in the organisation is the localising of the possible loss of knowledge. The areas and the involved employees need to be found and the projects need to be prioritised. The goal should be the identification of knowledge areas for transferring the knowledge and to embrace it in the organisation as standard defined processes and actions.

The next step in the model of Keller and Kastrup will be capturing and transferring of selected knowledge, which includes the subtasks of preparation, collection, transfer and evaluation. Projects need to be established in each of the steps with the knowledge holders to identify the acute need for action on the one hand and to get the support of

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the overall organisation on the other hand. In terms of the practical work on a high-level view the model can be subdivided into define the following process stages:

Preparation:

  − Building mutual trust;

  − Establish the basis of information;

  − Define the goals;

  − Agree to the methods.

Collection:

  − Develop the overview of knowledge areas;

  − Define priorities;

  − Capture know-how and document it;

  − Gather the transfer plan.

Transfer:

  − Start transfer (hand-over meetings, workshops);

  − Establish activities plan for the successor.

Evaluation:

  − Compare achievements with previous defined goals;

  − Evaluate process / lessons learned;

  − Describe the potentials for improvements and communicate it to the management.

A useful tool for the transfer of organisational know-how is the breakdown into categories of knowledge. These categories can be oriented to the different parts of organisational knowledge of each employee. The following figure shows the variety of individual knowledge in an organisation and shows that the effort of gathering all related information is extensive. It underlines the need of a structured approach to work with the knowledge.
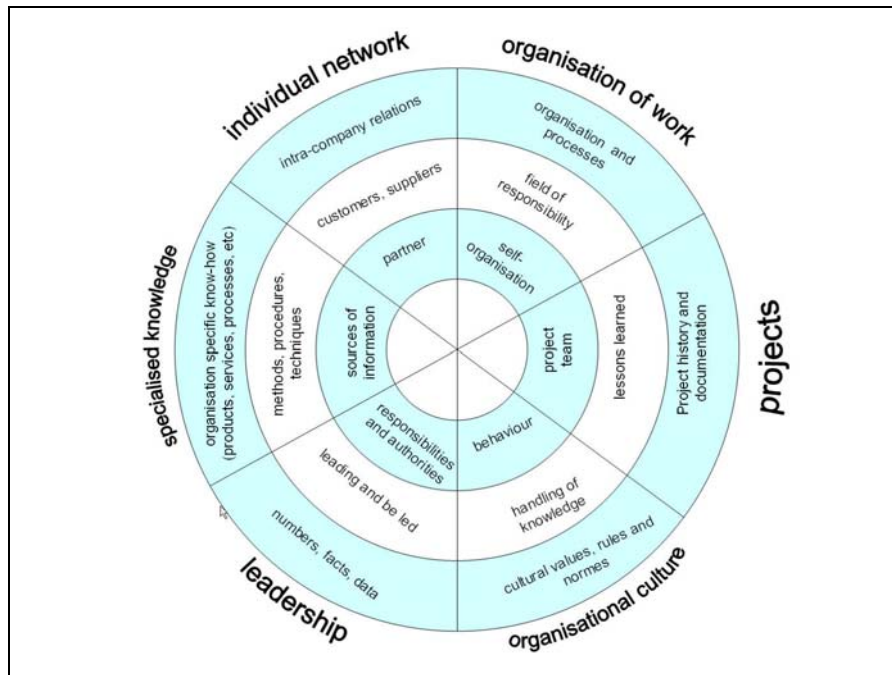
Figure 3.3 – Knowledge Categories (Keller & Kastrup, 2009)

The categories of knowledge point out what areas need to be discussed with employees. The results of this process must find a way of documentation and should be reviewed with a participation of the person who provided all the details and the person who is going to use it. This kind of session should be moderated in a take-over meeting. The lessons learned process should be an essential part in this process to use the earned experience for making the process as effective as possible.

The next step is the implementation of standard processes and activities that follow the first hand-over projects and are intended to be driven by the management. The handling of changes in the staff (managers or specialists) should become an accepted and lived process that is evaluated regularly to implement improvements as they become necessary.

3.8   Overcoming knowledge barriers

In the process of KM and the implementing of it from the beginning the planning steps of will normally identify what needs to be done, who is involved and what can be expected from the final solution. One of the main points for KM is the involvement in terms of the support and participation of the overall organisation. It is possible that the

implementation of KM will be a radical change to ideals, values and priorities with no clear indication of value to the business Tools, techniques, and best practices are introduced to the environment and resistance will occur in several situations (Menken 2009, p. 150).

The success of KM is dependent on managing the organisational change towards a knowledge sharing culture – as described in the previous chapters. Starting from the point of communicating the first step, to the point of communicating, the upcoming tasks in the KM project (Menken 2009, p. 150). The building of the basis for KM is creating an understanding of KM, the company's strategy of KM and what are the expected benefits for everyone. As previously described the change culture is an important aspect in KM. "*The old axiom "knowledge is power" has been a major resistance point to knowledge sharing*" (Menken 2009, p. 154). The fear of losing work, when the idea comes up that a specialist is not needed anymore; in the big idea is enough to put barriers up against knowledge sharing.

It must be always kept in mind that overcoming these barriers can only be created by establishing a mutual understanding. The relation of KM solutions to the fulfilment of employee's current goals or realigning the goals to incorporate the initiative, the participants are now able to work within a context to drive knowledge sharing. Other opportunities might come up, such as assigning leadership or facilitator roles to employees.

The important thing is putting the human factor in the middle, so that possible resistance can be used to answer concerns. Most of the employees are aware of the value of their knowledge and usage of pointing this value out to distinguish oneself (Schwertfeger, in Roß 2008, p. 31). The theory brought up by Davenport and Prusak that the generous handling of knowledge is done less and less, is taken up by Schwertfeger (in Roß 2008, p. 31) saying that knowledge will become the lean resources of the world and Thönneßen (in Roß 2008, p. 31) comments that the sharing of knowledge and therefore the release of the exclusivity is a self-destructive act, is stressing the willingness of people to share their knowledge.

Recognising the source of negative reactions to change how to deal with those reactions will assist the effort. The role of managers in this context is again coming up, as they are typically doing the hands on work of influencing. Another option would be a group specialises for organisational change or a combination of both (Menken 2009, pp. 154-155). Negative reactions can be found in several forms. Rational reactions coming from a misunderstanding in the details usually source by a preconceived notion, usually in the form of change being unnecessary or detrimental of the effectiveness of the effort.

An approach to resolve this reaction is to go into greater detail and clarity of the plan, the solution, and the intended outcomes. Personal reactions are simple anxiety for the future, which are related to the loss of job, loss of influence, resentment on any implied criticism over performance, or resistance to authority. Dealing with such kind of resistance require a personal path of discussion ensuring the individual that positive benefits of the program and what does it really means for them. The communication of past failures and the benefits that are expected to rise from the project to improve the current situation is necessary and implies that the right person for communicating these messages have to be selected carefully. Dealing with people as answer of their emotional reactions is often solved by constant communication to show progress and intent (Menken, p. 155). The aspect of trust is coming up again, so that a ground rule is created targeting the point the knowledge will not be used as an instrument of power. Such a point must come from the management of an organisation (Roß 2008, p. 32)

A common problem that the participation towards KM is facing is the lack of time, which is related to the high prioritising of operational work of the day-to-day business of employees, so that the maintenance of KM (systems) is often be considered as administrative effort, that isn't of any use. Roß (2008, p. 33) defines the reason for such a behaviour as result of constant changes of organisations. A solution would be the dedicated establishment of time and if necessary the facilities. This kind of support can only be provided by the management. They need to create the ideal conditions for a knowledge sharing culture: trust, tolerance and reward are coming up again. The acceptance and the support by all persons in the organisation is the common goal. The previous discussed aspects are demonstrated by Roß based on the statements of Davenport and Prusak in the following table (2008, pp. 34-35):

Problem	Possible solution
Lack of trust	Establishing relations and trust through personal meetings
Differences in culture, languages and context	Building a common ground through education, discussions, publications, teaming, systematic workplace exchange
Lack of time and facilities, strict picture of productive work	Making missing parts available in form of time and facilities with the intention of transferring knowledge (meetings, dedicated rooms, …)
Access to knowledge bearer	Assessments based on and establishing of incentives for knowledge sharing
Lack of receptiveness on the part of receivers	Education of employees to be more flexible; giving opportunities to learn; hiring of candidates that seem to be available for new ideas
Attitude that knowledge is subject to specific groups	Support of non-hierarchical handling of knowledge; the quality of knowledge is more important than the status of the knowledge source
Intolerance of mistakes and need for help	Acceptance and reward for creative misapprehension and projects of cooperation; no loss of status, if not everything is known

Table 3.3 – Problem and Solution with the Transfer of Knowledge – Roß (2008)

3.9 Conclusion

This chapter was used to provide an insight on the view on KM in the organisation, its parts and general view on knowledge in the organisation and was used to complete the general ideas found in the literature towards aspects of analysis of organisation. The important part of a knowledge sharing culture was underlined and extended by the ideas about KM and Information Technology and their importance influences of making knowledge management work and especially supporting the sharing of knowledge.

The chapter highlighted the thoughts about the role and the understanding about people in the organisation and the understanding how different levels of interests should be work with and what the importance about managers is.

The framework for knowledge sharing will combine these aspects by looking at the technology point of view and looking on the individual perspective of how the sharing of knowledge is lived within the organisation to define ways of how it can be improved.

4. THE STRUCTURE OF THE SALES ORGANISATION

4.1 Introduction

This chapter takes on the previous presented ideas on KM and KM in organisations by using a deductive approach coming form the general ideas of KM to specific examples used to fulfil the development of a picture of the organisation and to develop the framework for knowledge sharing. This chapter will introduce the IBM Corporation as place where the experiment takes place. The author is currently employed in the team within IBM that is put in focus. The chapter will provide the reader with the overview of the organisation the team structure and the found KM approaches within IBM.

4.2   The personal experience

As the author is currently employed in the organisation and in the team that is standing in focus of this work some personal experiences are placed in this context to provide the reader with an initial view. The author started working within IBM in September 2006 and was hired as a Telesales Services Sales Specialist with a focus on selling Networking Services. During the time the introduction into the team, learning on the job and seeing team members leave; the organisation shows the author that there seems to be no specific structure of making this dynamic environment able to better handle a quiet high fluctuation.

The hiring process of the organisation is challenging as the employees are coming from countries from all over Europe and a low amount of these is staying for a long time so that the organisation is facing the challenge of integrating a new member to a team and sharing the experience and knowledge of the existing team members is essential for a continuous way of working successfully and to strengthen the team by giving the new members the chance to incorporate the knowledge of the team. The author will assess the organisation in a way that describes its capability for knowledge sharing. The background of this project is related to the challenges of knowledge sharing and the way tacit knowledge is transferred from an individual to another.

A lot of integration in terms of taking the new hired persons into the team is done in an informal way. This kind of way gives the opportunity to share the tacit knowledge of the existing teams and enables them to use the experience of all team members. This informal approach will be taken into closer investigation by auditing the existing habits within the team, finding existing approaches of knowledge sharing and bring them to the surface for closer consideration.

The modelling of a framework for integrating new team members, and focussing on knowledge sharing within a team of Telesales Representatives will be more tangible and the setup for new people in the team will be more manageable and improvable as the process might be monitored.

IBM.COM – part of the IBM Corporation and the home of the assessed team – started an internal campaign called "Web 2.0", which was focussed on the integration of Lotus Connection in the organisation and using these kinds of technology to enable an easier access to people, documents and in general resources to work with existing knowledge and to provide a benefit to the organisation. In the progress and after becoming familiar with the topic of KM, especially when joining the programme at the DIT, the author became aware that a lot of things need to be done to make the environment able to work with the requirements of selling more and especially more efficient. Several team members have left the team and several others were joining the team and it seems to be always the same structure of no guideline of handling the leavers and welcoming the new members of the team.

Some existing ways of working more structured have been in place – like buddy-systems, where a new hire is assigned to an experienced member of the team (buddy) – and this person is giving the first guidance in terms of all organisational and work necessary topics. In the opinion of the author the need for a more structured approach was existent at this point of time.

The author was promoted in May 2008 to be the new team leader and the previous team leader became the manager of the team. During this time several situation showed the author that a lot of work is done repeatedly and therefore unnecessary. It seemed to be no structure of working with assets that have been created before

available. The peak of this kind of experiences was coming up as it seems typically in a sales environment at the end of the quarter where everybody seems to be rotating around to close the last couple of projects. During this time the gap between work effort of experienced team members and new team members was dramatic obvious. The subjective feeling was created that the experienced sellers were working without any breaks from 8 in the morning to 6 in the afternoon and even longer. On the other hand the new hires in the team seemed to have a lot of spare time.

The utilisation of team members was showing a wide gap and the idea came up to bring more structure to the team and all team members for closing the gap as soon as possible and as structured and organised as possible. The author was thinking about starting a framework of how the improve the general working structure in the team by integrating KM approaches in the daily work and the culture of the team.

4.3   The organisation

This work is focussed on a specific team within IBM. To show where this team is located within IBM the following overview of IBM is used: IBM consists of several business divisions that are focussed on all kinds of customers. IBM Global Business Services is the consulting division of IBM (an acquisition of Price Waterhouse Coopers extended the portfolio in 2002). The IBM Systems and Technology Group (STG) is focussed for the development and distribution of HW platform based IT-infrastructure solutions including server and storage products. The IBM Software Group represents IBM's software portfolio. IBM Global Financing is one of the biggest IT-Finance providers and the main business areas are financing and leasing activities for IBM customers. IBM Global Technology Services (GTS) covers the market activities in Strategic Outsourcing, Technical Support, Maintenance and Hosting Services.

In advance to the general overview of the major groups within IBM a group within IBM is existent which is named "ibm.com". This part of IBM is a small but dedicated sales channel of IBM and includes Telecoverage, Telesales and Websales. Telecoverage has a coverage function within ibm.com to provide a way of dealing with all kinds of customer, even the small and medium businesses. Websales is providing

the integration of systems of customers and IBM to provide e-business capabilities. Telesales as part of the ibm.com organisation is working as brand sales specialised organisation with the integration into the major groups of IBM: Systems and Technology Group, Global Technology Services and Software Group. The employees of the Telesales organisation within IBM are therefore product specialists that are oriented to sell all products of the brand they are focussed on.

The following statement gives an overview about the organisation in Dublin:

> "The **ibm.com Sales Centre** *opened in 1996 at Ballycoolin, Dublin, just 98 days after it was first announced. This Centre combines the functions of a typical call centre with the power of the Internet, creating a dynamic direct sales channel for IBM clients. The Centre has become one of IBM's leading European 'dot.com' centres, attracting employees from almost twenty different countries to work in its dynamic and vibrant environment. It provides a fast and easy access to IBM products, solutions and business expertise for IBM clients throughout 29 countries in 12 languages*" (IBM Ireland n.d.).

The experience of this dissertation is focussed on a team of IBM Global Technology Services sales specialists working within ibm.com's Telesales organisation in Dublin and is covering the German market.

4.3.1   The team structure

This section will describe the structure of the team and the closer overview about the contents that are handled within the team. For an understanding about the areas of IBM Global Technology Services that the team is aligned to; the following table demonstrates the structure of IBM GTS:

Service Product Group	Service Product Line
SPG 1 Infrastructure Access Services	SPL 1 IT Strategy and Architecture Services
	SPL 2 Middleware Services
	SPL 3 End user Services
	SPL 4 Integrated Communications Services
SPG 2 Infrastructure Management Services	SPL 5 Business Continuity and Resiliency Services
	SPL 6 Security and Privacy Services
	SPL 7 Site and Facilities Services
	SPL 8 Server Services
	SPL 9 Storage and Data Services
SPG 3 Infrastructure Support Services	SPL 10 Maintenance and Technical Support Services

Table 4.1 – Overview of Service Product Lines within IBM

The team itself is only working with the portfolio of the SPL 1 to SPL 9. The portfolio of the Maintenance and Technical Support Services (SPL 10) for Germany is covered by another team within the ibm.com Sales Centre. Each of the Service Product Lines has a separate portfolio of dedicated offerings, which are part of the team's day-to-day business. The need for an approach of handling knowledge in each of these areas can be underlined in this context. For the rest of the dissertation the detailed portfolio can be left out of major focus. The structure of the team on the other hand is shown in the following diagram.
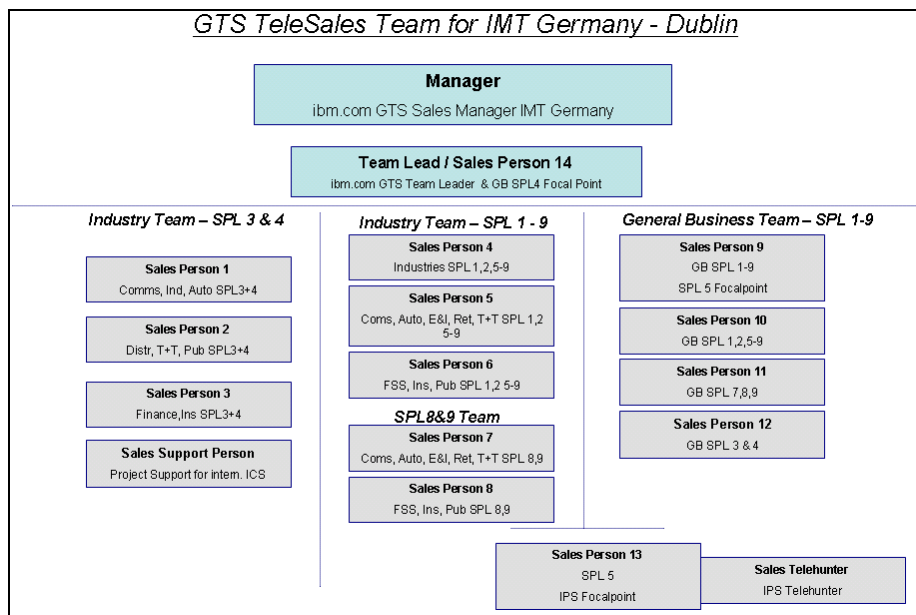
Figure 4.1 – Team Chart

Characteristic is the separation in different Service Product Lines within the team and another separation is done via the customer set. IBM in general divides customers in two major groups – Industry Customers (also known as Sector Customers) and General Business Customers (also known as Small and Medium Business Customers). Another differentiation in the section of Industry Customers is the separation of customer sets into several different sectors. The sectors can be found in the overview of the team as following: Comms – Communications Sector, Ind – Industrial Sector, Auto – Automotive Sector, Distr – Distribution Sector, T+T – Travel and Transportation Sector, FSS/Finance – Financial Services Sector, Ins – Insurance Sector and Pub – Public Sector.

4.3.2   *IBM's Knowledge Management approach*

IBM's general KM approach can be lived within IBM as employee of IBM without even knowing about KM. Several things are already done within IBM and especially two key thinkers in the world of KM – Davenport and Prusak - (Frapaolo 2006, pp. 101-104) can be associated with IBM. Some examples of that culture can been seen in the applications available and the linkage (i.e. trough tagging) within these applications can be found within IBM (IBM Corporation 2009b) along with BluePages as an implementation example of Yellow Pages, Dogear (IBM's social bookmarking application), Media Library (IBM's own YouTube), Cattail (web 2.0 file sharing), TAP (The Technology Adoption Program), BlogCentral (IBM's blogs), w3 News (your ODW profiled news), Thinkplace (IBM's global home for innovation), IT Help Central (IBM Enterprise IT Information support site), BluePedia (IBM Encyclopaedia), IBM Forums (IBM's Forums) and just recently brought to life with an high prioritised focus coming out of this dissertation – Pass it Along (IBM's peer to peer sharing expertise site).

It must be outlined that it is not the amount of tools within IBM should be used to explain the KM approach. The realisation of the KM with an optional use of these kinds of tools is essential. As this came to topic during the project, the idea of IBM of using "Intelligent Mentoring" is another example of IBM's approach of "How IBM Creates Value through People, Knowledge, and Relationships. This part of the chapter will focus on the of IBM's strategic business model. Murrel *et al.* describe the strategy

of IBM in the book "Intelligent Mentoring – How IBM Creates Value trough People, Knowledge, and Relationships".

This kind of approach is really targeted on the cultural aspects and the influences in terms of KM. It brings up the general behaviour expected in this context to work on building the organisational intelligence. The following picture will therefore describe how the mentoring portfolio looks like.
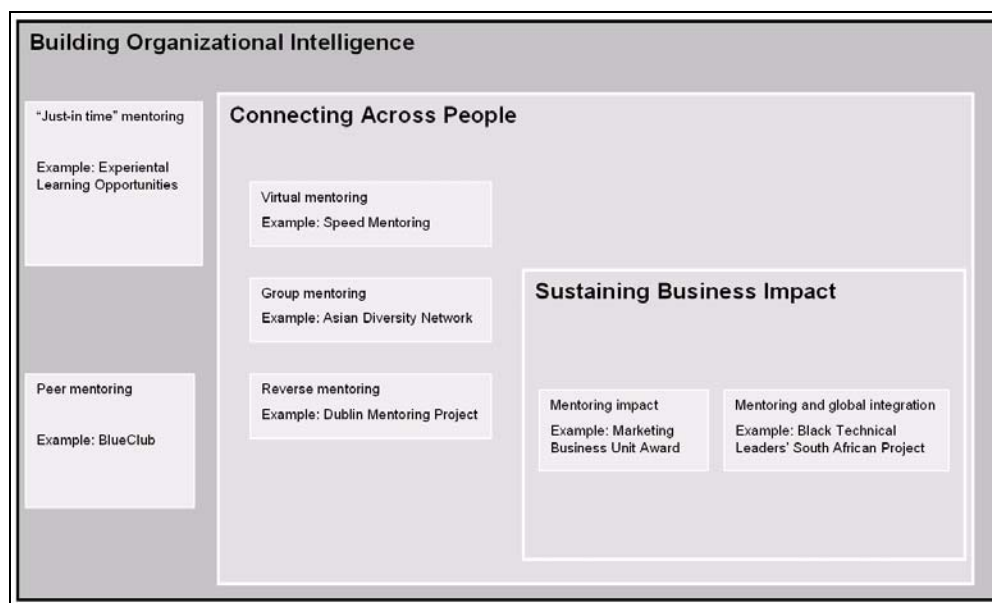
Figure 4.2 – IBM's Mentoring Portfolio (Murrel *et al.* 2009)

This portfolio or the series of formal and informal effort should mark the way to infuse mentoring within the culture of the organisation. There is not one type of mentoring program or structure rather the opportunity of managers, business units and human resources professionals to select from a wide variety of mentoring tools and techniques to find mentoring solutions. The mentoring portfolio is linked to the general global business strategy and mentoring is seen as a central and integrated aspect of how business should be executed and accomplished throughout IBM (Murrel *et al.* 2009, p. 12). The goal of the mentoring approach to support the company's global business strategy is highlighted within this context as a representation of an approach to help any kind of organisation "to attract, retain, and develop its most important asset – people (Murrel *et al.* 2009, p.13)."

IBM has taken several steps in the past to design a menu approach to mentoring that fits together with its ongoing career development efforts. Such a key development program was mentoring, which in this context is used to be tailored to the unique needs of the different segments of the employees within its global workforce. In addition to that the efforts in this context are designed to take on the initial efforts of recruitment and early socialisation in the company. The help for the employees is then set up to make it possible for them to gain access to knowledge and expertise that is available throughout the organisation (Murrel *et al.* 2009, p.34).

The idea of what comes up when linking the general KM approach of IBM to the way of how employees within should be mentored in an intelligent manner reflects on already existing ideas that have been already found benefits within IBM by looking at BluePages or the other tools in use within IBM to share proactively and strategically knowledge. IBM's idea of pushing forward the ideas of capturing, harnessing and transferring knowledge and experience form all segments of employees by developing the learning activity as a core component to sustaining organisational intelligence (Argote, in Murrel *et al.* 2009, p. 34) is driven forward by the mentoring approach.

The ideas of this approach are highlighted in terms of finding ways to identify and support experts throughout the whole organisation, connecting the employees with expert knowledge, especially in the early socialisation process (which is important to retention and enhancing the clarity of the role and the commitment), the question of what can the organisation do to support the transfer of knowledge to others and help develop experts (Murrel *et al.* 2009, p. 35).

Revitalisation of the organisation is in focus with the approach and is supported by implementing mentoring programmes to bridge skills and knowledge gaps. Another point of view is the protecting and maintaining of IBM's leadership status in the field of technology for sustaining organisational intelligence. Murrel *et al.* point out in this context (2009, p. 39) that employee development is a critical business investment and IBM's intention is to make employees able to use learning opportunities by fully applying their knowledge in sustainable ways. *"This is the reason mentoring is so important in the overall learning process, and if done properly, few employees should be left out of this critical effort. Creating opportunities for skills development while*

encouraging and rewarding knowledge sharing are key to developing a knowledge-resilient enterprise that is always poised to respond to the changing need of its global clients."

Mentoring can be put in place through several ways, which are always linked to the goal of connecting people. The challenge in this context is to better understand how to drive, leverage and sustain employee engagement throughout the organisation. Murrel *et al.* say that the critical factor in supporting these goals is whether the company provides the support and resources. IBM in this context is named as a knowledge-driven organisation and as such an organisation constant attention should be laid on the challenge of connecting people.

The issue of mentoring using technology has been answered by IBM with the design of mentoring tools for a support to help build connections, support communities of practice and help connecting with knowledge experts throughout the enterprise.

BluePages as the example to of "Creating Access to people" allows employees to network and collaborate with employees and peers with specific knowledge and skills. It will be expanded in terms of the functionality to facilitate mentoring relationships (Murrel *et al.* 2009, p. 81) so that mentors can show their willingness to share expertise and mentees can reflect that they are looking for guidance in a specific area.

For IBM the use of technology is a significant way to connect people across the business, and includes Web sites, team rooms, chat rooms, wikis, Web conferences, virtual group mentoring, and more. While the use of technology-enhanced mentoring to help increase access has shown some initial promise, there are some concerns with a broad use of technology-only types of mentoring. Issues such as increased miscommunication, slower development of relationships, problems with variability in individual competency with technology, and limitations on the actual technology itself are just a few of the issues noted by organisations (Murrel *et al.* 2009, p. 91). Bierema and Merriam (in Murrel *et al.* 2009, p. 91) argue that technology actually creates an opportunity for employees to detach from the organisation and co-workers, which lead to less commitment and employee engagement.

The message stays the same – technology is a tool and not a panacea (Murrel *et al.* 2009, p. 91; Rao 2002, p. 1; Figallo & Rhine 2002, p. 96). Organisations (including IBM) should take caution looking at technology as a substitute for other aspects of community building and collaboration. The focus should always stay on supporting the main idea of fostering knowledge, collaboration and connecting people. Technologies must be selected and implemented in ways that are always consistent with the purpose, organisational culture, and objectives of the company.

In context of the mentoring approach of IBM, which is directly focussed on creating value through people, knowledge, and relationships, another aspect when searching inside of IBM for a main contributor for realising the knowledge sharing approaches is essential – the managers. Leadership roles and skills are altering the traditional role of managers from one who controls to a coach who inspires, guides, and develops employees by setting goals, priorities, and standards (Luftman *et al.* 1993, p. 199).

Tools and techniques used for knowledge sharing cannot replace the important role that managers must play. Within IBM the efforts to hold its managers accountable for fully engaging the employees who report to them are strongly driven. This responsibility cannot be taken off the shoulders of managers by even the most innovative technology tool or specialised program. With the goal of preventing employee disengagement, which can cause in an erosion of the morale of an organisation and can lead to teams falling apart (Murrel *et al.* 2009, p. 91), the manager's education is oriented to provide help for attracting, retaining, and engaging employees. With the engagement of its employees, IBM creates the platform for developing broad knowledge and multidisciplinary skills. The role of managers as essential part of IBM's KM approach aligns with the idea of Keller and Kastrup presented in Chapter 3. The statement that managers should become more and more knowledge managers is concreted in this context.

The theoretical approach is summarised by Murrel *et al.* (2009, p. 92) as that "*the use of technology tools to enable people connection [...] has helped IBM realised that some simple, low-cost, but high-impact approaches are powerful tools for exciting and engaging employees. For IBM, engaging employees means connecting them to strategic business ventures that have meaning, purpose, and value, and at the same*

time, holding employees accountable to execute their roles with integrity and excellence." In addition to that Murrel *et al.* (2009, p. 93) say: "*Because of IBM's commitment to employee development and continuous learning, innovation and collaboration that matter and a staunch focus on leveraging diversity, the company has engaged its global workforce to increase productivity and ultimately reduce employee turnover. The innovative use of mentoring has been one key to the success IBM experiences in connecting people virtually, globally, and locally.*"

4.4 Conclusion

This chapter was used to provide a deep insight on the assessed organisation and the team that is used for closer experimentation to create an understanding about the environment of the research area. The organisation was assessed in the following way to describe on the organisation in general, its KM perspective and ideas on knowledge management.

This chapter will build the basis for the following chapter, where a deep analysis is performed to build the basis for the development of the framework for knowledge sharing

5. ANALYSIS OF THE SALES ORGANISATION

5.1   Introduction

This chapter is the initial assessment of the team based on a survey that is used to understand the current situation in terms of challenges and roots for possible improvements regarding knowledge sharing within the team.

The analysis of the sales organisation will be the first part in the overall methodology of this project and build the basis for the development of the framework for knowledge sharing in the following chapters.

As one of the requirements coming from the side of IBM was to use no names, the content of this work does not include any personal details about the employees or team members.

5.2   The methodology of the overall project

As the author used the analysis of the sales organisation and the team, which is in focus, as the starting point for the dissertation project, it seems to be the structured approach to show where the reader is standing at the moment. The author developed the following steps for the experimentation part of the project:

1) Analysing the sales organisation;
2) Developing the framework for knowledge sharing;
3) Evaluating the framework.

It is necessary to understand that the analysis of the sales organisation provides two essential parts towards the understanding of this project. The analysis is used to show about what kind of organisation the author is talking about in general on the one hand and to provide a deep understanding what possible areas of improvement have been discovered during this analysis process.

The project in general was influenced by following factors and some of the areas in this work will show outcomes of these influences:

- The role of the author within the team has changed and was used to develop the strategy for finishing this project;

- The author used parts of the outcome of this project as pilots in a stage, where short-term achievement were necessary and so some of the answers in the survey are linked to those results;

- At the same time these results are used directly for the development of the framework.

In addition to the project plan the background research now included literature reviews, on the job experience and insights gathered form interviews that were used for the project.

5.3   The knowledge management assessment of the team

The following section will provide the basis for the experimentation part of this dissertation. The main part of the assessment of the team was done trough a survey that was sent out specific to the team. The overview in form of a documentation of the survey can be found in the appendix section of the dissertation.

5.3.1   The structure of the assessment

At the beginning of the project as it came to the point of finishing the literature review and focussing more and more on the team as the object of the project, a survey was sent out to the team. The survey documentation in the appendix will provide the reader with the details on the questions. The survey was chosen by the author to highlight the most important thing in KM – "*first and foremost, knowledge management is about how people share and use what they know*" (Frappaolo 2006, p. 119). The survey's key dates are represented in the following table to provide a short overview.

Survey	Detail
Survey content	21 questions
Key elements	Multiple choice questions and questions with free comments
Tool used	IBM BlueSurvey – an internal IBM tool
Survey focus on	Team with 15 employees and 1 manager
Survey sent out	01.05.2009
Survey closed	21.05.2009
Participation	12 / 15 = 80%

Table 5.1 – Details about the survey

The intended use of the survey was to find out about the actual status in terms of the engagement, challenges and prohibitions towards knowledge sharing within the team. This survey is intended to act as part of a knowledge sharing ability audit to identify possible issues and reasons for knowledge loss, the find out about the KM characteristics within the team. Following Frappaolo and his structure of a knowledge audit, (Frappaolo 2006, pp. 118-122) the basis for the decision about the definition of a strategy and critical success factors to deliver an environment where people are comfortable with sharing knowledge, the question in the survey are pointed in the direction to find out about the current state of the audience, business practices, propensity for KM, value seen in knowledge, current knowledge production and usage habits. The knowledge audit can be furthermore described as the first step for developing a knowledge management strategy that incorporates the management of both tacit and explicit knowledge. A knowledge audit is conducted to identify an organisation's knowledge assets, how they are produced and by whom.

It can be understood as critical that the knowledge creation process is understood and therefore the understanding about the people involved in the process is critical as well. It can be use to identify where knowledge exists and where it is support for knowledge sharing is needed. It can be used to gather an understanding of the organisation and how it works, including its structure and culture, internal and external relationships, formal and informal communication ways (Henczel 2000, p. 211).

Furthermore the status of the participant's capabilities to share knowledge was intended to be assessed. The author wanted to create a status about possible inhibitors

towards collaboration and knowledge sharing and to find out what parts of the collaboration process are characterised by manual, complex, time-consuming or even error-prone attributes. The results should be used to build a picture for the use of creating solutions that are part of the framework for knowledge sharing. In addition to that the survey was intended to deliver a picture towards the technology part of knowledge sharing. That means that questions about tools, technologies or processes for collaboration were asked.

To find out what defines such an environment for a given organisation, the picture of the technical standpoint, a leadership standpoint, a work habits standpoint, a cultural standpoint, a communication pattern standpoint and a team structure standpoint will provide an insight as to whether the whole process of knowledge harvesting is going to be perceived as beneficial.

5.3.2 Survey result and interpretation

The 21 questions of the survey do include the following questions with the focus area shown in the following table.

#	Question	Type of question	Focus area
1	How long have you been in the organisation?	Multiple Choice, single answer	Personal experience
2	How did you experience the start as a new hire?	Multiple Choice, multiple answer	Knowledge management practice
3	Which SPL are you covering?	Multiple Choice, multiple answer	Personal experience
4	How would you rate your experience in the Services Business in compared to the whole team?	Multiple Choice, single answer	Personal experience
5	Do you use any of the following tools or methods to share knowledge, experiences or best practices within your small team?	Multiple Choice, multiple answer	Knowledge management practice
6	Do you use any of the following tools or methods to share knowledge, experiences or best practices with the whole team?	Multiple Choice, multiple answer	Knowledge management practice
7	What do you think is the most effective way of sharing experiences or best practices?	Multiple Choice, single answer	Knowledge management practice
8	How motivated are you to share your experience, knowledge and best practices?	Multiple Choice, single answer	Individual propensity to knowledge management
9	How important is the experience of the whole team for your work?	Multiple Choice, single answer	Individual propensity to knowledge management
10	How important is the sharing of best practices, experiences, contacts and knowledge for you?	Multiple Choice, single answer	Individual propensity to knowledge management
11	How did you experience the leave of a team member?	Multiple Choice, multiple answer	Knowledge management practice

Table 5.2 – Survey – Questions and Focus Areas (part one)

#	Question	Type of question	Focus area
12	Do you think you are supported to provide enough information to all your team members?	Multiple Choice, single answer	Organisational assessment for support for knowledge management
13	Do you think you are able to receive enough information from all your team members?	Multiple Choice, single answer	Organisational assessment for support for knowledge management
14	How important is it for you to share best practices, knowledge and skill with your team members?	Multiple Choice, single answer	Individual propensity to knowledge management
15	In which way did you have the chance to experience support for sharing experience, knowledge and best practices? Please provide an example for your selection(s) of how the support was realised!	Multiple Choice, multiple answer	Organisational assessment for support for knowledge management
16	In which way do you experience the management support for sharing best practices, experiences and knowledge?	Multiple Choice, multiple answer	Leadership assessment for support for knowledge management
17	In which way does the management not support sharing best practices, experiences and knowledge?	Multiple Choice, multiple answer	Leadership assessment for support for knowledge management
18	If you think you are not able to provide, share and receive best practices, knowledge and leverage the experience of team members at the moment - what is/are the prohibition/s?	Multiple Choice, multiple answer	Organisational assessment for support for knowledge management / Leadership assessment for support for knowledge management
19	How useful were past projects focussed on sharing information (i.e. Web 2.0) for you?	Multiple Choice, single answer	Organisational assessment for support for knowledge management
20	How successful were past projects focussed on sharing information (i.e. Web 2.0) in your opinion?	Multiple Choice, single answer	Organisational assessment for support for knowledge management
21	What would you like to change coming from a knowledge sharing point of view? What would you like to add when talking about these topics?	Optional, free comments	Personal experience / knowledge management practice / individual propensity to knowledge management

Table 5.3 – Survey – Questions and Focus Areas (part two)

The focus areas of the question reflect on the different points that should be revealed in a knowledge audit and the results of the survey will be pointed out in the following part of the chapter. It needs to be kept in mind that some of the questions were targeted to get an answer about more than one area. Especially question 21 was used in the survey to get more insight views on the overall topic of KM in the team and the answers can provide input for several areas.

5.3.2.1 Focus area: personal experience in the team

The questions in this area are mainly stated to reflect on the actual experience in the team. The questions related to this area are question 1, 3, 4 and 21. The answers of the first question of the survey can be visualised in the following graph.

Figure 5.1 – Q1: How long have you been in the organisation?

The twelve participants answered that they have been in the team between six to twelve months (two responses), over two years (four responses) and one to two years. The author shows in this context that the overall participation reflected especially the part of the team that is relatively new to the team as no hiring was done in the last six months. The author interprets that the reflection on the overall survey will be useful to get a picture especially on sharing knowledge between experienced team members and new team members.

Question 3 was answered as shown in the following graph. The overview reflects on the general tasks of each of the team members that participated in the survey to cover several topics within their day-to-day business. It shows that out of 47 overall selections for the covered Service Product Lines 4 are covered in average per team member. Comparing that result to the previous presented team chart – it has to be kept in mind that some team members are covering up to all Service Product Lines (Sales Person 9).
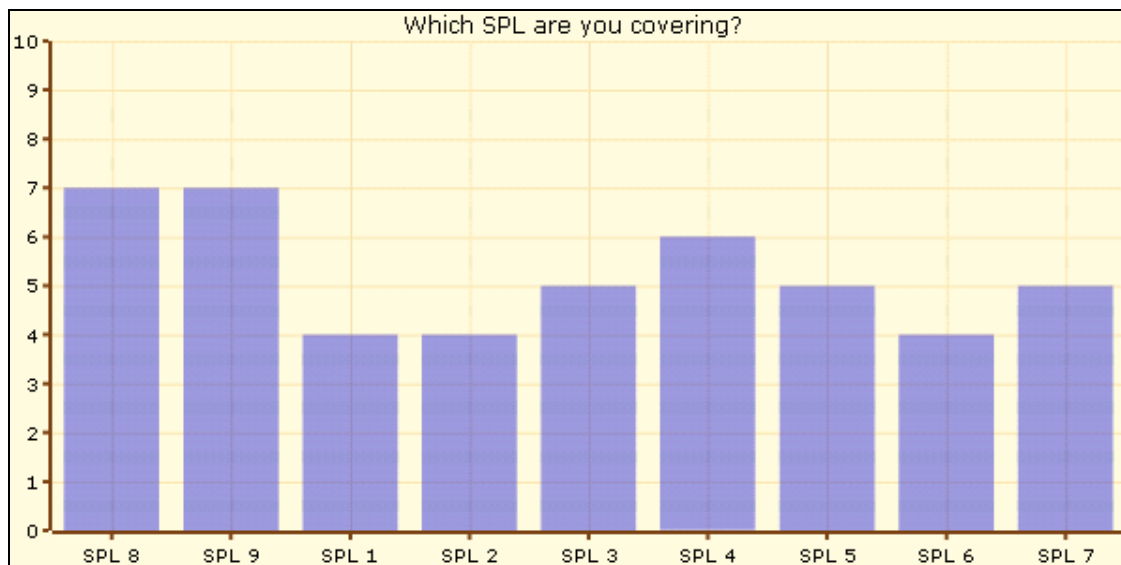
Figure 5.2 – Q3: Which SPL are you covering?

An interpretation by using the foundations out of the third chapter about the personal network can be combined with the existing knowledge about the business by the author. Each of the SPL is connected with teams around following topics: offering, sales and delivery. Offering is providing the rest of IBM with help regarding new solutions and ways to sell them better – so knowledge about the people within the offering and the actual knowledge about the offerings is necessary. The sales force within the country is normally supported by the Telesales team dedicated to the specific offering – the personal network of sellers with the knowledge about industry specific requirements for each of the solution is necessary to understand the complexity of the business and to actually do business within the team. The delivery teams in each of the SPL are providing the manpower to deliver the solutions that are provided by the offering teams and sold by the sales force (now combined of field sales and telesales specialists). The delivery teams are normally characterised by IT

consultants, IT specialists and IT architects for this kind of services business. The complexity of the projects must be taken out of the consideration for the assessment in this context. Another aspect that shows the amount of information, knowledge and experience that each of the team members must handle to work as a SPL specialist is to provide each of the other resources within IBM with answers or help for pursuing in projects.

The next question that was answered in this focus area was question 4. The question was directed towards the individual rating of each of the participants and is therefore compared to the two previous questions more of a subjective character.
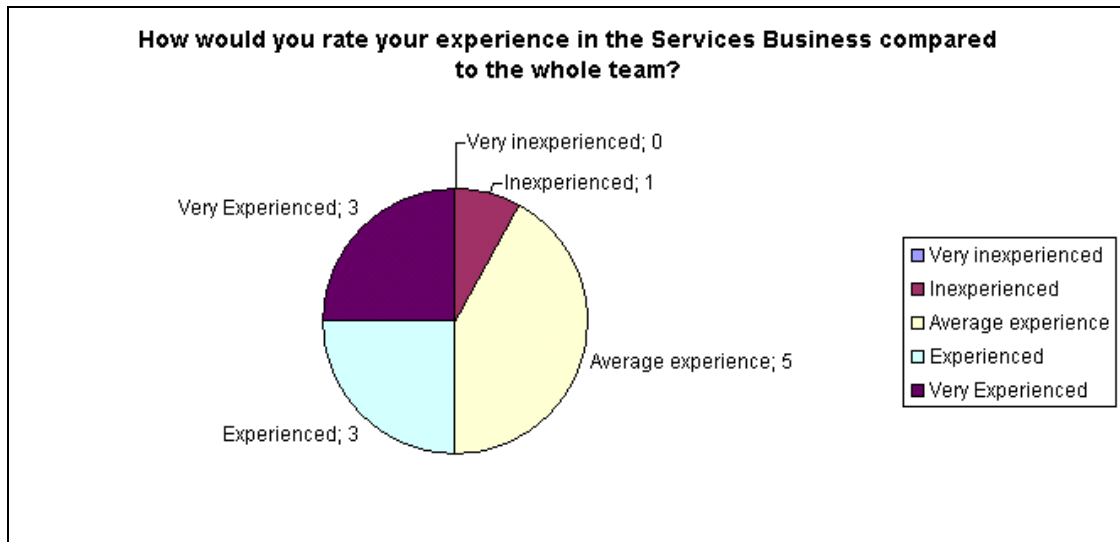
Figure 5.3 - Q4: How would you rate your experience in the Services Business compared to the whole team?

The results show that the own experience ratings of the participants are complex, but it also shows that some of the team members are confident enough either to rate themselves as experienced and even very experienced or confident enough to show that the level of experience within the team can be built up – especially with one participant response of "inexperienced".

5.3.2.2 Focus area: knowledge management practice in the team

This focus was used to obtain an understanding of the general existing KM practice in the team. The involved questions are: 2, 5, 6, 7, 11 and 21.
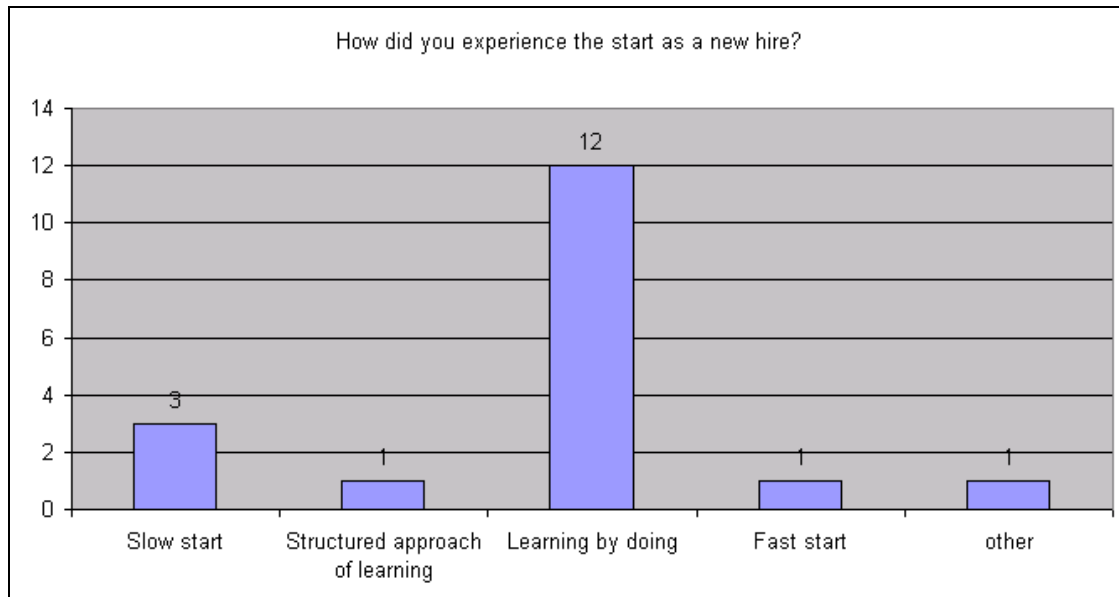
Figure 5.4 – Q2: How did you experience the start as a new hire?

Starting with the results coming out of the answers to question 2, the following overview will help to gain an insight on the part of the new hire process and a view on how the practice leads to bring a new team member into the team. The start of the participants as new hires was always experienced by learning by doing approach, but at the same time three out of twelve responses demonstrate that a "slow" start was significant for this time. The explanation given under the one answer to the selection "other" shows another experience to the process: "confusing as my area responsibilities exploded within days without possible sources of knowledge to gain from".

The responses demonstrate the approach of the team to take new hires on board with a more practical approach of learning by doing, but shows that optimisation potential in terms of structure could benefit to the new hire process.

Question 5 serves the assessment by finding out what kind of tools and methods are preferred to share knowledge, experience and best practices within the small teams (separation by SPL and/or Industry). The answers are represented in the following picture.
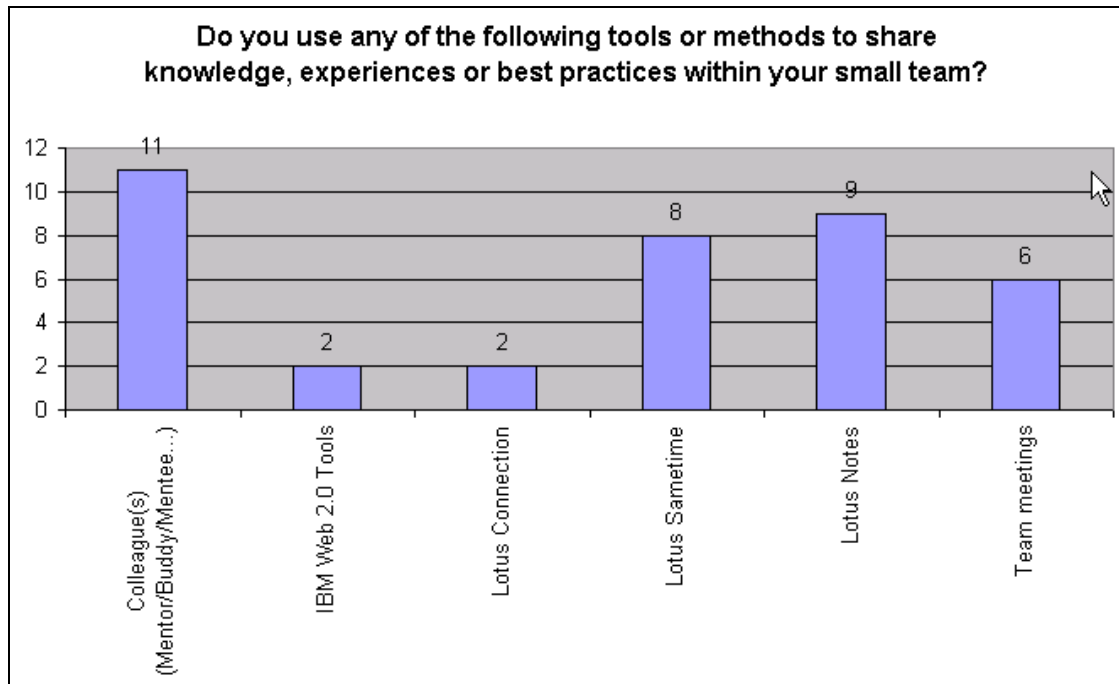
Figure 5.5 – Q5: Do you use any of the following tools or methods to share knowledge, experiences or best practices within your small team?

The answers of the participants show the following:

- Ca. 92% (11 out of 12) participants selected the part of team members as a main way to share knowledge, experiences and best practices;
- Lotus Notes and Lotus Sametime are common used business tools;
- The personal interaction as seen as preferred method as seen with six responses to "team meetings";
- The use of Web 2.0 and Lotus Connection is demonstrating that a part of the team is already using IBM's existing tools for knowledge sharing.

The next question (question 6) is aligned to the purpose of question 5, but provides the overview about how knowledge, experiences and best practices are shared at the moment within the whole team – as demonstrated in the following picture.
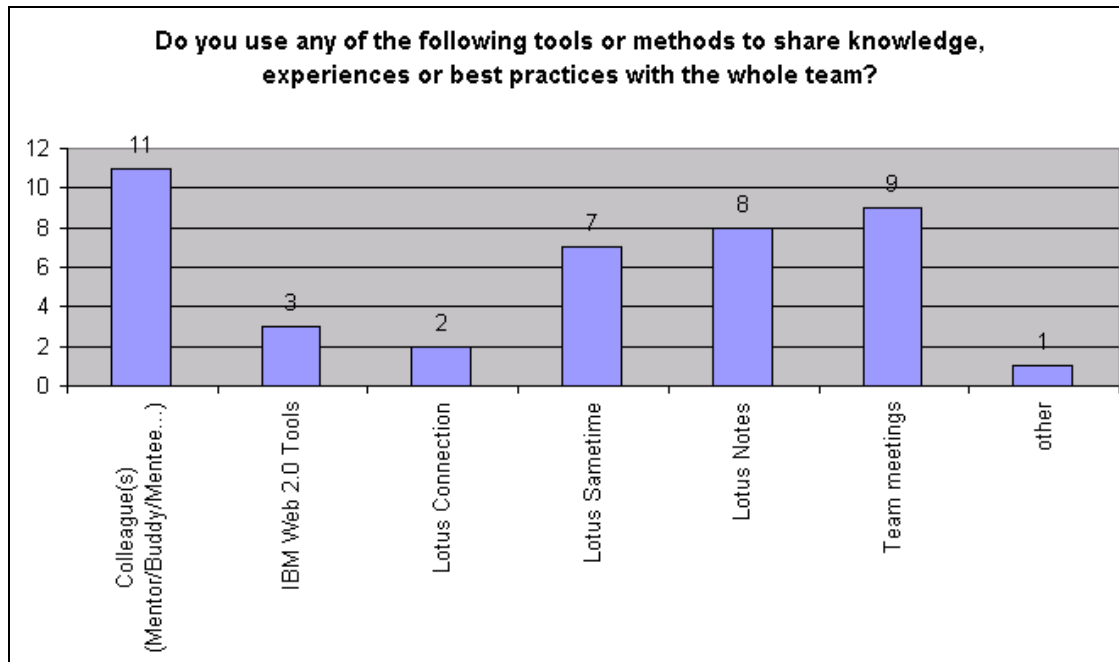
Figure 5.6 – Q6: Do you use any of the following tools or methods to share knowledge, experiences or best practices with the whole team?

In addition to the summary of the responses to question 5, the important aspect of sharing knowledge on a personal level is highlighted as the responses show that the platform of team meetings is used even more to share knowledge within the whole team (75% of the participant support this statement).

Question 7 is providing an overview about the participants' evaluation of tools and methods that are in use. The responses underline the previous interpretations and show that the usage of the personal interaction to share knowledge, experience and best practices is the preferred way in this context. The following diagram illustrates the results of question 7. The explanations of two participants found in "other" are providing an understanding of what kind of tool is currently used ("Quickr" – short for Lotus Quickr) on the one side and leaves one participant with the comment of "clear documentations and the access on hand" on the other side. The last statement can be interpreted as an expression of a need for a clear documentation and having access to specific information.
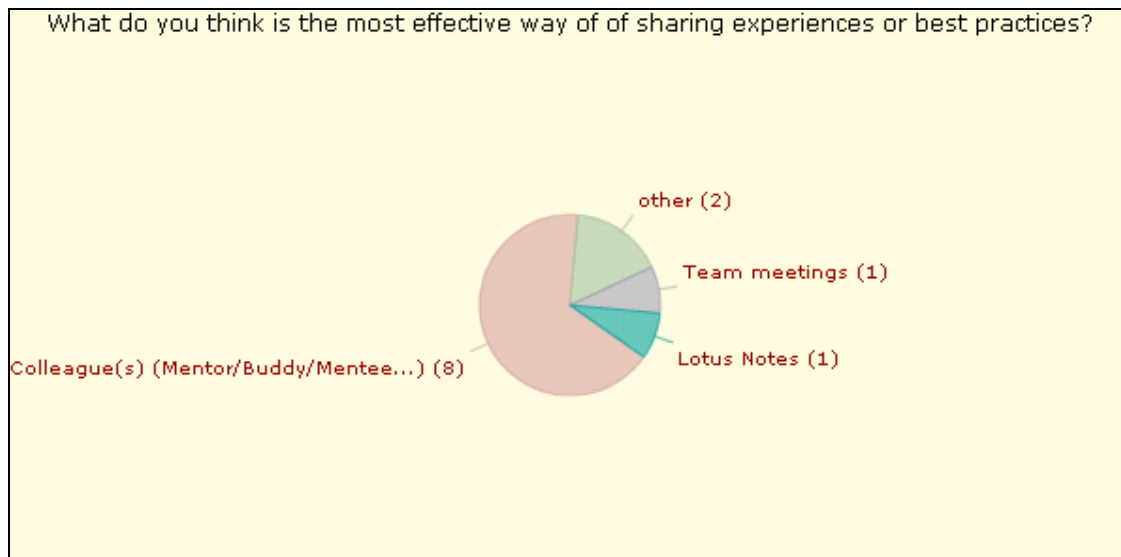
Figure 5.7 – Q7: What do you think is the most effective way of sharing experiences or best practices?

The results of question 11 are represented in the following graph. The question is targeted on the assessment of the current process when a team member leaves the team.
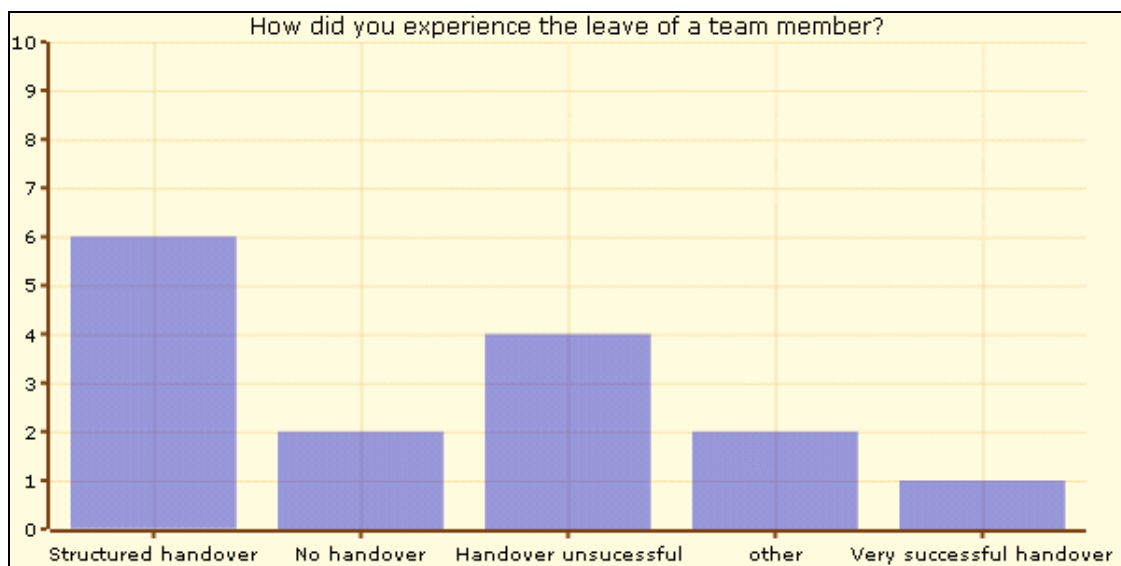
Figure 5.8 – Q11: How did you experience the leave of a team member?

Despite the fact that one statement under "other" is related to having no experience in the leave of a team member; the following statements can be identified:

  – Half of the participants experienced the leave with a structured handover;

- Two out of twelve experienced no handover and four out of twelve participants had the experience of an unsuccessful handover;
- Only one participant experienced a very successful handover.

The answers show that there are existing approaches in the team that need to be more specified.

5.3.2.3 Focus area: individual propensity to knowledge management in the team

The questions in this focus area are used to provide an understanding of the participants' individual propensity towards KM in the team. The questions used in the survey are question 8, 9, 10, 14 and 21. The first question in this focus area is question 8 with the purpose of identifying the team's motivation of sharing the own experience, knowledge and best practices in general. The following diagram gives an understanding
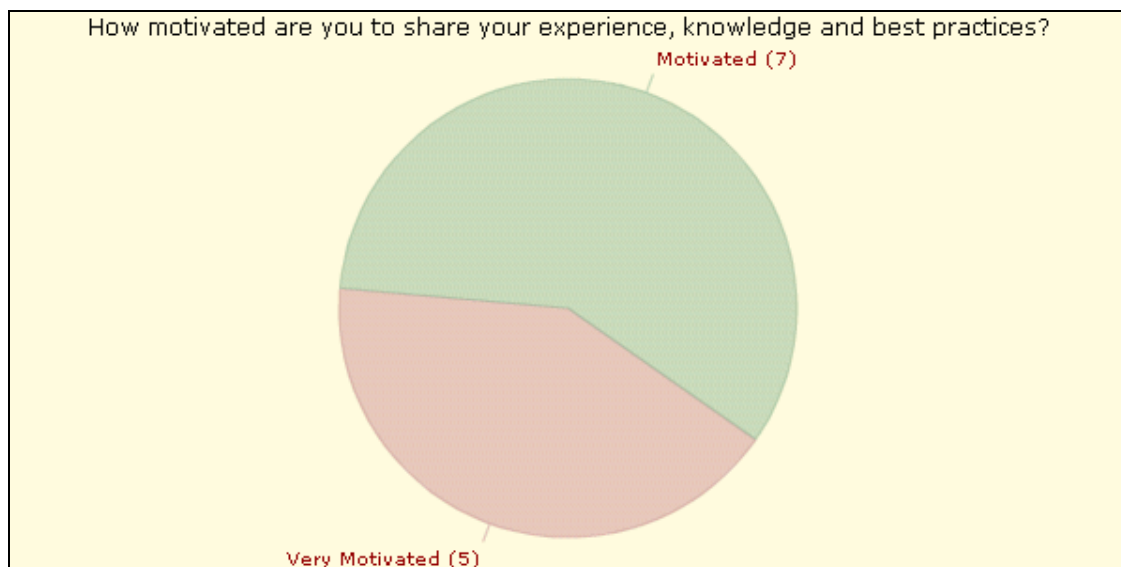
Figure 5.9 – Q8: How motivated are you to share your experience, knowledge and best practices?

All twelve participants brought to expression that they motivated (seven out of twelve) or even very motivated (five out of twelve) to share. The author interprets that the

basis in terms of an inner motivation of the participants is existent and the principal support for a change by bringing in a framework for knowledge sharing is available.

The next question in this context is question 9 with the intention of complementally assessing the importance experience of the participants in regard to the team's overall experience and finding out how the team thinks about itself in terms of the usage of team members as source of experience. The next chart shows that the majority (67%) of the participating team members think that the experience of other team members is important for themselves and in addition to that 25% think that they still can learn from others. Only one participant thinks that there are just a few things can be learnt from others in the team. This result shows that the team's opinion to use the rest of the team members as source of experience and knowledge is very important.
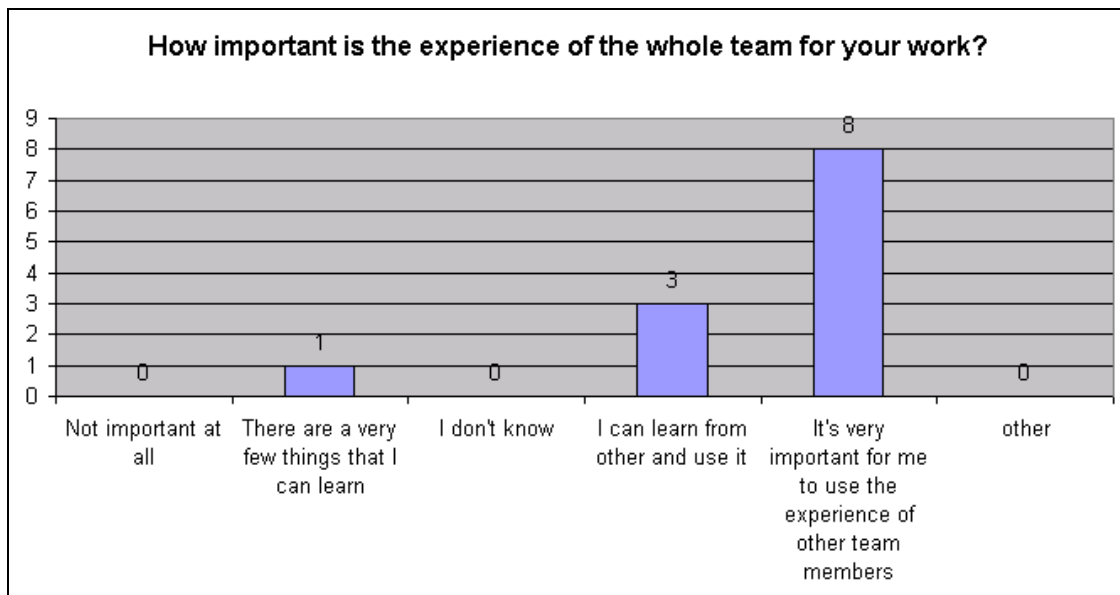
Figure 5.10 – Q9: How important is the experience of the whole team for your work?

Question 10 is another question used to explore the focus area of finding out about the team's propensity to share knowledge with each other. In difference to question 8 and 9, this question is more focused on finding out how important the general aspect of sharing knowledge, best practices, experience and the personal network is. The next chart shows the result of the question.
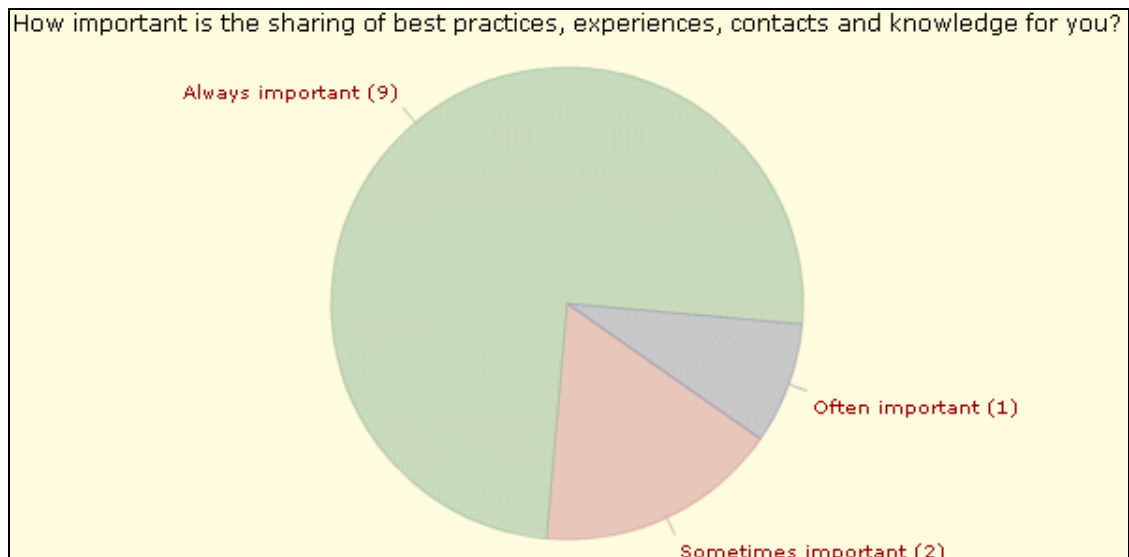
Figure 5.11 – Q10: How important is the sharing of best practices, experiences, contacts and knowledge for you?

75% of the participants say that the thought of sharing of the mentioned topics is always important, which aligns with the result of question 9. Regarding the importance of sharing within the team, it can be said that the participants reflect on the opinion to share with each other and to use the other team members for sharing (with no distinction whether being on the receiving end or on the giving end).

The next question in this focus area is question 14. Question 14 targets the individual perception of knowledge sharing with the respondents' reflection on sharing knowledge with other team members. The next chart shows that from a possible selection range only two have been selected – "important" and "very important".
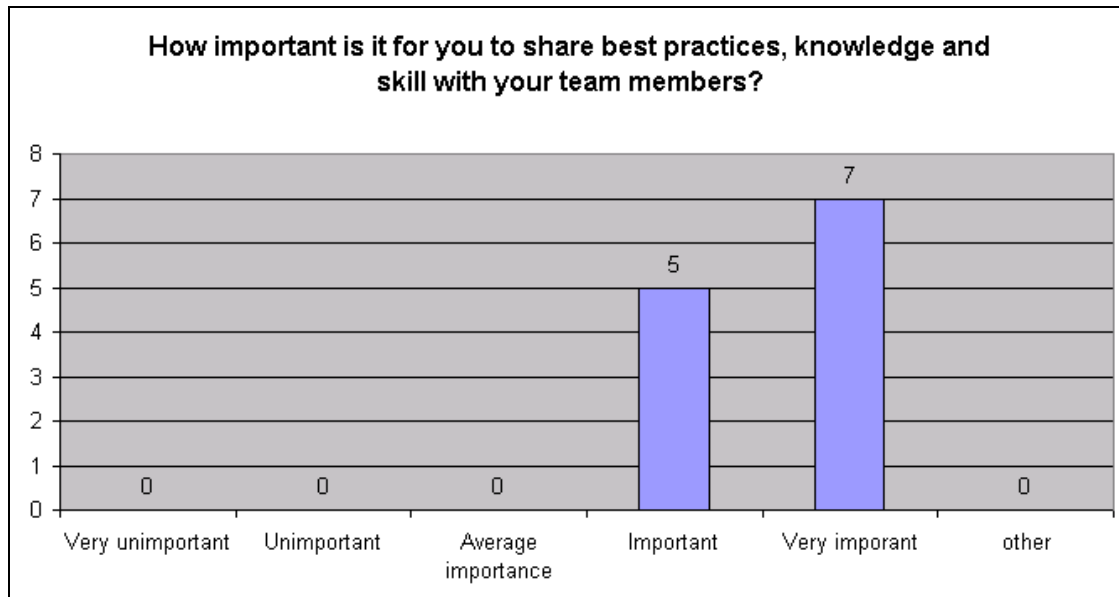
Figure 5.12 – Q14: How important is it for you to share best practices, knowledge and skill with your team members?

Taken the results of this focus area together it can be said that the team knows it can learn from other team members, is motivated to share experience, knowledge and best practice and can provide the basis for the implementation of a structured approach to encourage KM from a motivation's point of view.

5.3.2.4 Focus area: organisational assessment for support for knowledge management

The focus are of the organisational assessment for the support of KM is mainly used to find out about existing KM and knowledge sharing activities within the organisation – again – from the survey participant's point of view. Questions 12, 13, 15, 18, 19 and 20 were used to establish an insight on this area. The first two questions in this context are question 12 and 13, which are targeted on finding out if the team is – on the one hand – supported enough to provide enough to the team (question 12) and on the other hand is able to receive enough information from other team members. The results of both questions are shown in the charts below.
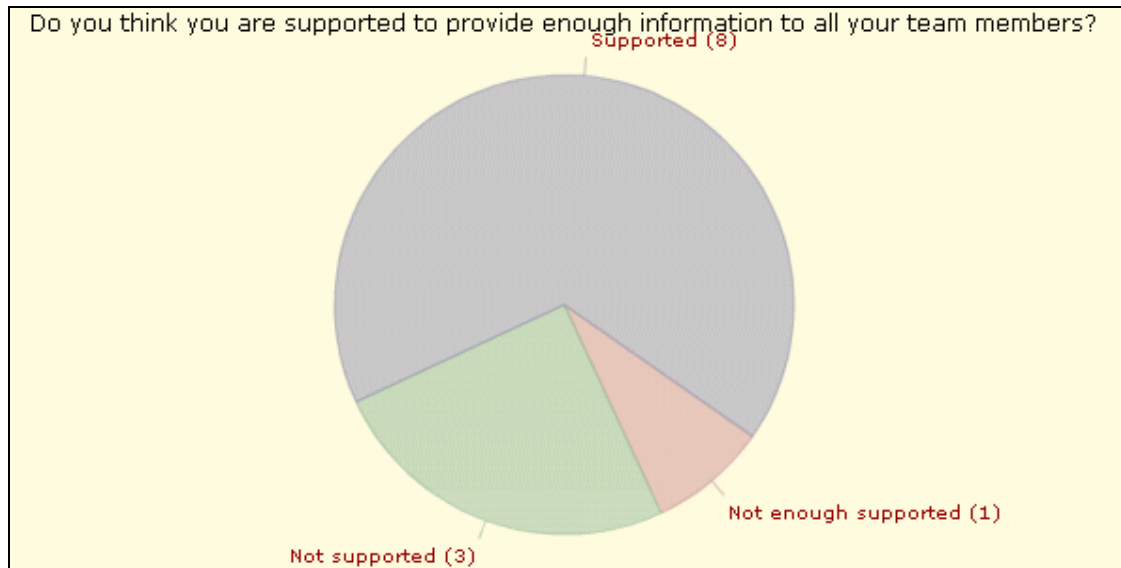
Figure 5.13 – Q12: Do you think you are supported to provide enough information to all your team members?

The responses to question 12 show that the participants mainly think that there is support in terms of being encouraged to share information with the whole team and all team members, but as 33% of the responses indicate that they are not supported (three out of twelve) or not enough supported (one out of twelve) to share an appropriate level of information with the team; it shows that there is room for improvement. The target now for the definition of the framework for knowledge sharing is taking up this point and finding out what are the prohibitions and in addition to that eliminate them.
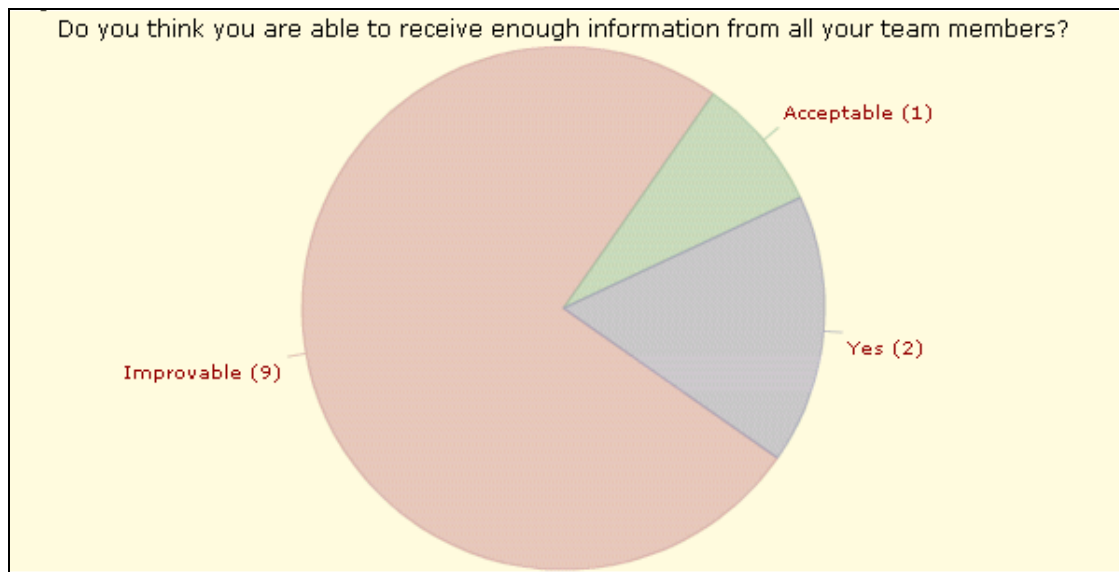
Figure 5.14 – Q13: Do you think you are able to receive enough information from all your team members?

Question 13 on the other side is used to reflect on the team's point of view of being supported enough to receive enough information from other team members. The results of the survey show that 75% of the participants feel this situation is improvable, only one respondent feels it is acceptable and two feel that they are supported enough to receive enough information from all team members.

The next question of the focus area is question 15 with the intension of finding in which way support for knowledge sharing was experienced by the participants. The question's results are shown in the following chart.
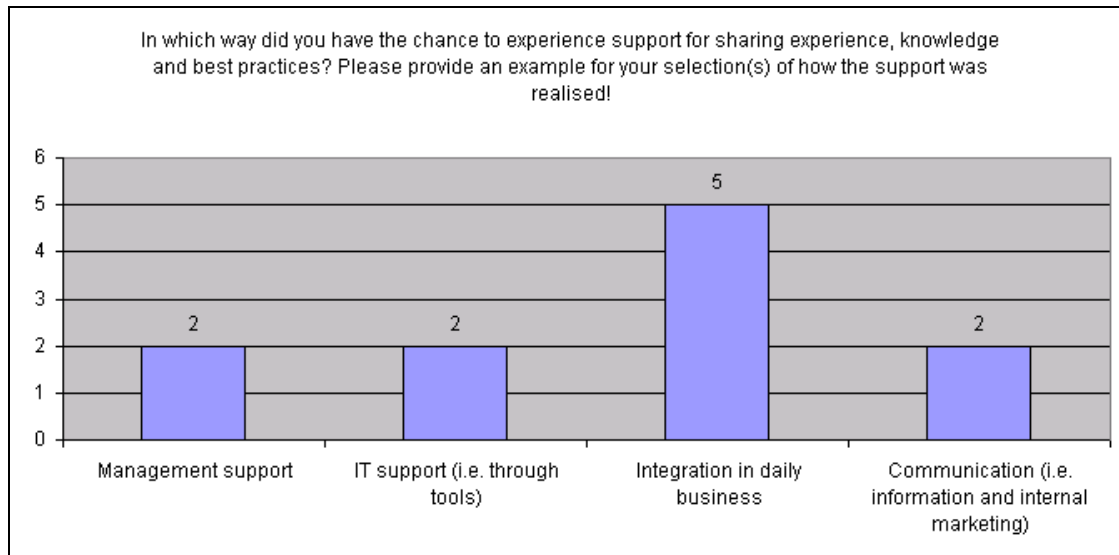
Figure 5.15 – Q15: In which way did you have the chance to experience support for sharing experience, knowledge and best practices?

The responses give an impression of how support was recognised within the team. The answers show that various kinds of support were already seen by the team and can be used to build up the further development of support mechanism for knowledge sharing within the team. As some of the free comments reflect on parts of the framework that have been piloted by the author during the phase of the start of the implementation of the framework, the free comments will be used to reflect on the evaluation part of this dissertation.

The next question in this context is question 18 which is also used for the next focus area. This question is focussed on the part of finding out what are main prohibitions for knowledge sharing within the team. The results are reflected in the following diagram.
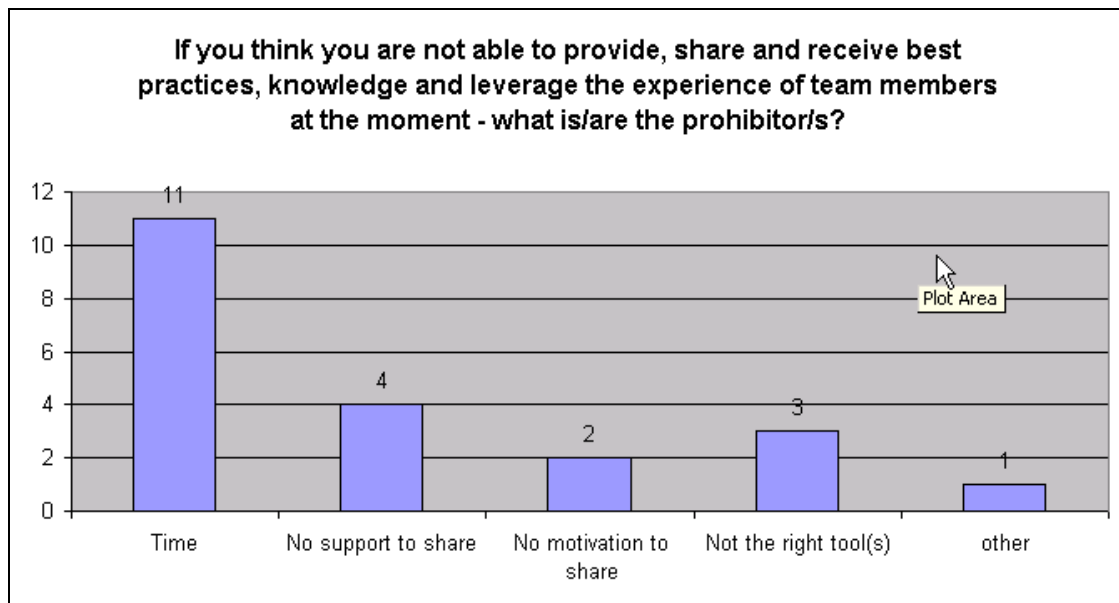
Figure 5.16 – Q18: If you think you are not able to provide, share and receive best practices, knowledge and leverage the experience of team members at the moment - what is/are the prohibition/s?

Looking at the results it shows that especially the factor time (eleven of twelve participants underline this statement) is one of the main prohibitions of sharing knowledge, best practices and experiences within the team. The answers state on the other side that "no support to share" (four out of twelve) is existing, they have no motivation to share (two out of twelve) and that the right tools are not existing (three out of twelve). The results now have to be taken into account when targeting the support for the development the framework for knowledge sharing within the team and should be addressed directly and communicated openly.

The next two questions are addressing projects or activities of the past that addressed knowledge sharing in general. One of these projects that ran in the past was named "Web 2.0" with the intension of communicating the benefits of Lotus Connection within the whole organisation of ibm.com and with the target of bringing people to use it. The questions are intended to give an insight on the experiences that come with an introduction of a set of tools or other methods for knowledge sharing and are mentioned within the formulation of the question with the example of the "Project Web 2.0".

The features of IBM Lotus Connections are described by IBM (2009c) as: "*With IBM Lotus Connections, you can use the collective knowledge of your organisation by dynamically building new connections between people, the information they know and the activities they are executing.*"

The answers of question 19 and 20 are used to give an overview of the participants' impression on the usefulness and the success of previous projects.
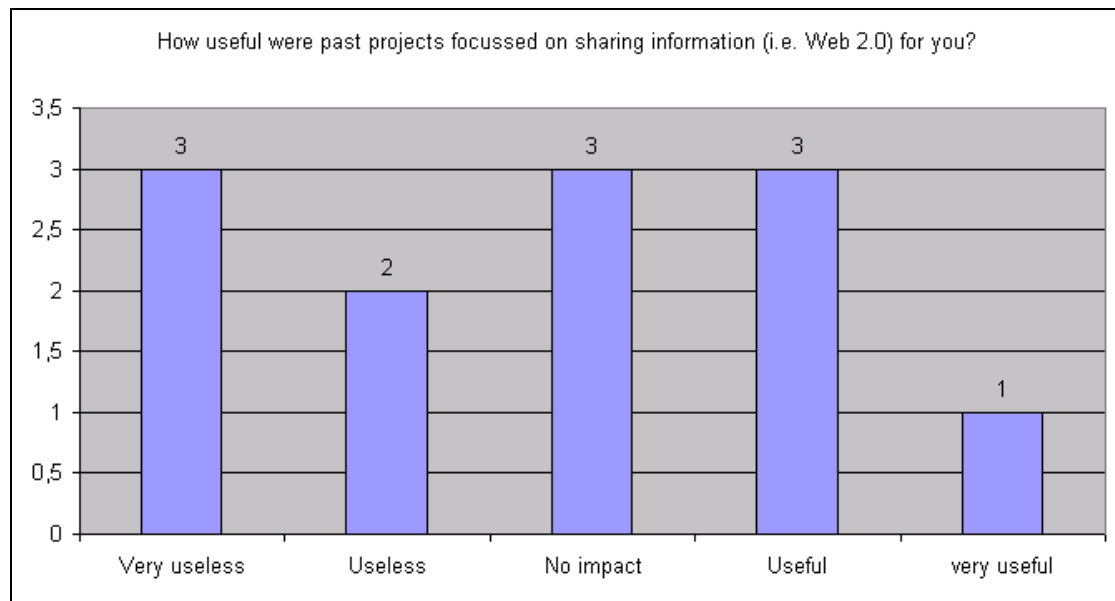
Figure 5.17 – Q19: How useful were past projects focussed on sharing information (i.e. Web 2.0) for you?
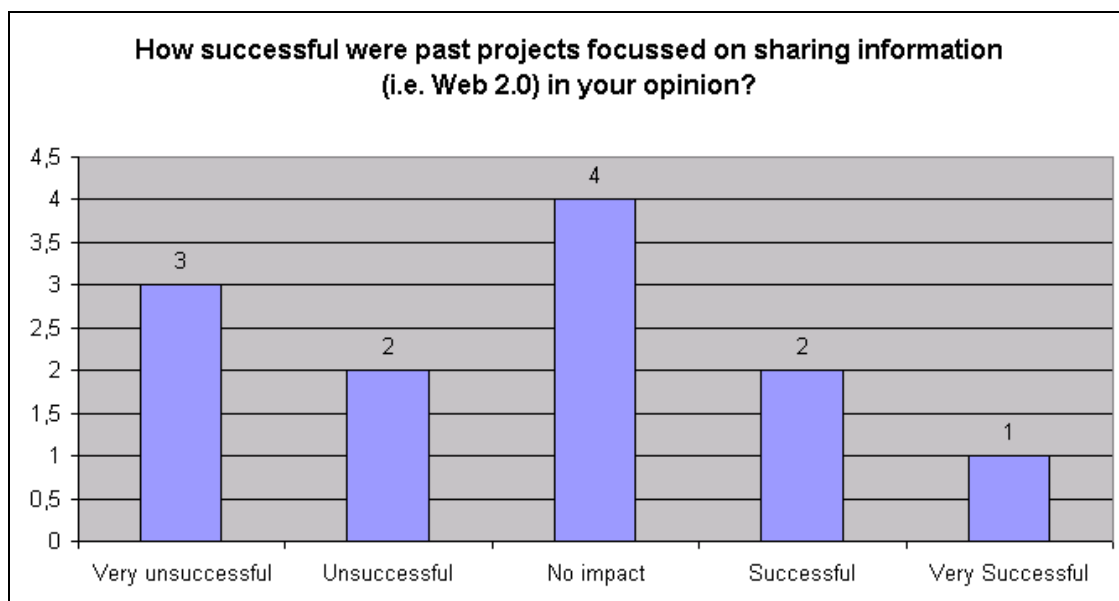
Figure 5.18 – Q20: How successful were past projects focussed on sharing information (i.e. Web 2.0) in your opinion?

The responses show that there is no common opinion in the team, but it shows that there is a basis for active sharing of knowledge about the projects, the results of the projects and their impact towards better exchange of information, knowledge and best practices. For both question it can be said that leveraging the advantages that some of the team members see in the results of the projects or the tools that have been introduced to the organisation should be one of the goals when developing the framework for knowledge sharing.

5.3.2.5 Focus area: leadership assessment for support for knowledge management

The last focus area as part of the survey was intended to find out how the participants experience the support coming from the leadership team in the organisation. Some of the previous explained questions covered already parts are related to this topic, but the questions directly involved are questions 16 and 17. Question 16 targets thereby the existent management support which is experienced within the team. The answers to this question are shown in the chart below.

Figure 5.19 – Q16: In which way do you experience the management support for sharing best practices, experiences and knowledge?

The answers reflect the following:

- There has been a support coming from the management by establishing regular meetings (two out of twelve respondents provided this answer);
- The management is receiving feedback from the team – so the team is ready to give feedback for the related issues when coming to a sharing of best practices, experiences and knowledge;
- Three out of twelve participants experienced that there was a feedback given to them;
- Five team members selected the answer that there is a general support for the issues, but the is no action related to solve these issues;
- One participant provided the feedback that there is no support from the management.

Question 16 gave an overview on how the management actual is involved in terms of supporting the sharing of best practices, experiences and knowledge. The answers provided by the team members are multifaceted and give only an idea of what there is not an actual typical method in place to support the knowledge sharing within the team.

In addition to that theory question 17 will provide a deeper insight on the issues related the support of the management in the team. The responses to question 17 are shown in the following diagram.
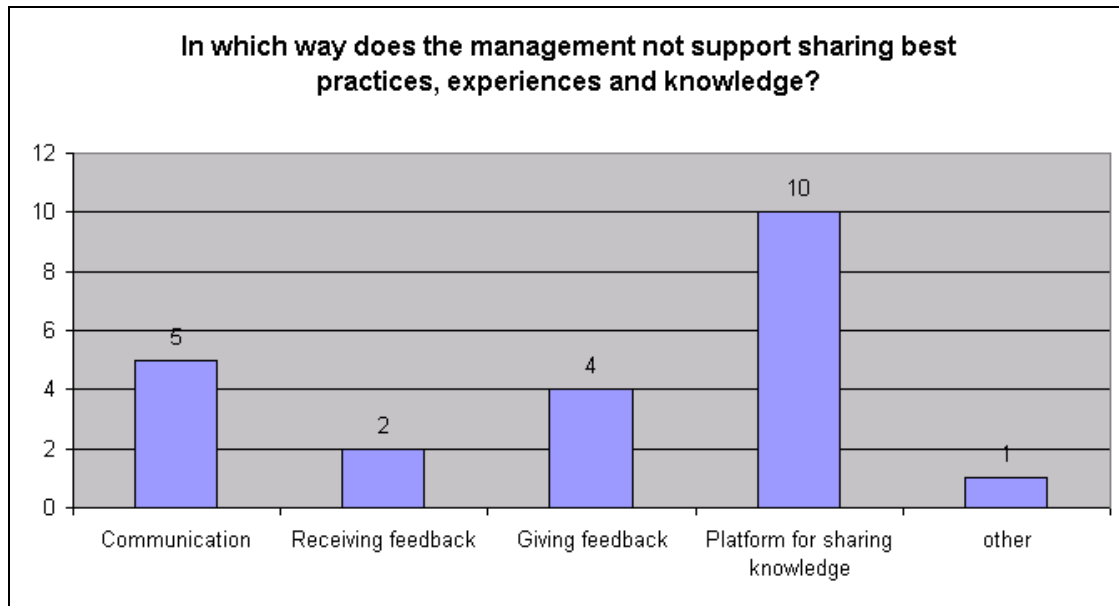
Figure 5.20 – Q17: In which way does the management not support sharing best practices, experiences and knowledge?

A significant need and at the same time an issue that can be addressed towards the management is the statement selected by 83% of the participants – the management does not support the sharing of best practices, experiences and knowledge, because of a missing platform for sharing knowledge. This answer underlines the overall thesis connected with this dissertation – there is no structured approach used within the team for sharing knowledge.

Another important factor provided as an answer to this question is the answer related to the communication within the team in general. One of the participants stated as a free comment that communication is existent but simply just forwarded and there is no structured approach recognisable. The answers shown in this focus area show that there is definitely a room for improvement and the feedback received in this context should be used to develop the framework matching to the requirements of the team.

5.3.3 Reflection on survey

This part of the survey is used to reflect summarised on the results of the survey and the gathered information, while looking on possible alternative methodologies of

survey development by implementing points for improvement that have been discovered during this project. The author found out during the process of evaluating the results of the survey that some of the requirements of the management of the organisation – defined as the projects was introduced and approved – were influential towards the project in a way that the author got the chance to work on the project in a way, that can be compared to the working methodology of an external consultant, who is not familiar with the team and the sales organisation.

The requirement of using survey results only in an anonymously way brought out some difficulties. The author wasn't able to link answers directly to team members. The only negative point with this approach is that a differentiation between answers to all question coming from new team members and on the other side experienced team members were not possible. The use of the tool BlueSurvey can be discussed in this context as well and has to be considered when using surveys for these kinds of topics. The recommendations coming from the author are following:

- Distinction between the inputs coming from more experienced persons and coming from other team members;
- Using different kind of questions for several focus areas to cover all aspects that are essential for knowledge sharing;
- Reconsidering formulation of questions and answers that can be interpreted ambivalent;
- The motivation for the participation is an important point and should not be neglected.

Overall, the results coming out of the survey were useful and enabled the author to start working on the following topics.

5.4 Conclusion

This chapter was used to provide a deep insight on the assessed organisation and the team that is used for closer experimentation to create an understanding about the environment of the research area. The organisation was assessed in two ways: the first way was to reflect on the organisation in general, its KM perspective and ideas on KM. The second way was a structured and very deep assessment about the team that is in

focus in this overall project. The author provided the assessment of the team within IBM in a survey that was used to discover five focus areas of investigation.

The survey reflected on the aspect of finding initial statements about the ability of the team to share knowledge, challenges and views on different facts that have been pointed out in the introduction parts of this work.

This deep analysis is a very important part for the overall project and was used in a way that can be compared to a knowledge audit. The results of this first part of the experimentation will be used for the next chapter to define a framework for knowledge sharing matched to the requirements gathered from this analysis part of this work. The goal is to let people recognise the gains from knowledge exchange and harvesting in their jobs, or otherwise the risk could be existent that framework is not used and will not provide any benefit.

6. A FRAMEWORK FOR KNOWLEDGE SHARING

6.1 Introduction

The goal of this chapter is to demonstrate the development of a framework for knowledge sharing for the team that is in focus for this project. Most of the input that is needed for the development of such a framework is used from the previous chapters of this dissertation in which the team and the sales organisation have been explored and analysed. One of the outcomes of the previously presented survey was the identification of the challenge of knowledge sharing. This statement is emphasised by Figallo and Rhine (2002, p. 29) as well by stating that organisations over the past 50 years have identified information handling as the great challenge heading into the 21st century.

This chapter will take the inputs from the previous chapters into account and provide a framework that is focussed to establish a basis for knowledge sharing within the team. The author will reflect on the identified points and address the major issues in the current situation with the framework focussing on solutions that are considered to be short-term, mid-term and long-term solutions.

6.2   Framework development

The process used for the framework development can be characterised by following facts. The framework was developed using the approach of designing short-term, mid-term and long-term actions with the focus of supporting the team's capabilities for knowledge sharing. The project in overall can thereby only evaluate the short-term and parts of the mid-term solutions because of time constraints over the phase of the project. The short-term solutions in the framework are mainly solutions that are characterised by pragmatic approaches of giving the team members the opportunity to achieve success right out of actions. The mid-term solutions are taking into account planning activities based on the results of implemented short-term activities and prepare the continuous integration into the framework on the one side and on the other side they are focussed on facilitating methods that support the knowledge sharing with

tools. The long-term activities in the process of framework development are mainly focussed on bringing the short-term and mid-term solutions into a consistent background while defining the goal of supporting any kind of knowledge sharing.

6.2.1 Requirements of the framework

As the development of a framework for knowledge sharing in a dynamic sales environment is the target that the author will achieve in this project, it is important to understand what the requirements for this framework are. This section will provide the details on this topic and thereby build the foundation for the framework development. The requirements of the framework were mainly developed out of the analysis of the analysis of the sales organisation. The survey that was used to assess the main issues, existing behaviours and suggestions coming from the survey participants is used to provide the requirements. To define the clear picture the following overview will provide details on the main outcomes of the survey.

Taking into account the results for the first focus area of the personal experience in the team; the main outcome were that different levels of experience are existing within the team combined with the need to close gaps. The demand towards each of the team members needs to be able to handle information from several areas. This outcome can be answered within the part of short-term, mid-term and long-term solutions of the framework. The next section will provide details of how the outcomes are transferred into a suggestion for a solution.

The focus area of the general KM practice in the team used in the survey provided the outcomes: personal interaction within the team is the main contributor to knowledge sharing and the preferred method within the team. The approach of learning by doing is established as main method of getting used to new topics, which is relevant to new hires and to changes within areas of responsibilities within the team. Web 2.0 tools are already established in terms of usage within parts of the team. The benefits of the usage could be communicated through the team members that use these tools for transferring of best practices. These outcomes will be handled within short-term and mid-term solutions of the framework.

In terms of the individual propensity to KM in the team nearly the whole team is motivated to share knowledge. The team seems to appreciate other team members as knowledge resource and it knows that knowledge is distributed within the team. The focus of keeping the communication clear in terms of the importance of each team member for contributing to the proposed framework and keeping up the motivation will be part of all framework areas. The organisational assessment for support for KM provided the following outcomes: The sharing of knowledge is an important aspect within the team, but delivering an infrastructure for knowledge sharing is necessary and needed. The support is seen in general, which aligns with the overall statement of IBM, but the implementation is improvable. The main prohibition is seen in the missing time and the improvable support to share knowledge. The appropriate solution is suggested by the author as integration in the formulation of a strategy, which is seen as a part of the long-term solution within the framework.

The leadership assessment for support for KM in the survey showed explicit that the need for a platform for knowledge sharing is existent and the implementation is necessary. Another important outcome was the need for a clear communication towards all team members.

All these outcomes and the formulated requirements can be covered in different approaches with a framework of knowledge sharing, but another important factor is the support from the management and the need for somebody taking responsibility for everything related – a knowledge manager. IBM's KM approach targets this issue with formulating the statement, managers must take over more responsibility and therefore this project can not answer the question of how the managers of such teams should align to the knowledge sharing strategy. In addition to the outcomes of the survey the following requirements were formulated:

- Survey results as first definition of requirements;
- Responsibility of the management;
- Open communication;
- System of integration on-going feedback and improvements to the framework;
- Definition of a strategy.

The framework is intended to work as a system that provides actions and benefits designed in a short-term, mid-term and long-term approach. It will take on existing informal and formal methods and will provide a guideline for establishing a knowledge sharing culture.

The next sections will provide the overview of the development of the framework for knowledge sharing in this dynamic environment.

6.2.2   Short term solutions

This section will describe the short term solutions in the framework for knowledge sharing. The author reflects hereby on the previous chapters and outcomes. The challenge for such an implementation of a short term solution is to show benefits and results that can underline the developed solution. The characteristics for this kind of solutions can be formulated as focussed on person interaction, pragmatic approach and clear communication within the team for the support for knowledge sharing within the team to target the main issues defined in the requirements of the framework.

The short term solutions build up on existing best practices to share knowledge and experiences. The survey in the analysis part of the project is used as starting point for taking up approaches that are already existent – more in an informal approach. However, there are important reasons for at least beginning with the simplest tools that will enable measurable improvement in knowledge exchange. As one of the requirements is the focus on the personal interaction to build up on existing knowledge sharing structures within the team; the author would like to highlight the use of Communities of Practice. Gruner (2008) analysed the usage of "*Communities of Practice in an international, intercultural, fast changing working environment*" and explored the benefits of this approach already. The author will just highlight up some existing points and will not go into a deeper analysis of this approach in this project.

Taking this major concept of KM (Menken 2009, p. 56) into consideration and aligning it with the requirements and the definition of a possible solution customised for the team can lead to benefits that support enabling the concept of knowledge

sharing based on the identified requirements. The adoption of tacit knowledge provides a way to manage the capturing, codification, and storage of explicit knowledge, as well as handling tacit knowledge. This concept allows encouraging tacit sharing of knowledge, with the appropriate tools to support explicit creation of the same knowledge. The author agrees with Menken (2009, pp. 57-58) and suggest leveraging the advantages that are mainly coming from the interaction between team members: "*Workers are more likely to turn to a co-worker in their community of practice than to look for information in a database.*" This advantage and behaviour has been identified during the analysis of the results of the survey (especially questions 5,6,7,9 and 10). With communities of practices, an organisation can benefit in following (Menken 2009, pp. 58-59:

- Avoiding mistakes;
- Solving problems;
- Saving time;
- Standardise practices;
- Develop new capabilities;
- Increase talent;
- Leverage solutions.

Using these points as basis for an implementation of a short-term solution the author wanted to take up the idea of a synchronous learning approach. One of the implementations done as part of the short-term solutions was to enable a concept that allows the sharing of ideas with multiple participants at the same time. The concept coming from the ideas of Communities of Practice was introduced by the author in form of implementing regular team meetings within the team – separated from the normal day-to-day-business environment with the intension of giving the team the opportunity to talk about current issues in on-going projects.

During November 2008 this concept was brought to life during a challenging time as some of the experienced team members were complaining about the actual work load and some of the new team members did not have to work a lot. Two issues come with this kind of situation: a) the motivation decreases in both groups as no support seems to be available and b) the experienced seller were not able to plan time for the transfer

of knowledge to the new colleagues. A schedule was sent out to the team with the announcement of a discussion of the current situation.

The first meeting was intended to give an explanation by the author that he recognised differences in the workload of different team members and that everybody should provide a different overview about current projects, issues and questions. With the whole team participating and a moderator (the author) to coordinate the first meeting; the following meetings were used to discuss each team members current situation. The author explained repeatedly the intention of these meetings to all team members and to the manager of the team. The author tried to embed this KM practice into the work processes so that it became a sustained, ongoing effort. Another important aspect in terms of the requirements of the framework was targeted to provide the team with a distinguished communication to reflect on their benefits especially when coming to prohibitions for doing their daily job – to solve the issue time in this context.

The target of these explanations can be described with the following model.
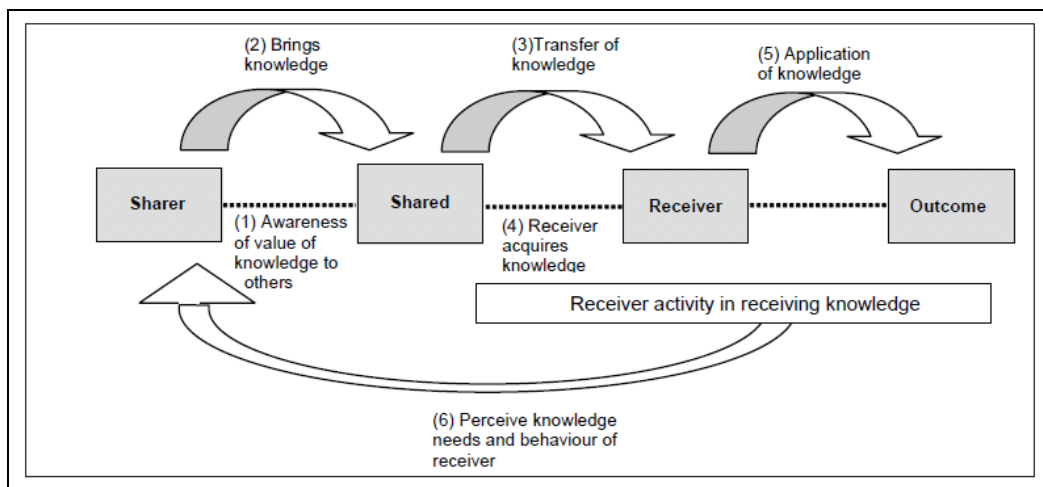
Figure 6.1 – A simplified receiver-based model of knowledge sharing (Hunter & Lichtenstein, 2008)

Hendriks (in Hunter & Lichtenstein 2008, p. 89) developed this structured process-oriented model of knowledge sharing that enables to examine the potential role of receivers in sharer choices. The model assumes a person who possesses knowledge (sharer or experienced team members) and includes the following steps:

- Sharer becomes aware of the value of the existing knowledge to a potential receiver;
- Sharer brings knowledge to the attention of a potential receiver;
- Knowledge is transferred to a receiver through a channel;
- Receipt and assimilation of knowledge by receiver;
- Effective application of received knowledge in practice (Hendriks, 2004);
- Feedback from receiver to sharer about receiver knowledge needs and behaviours, including knowledge application.

This model was therefore used based on the survey outcome as the team recognised the existing value within the team. The support in terms of bringing the knowledge of team members to the attention for potential receivers (inexperienced team members) was formulated in the request for meetings to share knowledge and solve actual issues. The communication was formulated with the following idea: *Doing what is done, in the most efficient way, reusing every artefact that has been created by someone within the team to save time and focus on the high value parts of the business*.

This short-term solution took the results of the survey to use what is already integrated in the team and leveraged it when building up the framework for knowledge sharing. Learning by doing in this context – that means people to people interaction / face to face conversion were used as important part to learn and to share experience, knowledge and best practices.

The following diagram shows the character of these kinds of projects as a framework for knowledge creation and knowledge application.
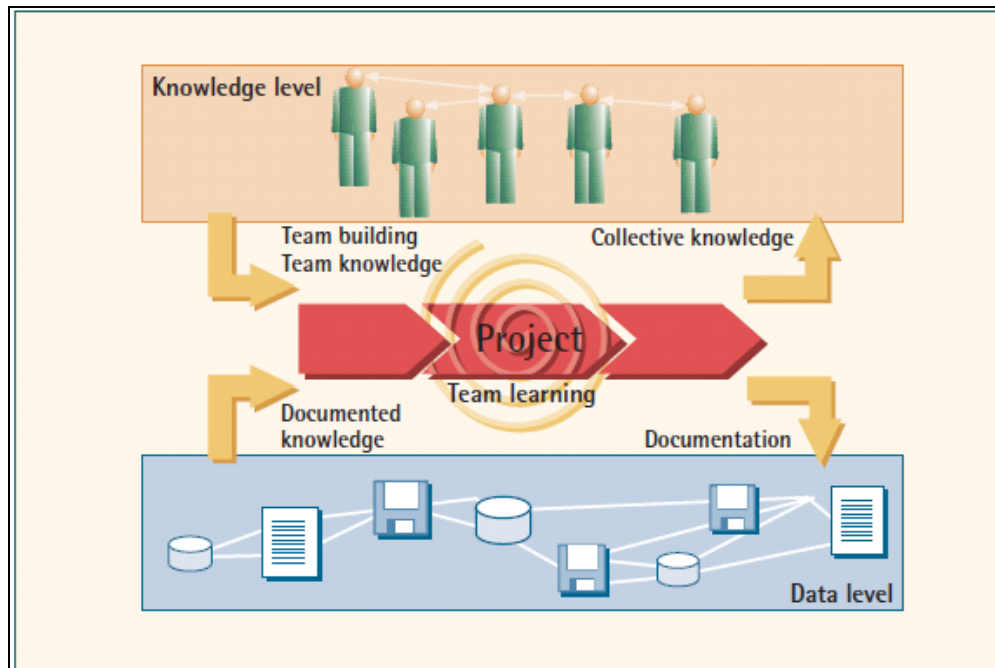
Figure 6.2 – Projects as framework for knowledge creation and application (Wissensmanagement-Forum, 2003)

The Wissensmanagement-Forum (2003, p. 5) describes in their model the different levels in this process (as shown in Figure 2.3). The levels are linked with the five core knowledge processes - information, documentation, communication, application and learning – to form a basic model of KM. As the short-term solution is hereby only facilitating the more interaction part of the five core knowledge processes, the solution is really focussed on bringing short-term results. The next section will therefore describe a possible mid-term targeted solution for documenting results and making these results available for an easier reuse.

6.2.3   Mid-term solutions

The previous section described a proposed short-term solution that has been integrated into the team for showing short-term results to all participants. As an appropriate knowledge sharing framework consists also of mid-term solutions; this section will elaborate on suggested solutions.

The first part of possible mid-term solutions is to integrate successful short-term solutions into consideration for a mid-term strategy. The adaptation of the following suggestions is therefore brought into consideration by the author to create a framework

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of initial solutions for short-term problems that may come up during the normal day-to-day business:

– Establishing small team roundtables;

– Establishing all team roundtables;

– Proactive interaction with the management to talk and discuss regularly about knowledge sharing problems that arise;

– Implementation of best practices sharing in a format that is accepted by the whole team.

The need of a platform for knowledge sharing is answered by the author with the framework that was developed in this project, but to facilitate other outcomes of the survey the author suggests furthermore that a clear communication within the overall framework must be enabled. The clear communication is supported by these previous proposed meetings and should be encouraged by the management to motivate the overall team.

The literature review showed that motivation can be supported through early communication about strategies, current project and discussions to create the acceptance of the team for upcoming changes and to establish a model for overcoming concerns. The mid-term solutions in the framework should find a target and the motivation of team members through communicating the idea of overcoming timewasters by learning from others and getting to know all areas within the knowledge categories of colleagues. With this idea the motivation for sharing knowledge – which doesn't seem to be a problem at the moment (based on the results of the survey) – can be supported by letting the knowledge experts know what they are worth to the team and the organisation. If the knowledge experts or team members experienced in specific areas are integrated into roundtables and meetings for general improvements the chances for using the benefits of solving problems, saving time, standardising of practices, and developing new capabilities are high.

To document possible successes and outcomes of these methods and actions is seems to be necessary to take up the point of formulating a part of the solution that is focussed on using communication and collaboration by building up a pool for sharing

problems. In this context the author proposes a solution that is supported through technology. As this part of a solution is always connected to different concerns, because the introduction of technology in general should always be designed for the people and take up the ideas of the people, who use the technology; the author takes again outcomes discovered out of the survey. One of the tools that have been mentioned directly by the participants is Lotus Quickr (question 7 and question 21).

IBM states the following to Lotus Quickr and possible benefits (IBM Corporation 2009 d): "*IBM Lotus Quickr is team collaboration software that can help you access and interact with the people, information and project materials you need to get your work done. Lotus Quickr has a rich set of features, such as content libraries to share information, team discussion forums to encourage communications, wikis that let your team create and edit content together, and connectors that help make sharing easier and which connect team collaboration with other software*." Its benefits should be eliminating or reducing duplication efforts, and content inconsistencies, share, access and collaborate on team content that is the most up-to-date, focus valuable resources on solving business problems, leveraging new ideas, empower teams to set up and manage their information and projects in a security-rich environment without requiring deeper IT assistance, capture and reuse business best practices so that teams and projects can get "up and running" more quickly.

The author decided to establish this tool as is has been in use within the team. The idea was not to simply set up a database, populate it once and refer to it. The author tried to find a way of keeping sure that information is refreshed, or it will quickly become useless. To start the development of such a tool for documenting knowledge and to support the transfer of knowledge as part of the framework for knowledge sharing the author established the following strategy:

One of the team members who started in 2008 was given the task by the author to collect information that seems to be important from the perspective of someone who is new to the team. The author explicitly chose this way, because of two reasons: 1) the participation of someone new to the team becomes an useful process in the background of building a framework for knowledge sharing that supports all team members disregarding their level of experience – especially when someone still in the learning

process can spend more time on this kind of task and 2) the motivation to keep a repository of question and answers connected to a different approach makes sense because the angle of a new colleague is focussed on several other aspects compared to someone experienced within the team.

This task was later extended to set up the environment in Lotus Quickr as the platform for storing all necessary information. The idea hereby was to ensure that this tool is going to be used on an ongoing basis. The Lotus Quickr introduction to the team started thereby by the support of the team members that were using Lotus Quickr already and the development by a new team member brought a pilot character to this part of the project. The documentation can be found in the appendix of this document. The topics covered within this project are limited to specific areas and cannot cover all possible solutions that cover short-term, mid-term or long-term objectives.

Therefore the definition of a framework for knowledge sharing in this project will only cover parts that can be classified into solutions for each of these solutions. To finalise the view on possible approaches to create a framework for knowledge sharing the next chapter will focus on possible topics targeted on long-term solutions and the general goal of the framework.

6.2.4   Long-term solutions and goal of the framework

This chapter will discuss solutions considered by the author as long-term solutions to complete the framework for knowledge sharing for the team GTS Germany team within ibm.com.

To summarise, the whole experimentation process was structured with the taken into account the approach of the introduction of KM described by Keller and Kastrup, which can be divided into the following steps (Keller & Kastrup 2009, p. 32):

- Initialising;
- Analysis and planning;
- Implementation;
- Assessment;
- Continued optimisation and transfer.

The initialisation in this context was used as the request of the author to start this project with the definition of the project proposal. The analysis and planning part was covered by chapter 4 in this work. This chapter represents the implementation and the chapter 6 will highlight the assessment. The project is limited to specific constraints that are related to the project character for this dissertation. The author had to face the time constraints which lead to limitations in terms of assessing the proposed solutions in long-term aspects, but can now be used as suggestions for similar projects.

As the overall project was designed to fulfil first of all short-term results with approaches that can be extended by the organisation when fulfilling the requirements to the team coming with such a KM project, the author is defining solutions in this chapter which can be better described as suggestions for making the knowledge sharing framework work. Parts of the long-term solution are the successfully deployed approaches of short-term and mid-term solutions. The requirements of a long-term solution in this context are to maintain these previous described solutions and to implement the continuous optimisation and transfer them into the team. For this reason the author would like to highlight his suggestion for a long-term solution as the development of a statement of a goal of how participants in the circle of KM should communicate with knowledge, knowledge sharing and the view on knowledge sharing within the team.

The definition of a goal in this context is used to define a long-term solution of the developed framework for knowledge sharing. The aspects of short-term and mid-term solution have been discussed in the previous chapters and will be highlighted in the following picture. The overall framework in this state of development (keeping in mind that continuous improvement is part of the definition) is representing the main points covered in analysis of the sales organisation. The highlighted need for a platform for knowledge sharing discovered during the survey is answered with the proposed knowledge sharing framework and its parts. The following diagram shows a summary of the framework.
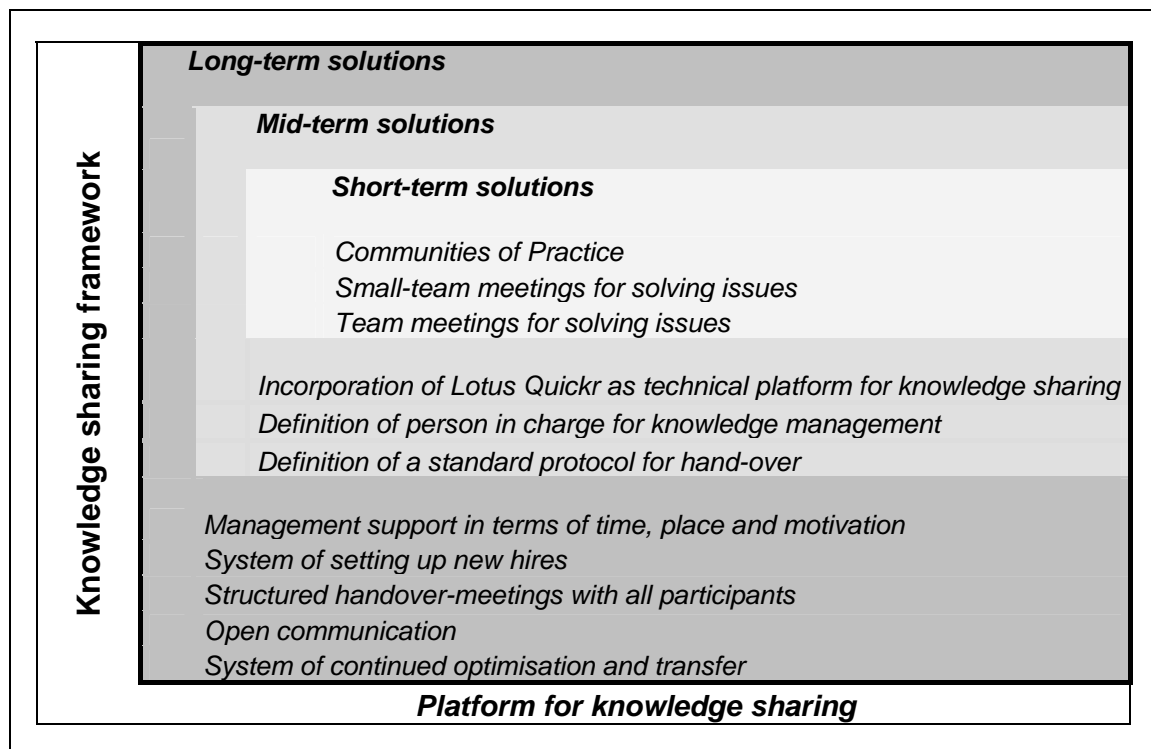
Figure 6.3 – Knowledge Sharing Framework (Author)

The experimentation phase of this project was used to decide on possible solutions for defining short-term, mid-term and long-term solutions, but the most important point of this overall project was the analysis of the sales organisation to gather a close view on the current capabilities regarding knowledge sharing. In addition to these points it seems to be useful to define a common goal for the current state of the project. This statement can be used to keep the focus on the achieved points and to optimise the knowledge sharing within the team.

The goal of the framework is defined as following:

The proposed solution is a framework for knowledge sharing for the analysed telesales team working for the German market with their distinct requirements. The framework has the goal in general to use the existing resources as efficient as possible, to equip team members with all necessary and available information to fulfil their job. The approaches designed as short-term help discover resources in the team and find already existent knowledge. The idea with this first way of bringing a structured way of KM to the team is to increase awareness, understanding and the benefits of KM in team.

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The transfer of best practices and experiences in specific areas should be common practice in the team with the support of the management. One mid-term solution had in focus of gathering information based on the perspective of a new team member where in the daily business routine integrated approaches of doing business can be discovered and transferred to the rest of the team by making them available through an IT supported platform for knowledge sharing. The integration of all these kind of solutions with the continued maintenance and optimisation of these solutions into long-term approaches is another goal of the framework and can only be supported by open communication, participating and support by the management. The framework development was specifically done for the team, but further aspects need to be highlighted.

6.3 Bringing technology to the framework

"Technology is not a solution in itself. Technology can help to provide solutions that meet the users' requirement for sharing, reusing, and managing intellectual capital in a networked team environment. (Huang 1998)"

The previous chapters were used to define a picture on people and process in the overall construct of knowledge sharing. The knowledge management aspects in this part of the solution design to the framework for knowledge sharing will consider the role of technology, as knowledge management requires addressing both cultural and technical issues.

The goal of technology in this context can be defined as following - shortening the time to acquire information and gain knowledge. Therefore technology is a key factor in increasing the way of providing information to gain knowledge to knowledge workers. The success of technology solutions depends on the solutions, which must support all three levels: enterprise, team or business unit, and individual. In addition to these levels, it has to be kept in mind that for the framework for knowledge sharing; technology should support each defined level of solution in the framework.

We can enhance the statement out of chapter 3 where it is defined that the workhorse for knowledge management is collaboration, the consequence from the technology solutions point of view is hereby active contribution of the communities. The use of technology can then increase the quality and content of relevant knowledge. Solutions and technology should allow sharing, reuse, and management of intellectual capital in an environment that supports the team environment. To increase knowledge intensity, an organisation needs solutions to support team interaction, knowledge synthesising, and knowledge management infrastructures (Huang 1998).

Technology can support each part of the framework for knowledge sharing. The next part of this chapter will elaborate on the tools matched to the framework by finding the bits of technology that support the people and process idea for leading the framework to work.

6.3.1 The role of Web 2.0

The term was coined by an industry "influencer" – Tim O'Reilly. According to O'Reilly (2006), "Web 2.0 is a term that captures the widespread sense that there's something qualitatively different about today's Web." O'Reilly describes the term as following (2006): "Web 2.0 is a set of economic, social, and technology trends that collectively form the basis for the next generation of the Internet - a more mature, distinctive medium characterized by user participation, openness, and network effects."

Web 2.0 simply means "connecting people to people." A key point of Web 2.0 is the social factor – applications are becoming better as more people contribute their personal knowledge or combine services that already exist into new applications. The expression Web 2.0 first emerged during a brainstorming session between O'Reilly and MediaLive International, with the term apparently coined by O'Reilly vice-president Dale Dougherty during that discussion. O'Reilly on September 30, 2005 posted an article "What Is Web 2.0" that has become widely accepted as the seminal work on the topic (O'Reilly 2005).

Not everyone agrees with the concept of Web 2.0. Tim Berners-Lee (2006), credited with inventing the World Wide Web, has dismissed Web 2.0 as useless jargon nobody can explain and a set of technologies that tries to achieve exactly the same thing as Web 1.0. One sceptic, Dave Winer (2005), defines Web 2.0 as "*a marketing concept used by venture capitalists and conference promoters to try to call another bubble into existence.*"

Open standards bring together diverse technologies to interact seamlessly. Web 2.0 is doing the same thing for the Web, bringing together diverse applications and their users to create new and useful Web content. A concept as hard to pin down as Web 2.0 cannot really be supported by a single standard, although many of the technologies that enable Web 2.0 are based on open standards (IBM 2009e).

Even the most passionate proponents are not suggesting that Web 2.0 is a new version of the Web, at least not in the generally accepted meaning of the term version. Web 2.0 is a new and evolving approach to the Web, not a new Web (Kilian *et al.* 2007, pp. 57-59). Web 2.0 is not necessarily about new technologies; in fact, Web 2.0 technologies are usually simple, frequently inefficient, and unlikely to be new (IBM 2009e). One key point of Web 2.0 is the social factor - how people and their actions make applications better as more people use them. The Web has become more interactive, introducing the concept of social networking, which involves many-to-many relationships instead of one-to-one relationships.

At its root, Web 2.0 is at least as much about the easy access, use, and collaboration of data sources as it is about social networking. Almost unlimited resources are now available in an easy-to-use fashion – data from previously closed sources is now free to be queried or used. This significant paradigm shift in part enables the wide variety of social networking, collaboration, and new content sites commonly associated with Web 2.0. IBM (2009e) says that using pre-existing services that are combined into new useful business applications are called composite applications, or mashups. Such combinations help to reduce development effort, improve functionality, improve consistency of data, and generate more useful software. This approach brings Web 2.0 and service-oriented architecture (SOA) together in the common purpose of improving the connections among people and systems as shown in the following figure.

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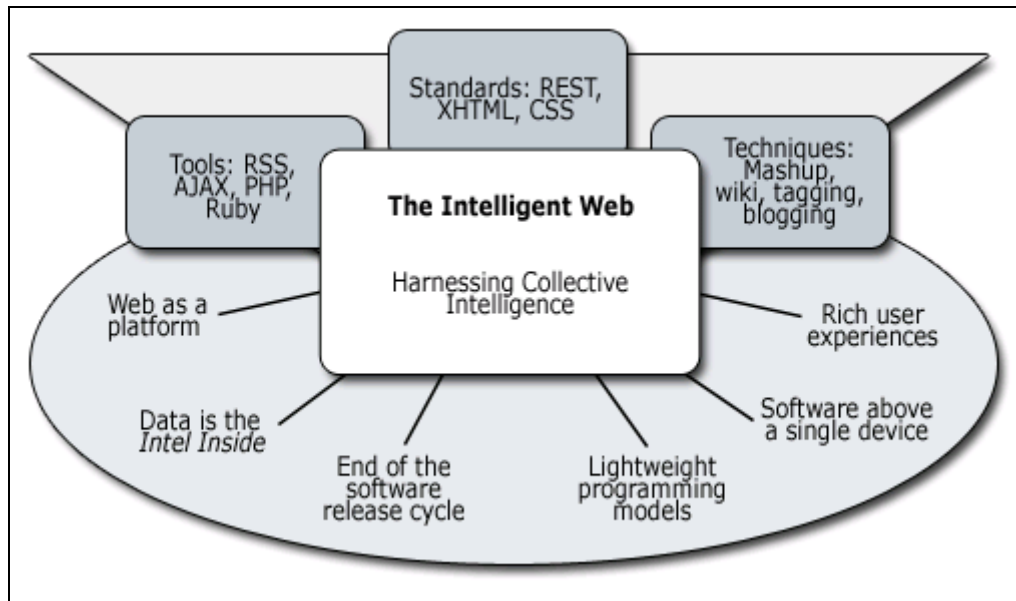
Figure 6.4 – *Web 2.0 Themes (IBM Corporation 2009 e)*

For growing numbers of people, the Web is no longer just a place to catch up on news and information and a place to communicate with friends and family. The Web now plays a major role in the decision-making process, as a key source of information and knowledge.

In his original article on the topic, Tim O'Reilly identified seven principles relating to Web 2.0; Web 2.0 sites and applications conform to some of these principles (2006):

1. **The Web as the platform** - Using the Web as a platform refers to taking advantage of the attributes of the Web, where huge numbers of users are able to participate in social networking, interacting with each other. Since the Web is the platform, the operating systems used by the devices and systems become irrelevant.

2. **Harnessing collective intelligence** - Web 2.0 benefits from social networking in that many of the systems become smarter as more people use them; their quality increases with their popularity. The principle, as described by James Surowiecki in his book *The Wisdom of Crowds*, is that the many are smarter than the few. The wisdom of the crowd is demonstrated in many of the Web sites that are characteristic of Web 2.0. Collective intelligence has resulted in the quality evident in Wikipedia, the online free encyclopaedia that anyone can contribute to

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or edit. Collective intelligence produces the page rankings in Google, where rankings are based on the number of links to a site and the popularity of the sources. Collective intelligence also enables Amazon to display the most popular options and recommendations, which are real-time computations based on actual sales.

3. **Data is the next Intel Inside** - Web 2.0 relies as much on SQL as it does on HTML. In other words, the value of a Web 2.0 site is based on the data that it can provide: the databases and other sources of information on which the site can draw. Applications are increasingly data-driven. Competitive advantages are gained by those who own a unique, hard-to-recreate source of data. An example of the effective use of data is Amazon, which receives the same information about books as other stores (– Amazon also provides a unique feature in the form of book reviews that are written by customers).

4. **End of the software release cycle** - Web and application developers are discovering that there is no need to wait for a finished product before launching a beta version. The key is to achieve a balance between having enough functionality for a beta and being stable enough not to annoy users. By leaving a Web application in beta for an extended period, developers can quickly make bug fixes and apply user feedback without following a lengthy cycle of product releases to incorporate the changes. This approach requires the tools to support such constant change, for example, test-driven development, as well as organisational changes. The perpetual beta provides greater opportunity to gather user feedback and to determine the features that users like, dislike, and want to see added.

5. **Lightweight programming models** - Simplicity is a hallmark of a Web 2.0 application. People want simple approaches that solve one problem at a time; applications that do so are the most popular. Web services are often complex, using such mechanisms as Simple Object Access Protocol (SOAP) to generate full-fledged Web services. In contrast, Web 2.0 applications are more commonly based on Representational State Transfer (REST) (IBM Corporation 2009 e). REST enables transfer of data in streams of

unlimited size and type, supports intermediaries (proxies and gateways) as data transformation and caching components, and concentrates the application state within the user agent components. Web applications also benefit from such lightweight data exchange formats as JavaScript Object Notation (JSON), a JavaScript subset frequently used in AJAX (Asynchronous JavaScript and the Extensible Markup Language (XML)); as an alternative to XML. Atom and Really Simple Syndication (RSS) are among the most widely deployed feeds because of their simplicity. These technologies are designed to syndicate and reuse services rather than provide control over access, which is typical of heavyweight Web services. A lightweight programming model results in an application that is loosely coupled, enabling developers to make changes to it, add their own functionality, or delete what they don't need. The learning curve is sharply reduced and therefore appeals to more developers. In addition, the resulting applications are simpler and more focused, making the end users more satisfied.

6. **Software above the level of a single device** - The PC is no longer the only access device for Internet applications, and applications that are limited to a single device are less valuable than those that are connected. Web 2.0 applications are designed to integrate services across handheld devices, PCs, and Internet servers, making the whole of the Web transparent and accessible across any device. Even applications that are not Web applications as such can leverage the power of the Web. Examples include iTunes, which uses a PC to cache and manage songs and an MP3 device to play them; BitTorrent, in which every client is also a server and anyone can download and serve content; and Skype, a highly popular Internet telephone network.

7. **Rich user experiences** - The term rich user experience is often taken as synonymous with AJAX, a technology that enables Web applications to provide seamless user experiences, often combining many discrete services. AJAX allows for user interaction on the Web page without requiring a refresh of data from the server for every interaction. AJAX is one of a growing number of technologies that enhance the usability of a Web application. Usability is often judged on speed, simplicity of use, and personalization. Portals can provide these

benefits by allowing the user to personalize the data and to use a single interface to access multiple services. A portal's dashboard enables any user to easily access different types of information.

According to IBM (2009e) Web 2.0 is the network as platform, spanning all connected devices; applications that make the most of the intrinsic advantages of that platform. Web 2.0 means delivering software as a continually updated service that gets better the more people use it, consuming and remixing data from multiple sources, including individual users who provide their own data and services in a form that allows remixing by others. Web 2.0 creates network effects through architecture of participation, going beyond the page metaphor of Web 1.0 to deliver rich user experiences.

Featuring more than just a set of technologies, Web 2.0 has attributes with primarily a social and business dimension. The consultants of McKinsey say (Choi, Miller & Roberts 2009, p. 2) that technologies known collectively as Web 2.0 have spread widely among consumers over the past five years. The popularity of Web 2.0 has grown; companies have noted the intense consumer engagement and creativity surrounding these technologies. Much of this is being driven by innovation in consumer markets. These innovations permeate enterprises through the process of consumerisation, largely via the Web. The concepts have matured, and many have been integrated into enterprise efforts, with mixed results thus far (Smith 2009, p. 3).

Although the designation "Web 2.0" is popular, new terms (such as "Web 3.0" and "the Semantic Web") continue to appear. Regardless of the next big buzzword, the Web will remain a major catalyst in technology (Smith 2009, p. 3).

The Web is the underlying infrastructure and centre of gravity that enables many recent additions to the IT lexicon, and will remain so long after the next generations of buzzwords come and go.

Choi, Miller and Roberts (2009, p. 2) define as well that Web 2.0 is the latest wave in corporate technology adoptions and could have a more far-reaching organisational impact than technologies adopted in the 1990s—such as enterprise resource planning

(ERP), customer relationship management (CRM), and supply chain management (SCM).

Web 2.0 covers a range of technologies. The most widely used are blogs, wikis, podcasts, information tagging, prediction markets, and social networks as represented in the following table. Each of these technologies can be taken into consideration for completing the framework for knowledge sharing from the technological point of view.

Web 2.0 technologies	Description	Category of technology
Wikis, commenting, shared workspaces	Facilitates cocreation of content/applications across large, distributed set of participants.	Broad collaboration
Blogs, podcasts, videocasts, peer to peer	Offers individuals a way to communicate/share information with broad set of other individuals.	Broad communication
Prediction markets, information markets, polling	Harnesses the collective power of the community and generates a collectively derived answer.	Collective estimation
Tagging, social bookmarking/filtering, user tracking, ratings, RSS	Adds additional information to primary content to prioritize information or make it more valuable.	Metadata creation
Social networking, network mapping	Leverages connections between people to offer new applications.	Social graphing

Table 6.1 – *Web 2.0 – A range of technologies (Choi, Miller & Robert 2009, p. 3)*

New technologies seem to appear as the Internet continues to evolve. The distinction between these new tools from previous technologies is the high degree of participation they require to be effective. Unlike ERP and CRM, where most users either simply process information in the form of reports or use the technology to execute transactions (such as issuing payments or entering customer orders), Web 2.0 technologies are interactive and require users to generate new information and content or to edit the work of other participants. As earlier technologies often required expensive and lengthy technical implementations, as well as the realignment of formal business processes; new tools are not technically complex to implement. Rather, they are a relatively lightweight overlay to the existing infrastructure and do not necessarily require complex technology integration.

Choi, Miller and Robert describe the differentiation in terms of the category of technology and their purpose by focussing on who is participating in the following picture. The different purposes for content generation, community building and decision support can be set in correlation to the participants.

There are three inter-related knowledge usage situations: the need to find knowledge that already exists, to gain access to experienced-based knowledge and to create new knowledge. These needs can be set in context with the solutions building the framework.
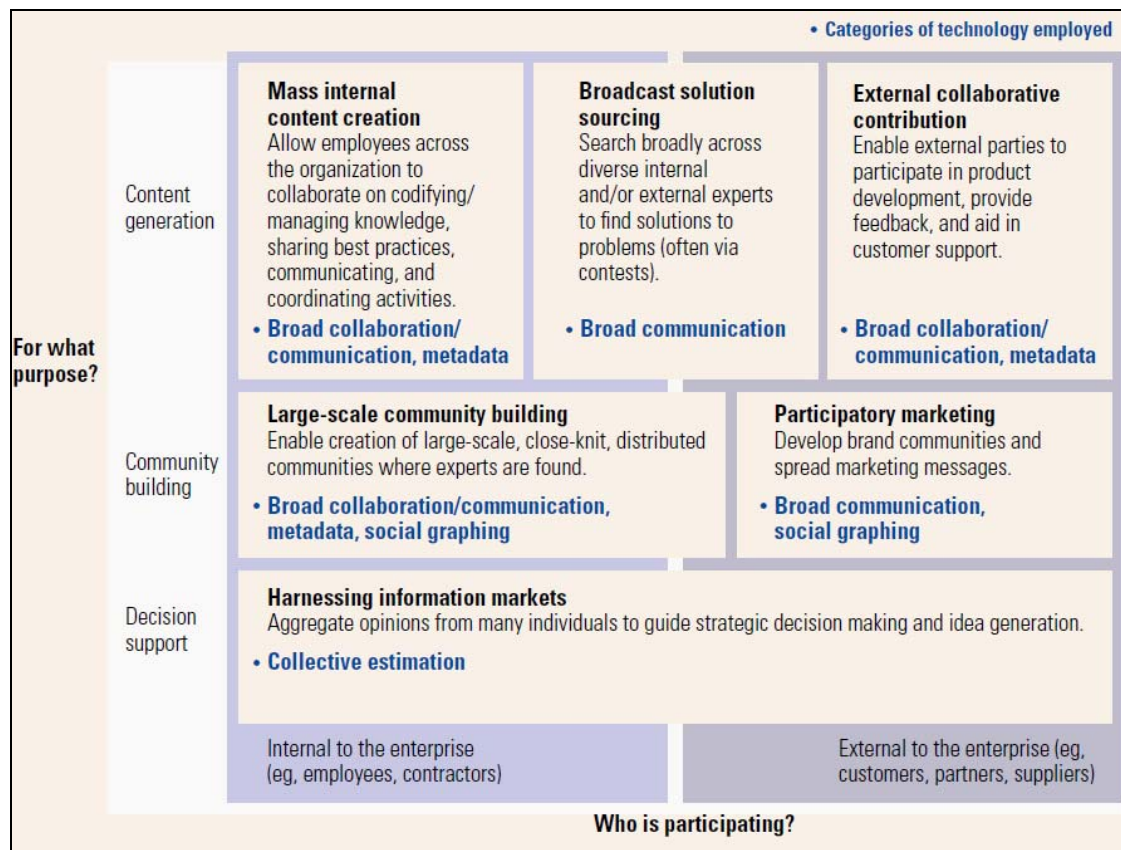
Figure 6.5 - *Management capabilities unlocked by participation (Choi, Miller & Roberts 2009, p. 4).*

6.3.2 Technology aspects to support short-term solutions

The short-term solutions of the framework are mainly focussed on the collaboration aspect to make it possible for team members to work together and share their knowledge. From this point of view technology can support short-term solution by enabling the bandwidth of collaboration and communication tools.

The need to gain access to knowledge based on experience that can be transferred from one person to another using technology, or simply by having a conversation or

participating in a community of practice. This knowledge is best applied when people need to find better ways to accomplish a goal in medium-complexity situations. The technologies that are used within IBM are mentioned in the survey out of chapter 4 and will be explained in the chapter about already used IBM tools.

In the following the bandwidth of tools can be extended by following: telephony infrastructure (PBX based telephony and IP telephony), mobiles phones, pagers, other kind of Instant Messaging platforms, and videoconferencing. It can be said that the tools, which support bringing the people together to enable them to communicate synchronously and asynchronously, are mainly described in this context.

6.3.3   Technology aspects to support midterm solutions

The need to find factual information that already exists in documents and graphical, audio or visual formats. It includes an extant body of facts, figures, operating procedures and the like. This knowledge is best applied when people need to learn basic skills to deal with low-complexity situations, or to find an answer to a simple question or a known situation.

The creation of new knowledge through collaborative methods such as brainstorming and hypothetical thinking is required when people need to explore options for dealing with situations of significant complexity that have not been encountered before.
The technological aspect should thereby focus:

- On good content management to ensure the information products are available, searchable and shareable;
- On User-friendly workplace technologies – and here we can include Web 2.0 so that people are enabled to easily connect, collaborate and share knowledge;
- Best practices should be easily to shift the based on the behaviours of experts and other team members.

6.3.4   Technology aspects to support long-term solutions

As the definition of the framework from a process and people orientation has been designed in the previous part of the chapter and is basically bringing the short-term and midterm solution in a long-term context; the technology supporting the long-term

solutions should focus as well on ensuring that communication and collaboration should be enabled to support the organisation and the team. In this context we can mainly focus on realising that content management is in place and is supporting the (changing) needs of the team, by bringing in new perspectives in relation to new members and supporting the alignment with tools that are used within IBM or new tools that help to follow the main idea of sharing knowledge.

6.3.5   IBM internal tools for the framework

The list of tools that are used within IBM for knowledge sharing and have a knowledge management character is long and they are integrated in IBM's worldwide network computing infrastructure. The basic solutions are based on Lotus Notes, Domino, the IBM intranet, electronic mail, and linked into the telephony systems.

- **Lotus Notes**

Lotus Notes is a client-server collaborative application owned and developed by the IBM Software Group. IBM (2009 g) defines the software as an "integrated desktop client option for accessing business e-mail, calendars and applications on an IBM Lotus Domino server." The Notes client is mainly used as an email client, but also acts as an instant messaging client (for Lotus Sametime), browser, notebook, and calendar/resource reservation client, as well as a platform for interacting with collaborative applications. In the early days of the product, the most common applications were threaded discussions and simple contact management databases. Today Notes also provides blogs, wikis, RSS aggregators, CRM and Help Desk systems, and organizations can build a variety of custom applications for Notes using Domino Designer.

- **Lotus Sametime**

Lotus Sametime provides choices and capabilities that organisations of all sizes can use to work together in real-time. Lotus Sametime is middleware, it supports enterprise software and business process integration (or Communications Enabled Business Processes), either through a Lotus Sametime plug-in or by surfacing Lotus Sametime capabilities as a service into the target application. Sametime integrates with a wide

variety of software, including Lotus collaboration products, Microsoft office productivity software, and portal and Web applications (IBM Corporation 2009 f).

The following overview will provide an insight on the tools that the author suggests for further investigation on the usage for the framework especially from a midterm and long-term perspective:

- **TeamRoom Plus**

TeamRoom Plus is a full function Notes database for IBM teams worldwide. TeamRoom Plus is a powerful collaboration tool that is more than a data repository; users have the ability to have threaded discussions, manage projects, post and track action items, and keep a team calendar. TeamRoom Plus is an asynchronous Notes application with following functionalities:

- Create documents and automatically notify team members that a document has been posted instead of sending a separate e-mail;
- File inactive documents enabling current work documents to remain in the users active views;
- Create meeting invitations, agendas, minutes, and tasks;
- Subscribe to Meeting and Call Report documents and receive notifications when a document is updated;
- Hold asynchronous discussions to discuss pertinent topics or to resolve issues regardless of where team members are located;
- Do effective meeting planning, tracking, and meeting management, including assigning action items;
- Offer best team practice guidance through regular Progress Reports.

During the work on the project the existing TeamRoom of the group was re-vitalised by removing all old data that were several years old. The accesses and the rights management were investigated and the whole team is now able to work with the TeamRoom. The work that was prepared during the idea of building up the knowledge repository with Lotus Quickr, the idea came up to use the existing TeamRoom as the usability is common for everyone in the team, as everyone is using Lotus Notes. The following figure will show the new structured teamroom as a basis for information and knowledge sharing.

The idea of using the TeamRoom with a dedicated TeamRoom manager was announced by the manager after the author pushed the topic several and the TeamRoom was cleaned up. One of the team members is now dedicated to maintain the content and contribution of everyone in the team.

Figure 6.6 – *TeamRoom Plus*

As the TeamRoom Plus will stop being deployed in 2009, because the CIO strategy is to deploy only applications that are web enabled. This means that users can continue to use their existing TR Plus databases, but users will no longer be able to get a new one. The only choices available to them will be TeamRoom7 and Quickr. The decision of the author to work with the Lotus Quickr as a new knowledge repository was therefore supported.

- **Lotus Quickr**

In addition to the information given with the introduction of Quickr in this chapter, following information can be added (IBM Corporation 2009 h): Quickr integrates into the desktop via downloadable connectors. Currently the connectors integrate with

Lotus Notes, Lotus Symphony, Lotus Sametime, Microsoft Office, Microsoft Exchange, and Windows Explorer. Connectors are only available for the Windows platform at this time.

IBM describes Lotus Notes Team Room is another team repository that is similar to Lotus Quickr. The current version of Lotus Quickr for Domino is 8.1. As Quickr is a web based tool the workstation resource usage is minor.

- **Lotus Connections**

Lotus Connections is a software suite made by IBM's software group. The marketing tagline for Lotus Connections is "Social Software for Business". It was announced at Lotusphere 2007, and the first release of the product came out in June 2007.

Lotus Connections consists of 5 main services:

- Profiles in Lotus Connections - a corporate directory tool that was modelled on IBM's BluePages;
- Dogear in Lotus Connections - a social bookmarking service;
- Blogs in Lotus Connections - a blog aggregation service based on the open-source JRoller project;
- Communities in Lotus Connections - a service for creating and joining communities of interest;
- Activities in Lotus Connections - a personal work management service.

- **IBM Pass It Along**

IBM Pass It Along is described within IBM (IBM Corporation 2009) as peer-to-peer knowledge exchange network that builds communities of experts and learners around "nuggets" of knowledge. In the "FAQ" section of Pass It Along the following explanation can be found in addition to it (IBM Corporation 2009a): "*Pass It Along is an intuitive web service focusing on collaborative learning. Unlike other collaboration tools and portals on the market, Pass It Along has a specific focus on training and learning 2.0. It supports discussions and the sharing of content among a community of learners, contributors and experts on a variety of topics and learning paths created by the users themselves. Organisations have seen value in Pass It Along as it supports their effort to build informal learning and peer to peer networks to embed learning into the day to day activities of their people.*"

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The settings in which Pass It Along can facilitate informal learning are the following that related to the initial survey to assess the KM capabilities of the team:

Point of view	Explanation
enterprise	orientation of new hires; retention of knowledge from a maturing workforce; training of sales force; project "on-boarding" and role transitions; training of global resources; aid to mentorship programs; extension of longevity of conferences and peer-led sessions, cross-organisation training collaboration (such as between clients, vendors, and business partners)
non-profit	volunteer-to-volunteer transfer of skills; community outreach for education- and training-based initiatives; transfer of knowledge to developing countries in order to bridge the "digital divide"
academic	knowledge exchange among network of researchers; alternative mode of delivery for teaching assistants and instructors; training in student-run organisations
public	*: public access to informal training offered by corporations; grass-roots training on specific tasks (such as perfecting a golf swing), matching of teachers and students (such as for basic Spanish grammar).

Table 6.2 – *Pass It Along - informal learning in several settings*

The focus of work within this project is thereby related to the enterprise point of view of Pass It Along. The communicated benefit of the tool is that it uses many features of existing collaborative tools such as wikis, knowledge repositories, content management systems, and social bookmarking with a structure related towards training and knowledge exchange.
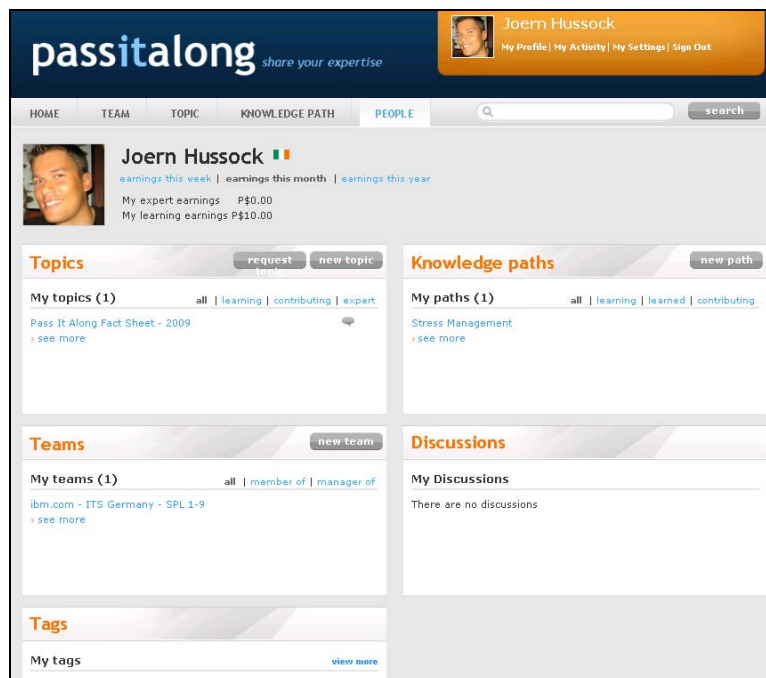
Figure 6.7 – *Pass It Along*

The following table provides an overview about tools that are available within IBM and support the general idea of the frameworks solution.

Tools	Benefits of the tools	View on knowledge sharing	View on the knowledge handled
Technology and tools supporting the knowledge sharing framework			
Short-term solutions			
Lotus Notes	Groupware for all kind of communication and collaboration aspects for accessing business e-mail, calendars and applications on IBM Lotus Domino server	Within IBM: basis for further integration into other KM technology	Explicit knowledge sharing
Lotus Sametime	provides real-time, unified communications and collaboration for enterprises including presence information, enterprise instant messaging, web conferencing, community collaboration, and telephony capabilities and integration	Use for several platforms for synchronous communication, several integration options into business processes	Incorporates tacit knowledge sharing – communication platform
General	Communication and collaboration supporting tools	Easy to apply and adapt, integration into technologies focussed on midterm and long-term perspective	Providing a platform for sharing especially tacit knowledge
Midterm solutions			
BlogCentral	IBM's internal Weblog platform. It allows every employee to open up his/her own Blog and start posting articles.	Part of the overall IBM knowledge base, available for search and	Explicit knowledge sharing
Lotus Quickr	Already established within the team and support for the future in terms of the CIOs strategy.	Part of the overall IBM knowledge base	Explicit knowledge sharing
TeamRoom Plus	Easy to use Lotus Notes database, user friendly as the group us using the Lotus Notes interface as the most common tool.	Knowledge sharing for a dedicated group of people, same interface as Lotus Notes – acceptance	Explicit knowledge sharing, incorporates tacit knowledge sharing
Bluepedia	Is the global intranet encyclopaedia of all things IBM, co-authored by IBMers for IBMers. This wiki already contains 4576 entries, written by 1144 authors.	Part of the overall IBM knowledge base	Explicit knowledge sharing
General	Tools for building up a platform for knowledge sharing on a specific user group	Can be matched to the requirements of the team and the experiences from a technological point of view	Providing a platform for knowledge creation, based on explicit knowledge
Long-term solutions			
Pass It Along	Group management, personal knowledge paths, and incentive system. Most advanced knowledge management tool discovered so far.	Modules available that support knowledge elicitation and knowledge creation, designed for a adaptable use	Strong focus on tacit knowledge sharing (networks, knowledge paths), based on explicit knowledge elicitation
General	Integration of all aspects of knowledge management with a strong focus on integration other systems	Integration into business processes to let knowledge management be part of the a "routine"	Creating the basis for knowledge creation as part of knowledge sharing

Table 6.3 – *Technology and tools supporting the knowledge sharing framework*

The presented technology solutions showed that there are already several tools existent within IBM that can support the defined knowledge sharing framework. The challenge hereby is to define the tools that can support the framework from a strategically point of view and based on the requirements of the users.

In most of the cased the technology presented are used for sharing explicit knowledge, but especially the bits of technology that support people to interact easily and focus on building a platform for knowledge sharing there is the basis for sharing tacit knowledge.

The goal is to select the appropriate technology that supports knowledge elicitation, knowledge creation, knowledge sharing and therefore knowledge management.

6.4 Further aspects of the framework

The analysis of the organisation and the team were the basis for the whole development of this project. During the analysis of the team some other points were discovered. This chapter will elaborate on some of the factors. Some of the aspects regarding the willingness of team members to share information and be aware of KM in general have to be considered carefully when starting a KM project in a sales oriented organisation.

In a discussion with one of the managers responsible for the sales execution (2009, pers. comm., 10th of April) the following characteristics of the sales organisation in general came up: The uniqueness of the sales environment and the individual behaviours have to be considered and taken into thoughts about how to overcome unique knowledge barriers and when thinking about setting up models that support knowledge sharing in an organisation. One important point is to consider where the motivation for someone in the team is coming from when working in a sales environment. The question comes up at the same time to think about the definition of a sales person or a sales job role within IBM. The sales organisation is mostly driven by short-term thinking which can be seen as standing in conflict with the approach of KM. The other character is the issue of what a sales person defines and what kind of skills are necessary to fulfil the job. With this issue of not being able to tell what sales

person is, comes the point on what kind of skill requirements and characteristic should someone be integrated into the organisation? This chain of questions leads to another question – what else needs to be changed when talking about the introduction of a framework for knowledge sharing into a sales organisation? The initial idea would be – taking out findings out of an analysis and extending it with ideas of the ideal profile for someone to be hired. The management and people within the teams need to be motivated to support KM – especially where initial results and the benefits are not that obvious at the beginning. The problem in this specific organisation is following: The environment is dynamic as the expectation for someone staying within the team is in average two years. Every manager of sales team is responsible to achieve their targets. In combination with this typically short-term thinking on a quarter-by-quarter base it is very difficult to find something in between.

The motivation for someone to change something is hard to find in this particular environment as the problem is that humans tends to ignore the need for preparation or change until a problem comes up and the solution cannot longer be avoided. It means, when an organisation finds itself in a chaotic situation that it has not experienced before and little knowledge about how to cope with the circumstances exists, then the value of people with context and prior experience who can connect with others and generate ideas becomes key to finding a solution (Roswell 2009, p. 3). It must be the target to change the thinking in general regarding the motivation and regarding the selection of people that have the motivation to change something. Future aspects of identifying role models in the organisation and to use them to formulate skill requirements and enable the organisation to rebuild the new hiring and promotion process based on selective criteria to get people into the organisation that are beneficial for the overall approach of realising the target to sell, might be another approach to be considered when talking about work that is done around people in the organisation. The question in this context is what can be done, when the organisation in general is not really supporting the establishing of a basis that supports knowledge sharing.

6.5 Conclusion

This chapter was used to demonstrate the implementation of a knowledge sharing framework during the project as the result of the analysis of the sales organisation done

in the previous chapter. The requirements of the framework have been highlighted and it is important to understand that the framework for knowledge sharing consists of more than just the short-term, midterm and long-term aspects, which have been introduced in this chapter.

All inputs for the definition of the framework were formulated out of the feedback provided by the team. To have a common understanding about how this framework could provide future benefits all the information gather directly from the team need to be updated frequently or the establishment of another method for collecting the feedback on these information is necessary.

This chapter showed ideas used by the author to define a possible solution matching to the sales organisation – with a focus on all three aspects: people, process and technology. The author used the theoretical foundations combined with the ideas of KM in organisations to develop suggestions and ideas to support the team with a structured approach for sharing knowledge.

Lastly, when an organisation finds itself in a chaotic situation that it has not experienced before and little knowledge about how to cope with the circumstances exists, then the value of people with context and prior experience who can connect with others and generate ideas becomes the key to finding a solution. For example, a management team would want involvement and input from a variety of sources as it considers whether to make its first acquisition of another company.
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7. EVALUATION OF THE FRAMEWORK

7.1 Introduction

This chapter will evaluate the experimentation done in the project presented in the previous chapters. The developed framework consists of approaches that are focussed on short-term, midterm and long-term solutions for providing the team with a platform for knowledge sharing. The chapter will provide an overview about the experimentation itself and the evaluation of the experimentation.

7.2 Experimentation

The project consisted of several parts of experimentation – the analysis of the sales organisation, the development of parts of the solution that are used to define the framework for knowledge sharing for the team and the steps that were involved to scientifically gather the needed information out of the team. The author used especially parts of the responses of the survey to discover the acceptance of the introduced solutions, but he used as well interviews to evaluate the proposed solution and to share experiences won out of the survey. In addition the survey was designed taken into account already existing best practices found in the literature.

The process of experimentation was initiated by the author by setting up parts of the framework for knowledge sharing. The definition of short-term solutions in form of pilots was used to gather results that show possible outcomes in terms of the participation and the acceptance of those solutions.

The idea of the experimentation was to find out what is needed in the team as part of the sales organisation, to clarify on that need and to fulfil the needs in even small steps. The idea of implementing a part of the midterm solutions into the team with involving a team member that showed a lower level of experience gives guidance about the value that a new perspective brings into the team.

The experimentation had in mind to initially find out the actual capability of the team to share knowledge in terms of the team member's motivation to share knowledge, the awareness of existing gaps and the awareness of areas of improvement in the field of KM.

Keeping in mind that KM is an on-going process and that long-term results cannot be easily gathered the author decided to take the evaluation of these parts into future work. The integration of short-term oriented ideas as important integration point into the overall framework and therefore into the long-term solutions with continuous reflection and optimisation stands for the parts of the long-term solutions which are already evaluated and can be used for future work.

7.3 Evaluation

This part of the chapter will elaborate on the evaluation of the experimentation of the project. Evaluation of KM projects can be done based on the following metrics: Internal process efficiencies and improvements, the frequency of solution reuse, the number of employees collaborating, and content value ratings indicate the degree to which support, development, and sales processes are being improved through the sharing of knowledge and information (Hekl n.d., pp. 6-7). To find a common approach the author defined the points of the experimentation that can be taken the previous metrics for an evaluation. There are actually three parts of the project that need to be evaluated on.

7.3.1 General evaluation

The first part is the analysis of the sales organisation that was mainly done in the presented survey and the evaluation of the results. The first point was one of the main part of the experimentation of the project is the user survey that was used to get a close picture on the analysed telesales team. With a participation rate of 80% of the target group of overall 15 team members the participation was high enough to represent statements of the team that can be used for the definition of findings for the overall team. The definition of solutions was mainly done based on the feedback in the survey. These solutions found expressions in the second part of the experimentation.

The second part in this context is the acceptance of the proposed idea to initiate meetings with the short-term solution character of integrating separated team meetings that were introduced to the team with the communicated target to share ideas, concerns and issues and to help colleagues that are stuck in on-going projects. The evolution coming from the point of the experimentation done was chosen to gather the feedback from the team about the implemented pilots in this case.

The survey used was employed to gather feedback of the implemented pilot for sharing best practices, ideas, solving issues and to start with the process of knowledge sharing within the team. The survey provided the opportunity to use the feedback coming from the participants as feedback in this case. Especially the questions designed with free comments were able to provide an insight on the integration of meetings that are structured differently compared to the usual team meetings in place. Feedback coming out of question 15: The weekly meeting, which has been addressed not to discuss targets or other general information and was initiated to specially discuss issues of team members, had in certain bids provided the chance to experience support for sharing knowledge and best practices and other team members tried to solve the issues, or answer the questions that other team members had.

In addition to that question 21 gave feedback on the established meetings:
- The motivation to share should be supported and especially the interaction in form of meetings to share best practices is important;
- Weekly team meetings are a good platform to address dedicated questions or to address topics that leverage the knowledge of other team members to support the need for information at a certain time;
- Regular team meetings with the intention of knowledge sharing should be integrated in the business routine, to share best practices in the whole team and in small teams. This approach is providing a platform for knowledge sharing.

The feedback provided in the free comment of question 17 showed that stopping these pilot and the meetings was recognised by the team as an example of not providing the appropriate level of support by the management: "stopped having this regular meetings".

The measurement of results of KM projects is hard and there is not a simple solution, but there are ways to measure whether the acceptance of this kind of solution is given. The comments provided in the survey were used to gather the general understanding that the acceptance of these kinds of meetings is existent and even that stopping the pilot was already recognised.

When thinking about the appropriate way of evaluating the outcomes of a project that is focussed on providing improvements towards the knowledge sharing capabilities of a team, especially in a sales organisation, it comes to mind that to measure the improvement in terms of more sales and shorter sales cycles. This project can not directly relate to these numbers. The author is more focussed on showing that the acceptance by the team can be achieved by using a structured approach of bringing KM into the team. The acceptance shown in the team are mainly shown in the answers that were collected in the survey. It is hard to distinct what kind of changes the project in general has developed by just introducing the topic of KM. Interviews with the team members showed that the acceptance for KM and the possible benefits are recognised and the acceptance of the introduced short-term solution is existent (2009, pers. comm. with sales person 9, 4th of June).

Furthermore the experimentation was influenced by restriction that can also be used as evaluation point? The creation of anonymous profiles for participants and the collection of their feedback was a requirement which was fulfilled accordingly. The content boundaries of the survey were defined in five different focus areas, therefore was the experimentation scope limited to pre-defined parts in the topic of KM.

The feedback in the survey highlighted that the recommended tool is in use already and is seen as a good starting point to document and share knowledge (feedback out of question 21), but this point leads to another possible criteria for evaluation. The consideration of the appropriate decision about the introduction of a tool for knowledge sharing and documentation is questionable. During the work of defining the appropriate solution for the knowledge sharing framework the author discovered another IBM solution that was just recently introduced into IBM. The author wants to highlight this tool as it seems to be useful in the context of consideration whether

Lotus Quickr is the right basis as the main part of the team is not using any kind of tool for KM purposes at the moment.

From the technology point of view and to measure the productivity improvements coming from the technology, there is a tendency to take productivity improvements for granted (Huang, 1998). A way of measuring the productivity can only be achieved to measure before and after implementing technological innovation, but it is difficult as the definition of productivity and the way to decide has improved are difficult as well.

The question coming up with the evaluation of the selection of the appropriate tool is now what should be implemented as the platform for knowledge sharing. The decision of the author and the evaluation point is taking the feedback from the team was to implement a tool that already is established in the team and might find more acceptance when the usage is driven by several team members. The author can evaluate this point as well on the best practice provided by Mann (2007, p. 3) that says that KM initiatives and thereby the introduction of tools that are tightly connected to everyday work processes have a much greater chance of success than those that remain separate or exist on their own. "*Separate systems tend to become seen as optional, so that users must explicitly remember to consult them. If it is part of employees' daily work to look for or capture their insights in a KM system, they will manage knowledge without knowing that they are doing it.*"

For the evaluation of the overall framework for knowledge sharing it has to be kept in mind that the experimentation in general found limitations in terms of gathering the outcomes of changes in a long-term perspective. Therefore the author focussed on the short-term and midterm results coming from the implementation of such a framework which the clear intention to enable these short-term and midterm solutions as part of the long-term solution of such a knowledge sharing framework.

The main part of the actual evaluation of the framework was initiated by presenting the outcomes of both developed outcomes of the projects – the survey to assess the knowledge sharing capabilities of the team and the developed framework with the different solutions.

7.3.2 *Interview based evaluation*

The author set up a team meeting on the 10th of June 2009 to give an overview about the gathered information of the survey and to reflect and discuss the developed solutions of the framework. In addition to the participating team members the manager and two knowledge management experts[2] out of other teams were invited to join the meeting. After the meeting the author used an evaluation form as interview guide for all present team members to start the interviews.

The participating colleagues were asked to rate the each part of the framework and the overall approach for integrating knowledge sharing within the team. The participants were given the guide to rate each point within a range of "1" to "5" using the following indication:

- – "1" – No value;
- – "2" – Some value;
- – "3" – Average;
- – "4" – Good;
- – "5" – Very good.

The following table shows the overall rating of the parts of the framework for knowledge sharing.

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[2] The persons invited to the meeting were nominated by the approver of the overall project to rate the outcomes. Both knowledge management experts have a background of knowledge management within ibm.com.

Interview based rating for the knowledge sharing framework					
Person	Participation	Personal perception of defined short-term solutions	Personal perception of defined midterm solutions and introduced knowledge base (Lotus Quickr)	Personal perception of defined long-term solutions and strategy	General perception of ideas for knowledge sharing
Manager	Y	5	5	4	5
Sales Person 1	Y	4	3	4	4
Sales Person 2	Y	5	3	5	4
Sales Person 3	Y	4	2	4	4
Sales Person 4	Y	4	3	5	4
Sales Person 5	Y	5	4	5	5
Sales Person 6	Y	5	4	4	4
Sales Person 7	N	-	-	-	-
Sales Person 8	Y	5	3	4	4
Sales Person 9	Y	5	2	5	4
Sales Person 10	N	-	-	-	-
Sales Person 11	Y	4	2	5	3
Sales Person 12	Y	5	2	4	4
Sales Person 13	Y	5	5	4	5
KM Expert 1	Y	5	4	4	4
KM Expert 2	Y	5	5	4	5
		4,71	**3,36**	**4,36**	**4,21**

Table 7.1 – *Interview based rating of the knowledge sharing framework*

The overall rating indicated following:

− The overall participation of the rating is 87.5% (14 out of 16 persons standing in relation to the overall outcome of the project);

− The personal perception of the defined short-term solutions were rated in average with 4.71, which indicates that the defined short-term solutions found a general acceptance within the peer group;

− The midterm solution on the other hand were rated in average with 3.36, which shows that further work has to focus on the improvements in this area, which is mainly focussed on the tool knowledge base;

− The definition of a long-term strategy and the integration of all defined solutions found an average rating with 4.36, which shows that the perception within the peer group is good;

− The overall perception of the whole conglomerate of solutions, ideas and approaches defined was rated with 4.21 and leads to the conclusion that the general ideas are accepted within the team.

The feedback coming from experts in the area of knowledge management with a specific perspective on knowledge sharing was chosen by the author to get an insight as part of the evaluation of the research project.

The author asked two experts to participate in an interview that was structured in the following way:

The author asked the interviewees questions in relation to the overall project, the sales organisation, and the framework. The author used mind mapping to take notes and to present the captured feedback in this format to present it back to the interviewees. The author understands this process as part of a knowledge elicitation process where the results of this process are given back to the interviewees and they were asked to agree on the captured feedback and were given the chance to change it.

- **Interview A**

The structure of the first interview can be represented in the following picture, where the main parts of the interview are shown.
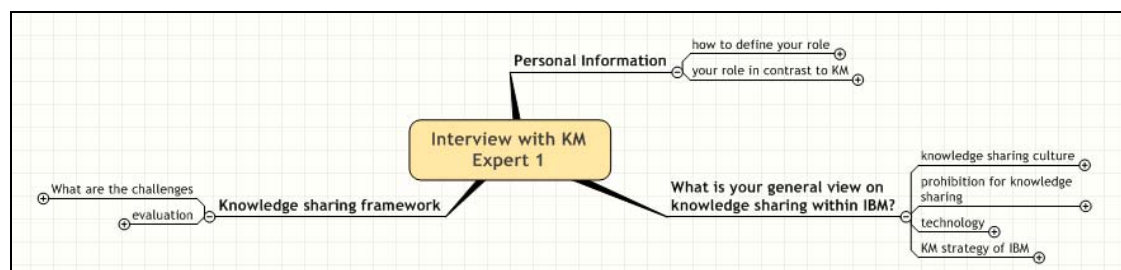
Figure 7.1 – Structure of interview A

The interviewee was asked to define the own role within the organisation and to highlight the role in contrast to knowledge management. This expert is the team leader of the Integrated Marketing Team (IMT) Alps (Austria and Switzerland) – a team within the sales organisation of ibm.com. The expert is responsible for all organisational aspects within the team.

This expert has an MSc in Computing (Knowledge Management) and worked on introducing CoP within several sales teams in this organisation.

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During the interview the following topics were mentioned regarding the general view on knowledge sharing within IBM:

The **KM strategy of IBM** – the actual existent knowledge management strategy of IBM is not very usable for this organisation, because the detailed plan to implement it on every level of the organisation doesn't seem to be in place.

Next to the things that are being used by everyone within IBM – like tagging or BluePages (a representation of the concept of Yellow Pages) – are a lot of things available within IBM, but there are slowly being adapted by the people in the organisation. Several departments are using Wikis, which is good in general, but the sense of each team using their own Wiki and just pointing other people to these Wikis has to be questioned.

A **knowledge sharing culture** must be enabled within the organisation and with the culture an incentive system has to be in place to support the participation towards knowledge sharing (for example "knowledge sharer" of the month or giving out virtual dollars).

The **important** things are that initial efforts must be overcome even when the outcomes may take a while, but they are worth the effort. The system and the culture must support the topic of knowledge sharing in general. There is a responsibility of the management and there are certain responsibilities of key knowledge workers in relation to the transfer of experience and especially (in a sales organisation) the transfer of the personal network.

At the moment the **prohibitions** are seen within this organisation as no support, a short-term focus that conflicts with long-term strategic planning for knowledge management, time related issues and that the resources needed are not available.
From a **technological** point of view there are a lot of collaboration tools available that can support knowledge sharing and knowledge storing, but it has to be kept in mind that they are only to be used as supporter, not as key part to let the knowledge sharing work.

The next part of the interview was brought in context with the defined knowledge sharing framework, where the interviewee saw challenges in:

- Management support;
- Hard to measure effectiveness;
- Motivation of the participants;
- Long-term perspective;
- Ensuring the responsibility of the management.

The concrete evaluation was structured into the parts of the framework and the interviewee gave a general evaluation of the framework.

The short-term solutions were rated as very good approach especially with the understanding as a starting point by using pragmatic ideas to bring the people within the team together. It is important to get everyone involved and have the same understanding about the idea of knowledge sharing. The interviewee highlighted that motivation is supported, when people experience that they can benefit from this simple solution and when the experienced people actually see what they are worth within the team in terms of knowledge.

The midterm solutions were rated as good. The consideration of the tool (Lotus Quickr) should be investigated further on, when the first content is brought to the system. The interviewee stated the concern of the acceptance of this tool within the team. In general the expert rated the incorporation of the short-term solutions into the framework as very good.

The long-term solutions were rated by the expert as a good approach, but the comment was given that the development of the short-term and midterm solutions must be investigated. The expert highlighted that it is very important in this context that somebody is taking over responsibility for the continuous optimisation. The definition of the strategy in this long-term perspective is very useful to be reminding how the framework should support the team.

For the overall evaluation the expert rated the framework as a good general approach, because it gives the opportunity of an initial basis in relation to the idea of knowledge management. The goal of the framework must be defined very precisely. The expert

added the difficulty to answer the question that can coordinate the overall topic of knowledge sharing as somebody with a lot of enthusiasm should be chosen.

In the end the mind map was finished and presented to the expert as the end of the knowledge elicitation process. The expert was asked to provide his feedback to the points on the map and the final results acknowledged by the expert can be seen in the following picture.
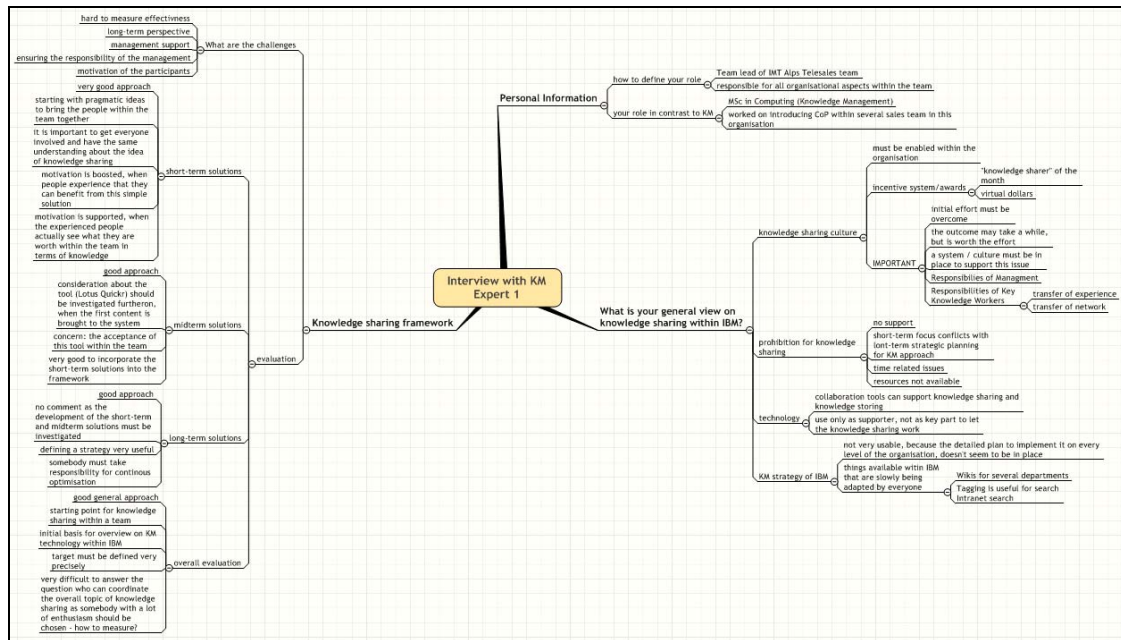
Figure 7.2 – Mind Map – Interview A

- **Interview B**

The following picture will present the structure of the interview done with the second knowledge management expert. The main structure is oriented similarly to the interview with the knowledge management expert 1.
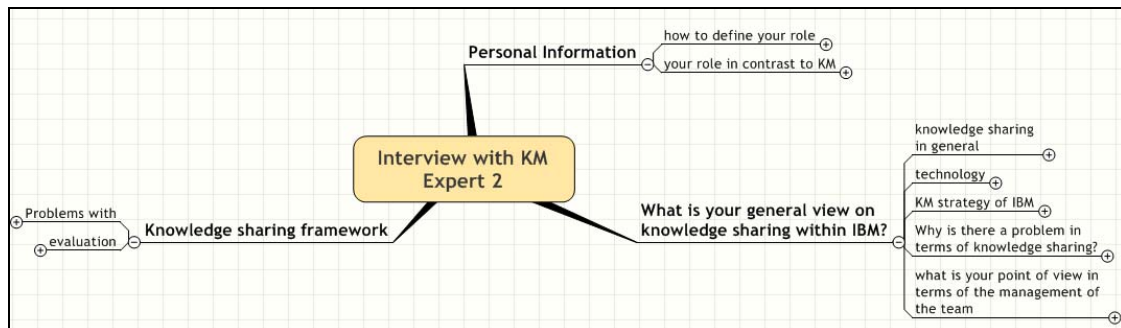
Figure 7.3 – Structure of interview B

The interviewee answered to the question of how to define the role in the organisation as Sales Specialist of one of the teams within ibm.com working for the German market. The KM Expert is the focal point for sharing for the transfer of best practice and knowledge within the team and created a platform for knowledge sharing within one of the mentioned tools – Lotus Quickr - where information where structured for the use as a new hire information package.

The following points were discussed during the interview in relation the expert's general view on knowledge sharing within IBM:

The expert mentioned that knowledge sharing within IBM is very important especially from the point of view of a new hire and that a database for finding all job related information would be very helpful as a starting point for knowledge sharing.

The technology perspective was underlined with the statement of the expert that a lot of tools are available within IBM, *"but there seems to be a fight between their existences"*. A problem is seen in the use of the tools in a lot of parts of IBM, but where a combination of the content is still missing. The expert explained that Lotus Quickr brings a lot of benefits, but at the same time functionality and additional features are still missing.

The question about the interviewee's point of view about the knowledge management strategy of IBM showed that the actual KM strategy is not known, but some elements of recognised within IBM. Web 2.0 is seen as a key play.

The expert highlighted that the actual problem of knowledge sharing is the missing time and the missing way to share knowledge easily even when the people within the teams have a lot of knowledge to share. The management has to take responsibility and the expert thinks that there is actually nothing coming from the managers.

The interviewee was asked to define the point of view on the framework for knowledge sharing and to rate it. General problems or issues are seen in the support of the management and the motivation of the people.

The short-term solutions were rated as very good approach with the addition that this approach is a simple solution, because it is easy to adapt by others. The midterm solutions where rated as very good approach as well, where the focus of using Lotus Quickr as the tool to incorporate knowledge was highlighted in this context. The expert added that a focal point is necessary to maintain and to the collect the information within the defined knowledge repository.

The long-term solutions where rated as good approach with the addition that the measurement of the effectiveness of the short-term and midterm solution has to be taken into a long-term perspective. The expert stated that the defined framework for knowledge sharing is a good starting point for knowledge sharing within the team as it provides a guideline and help. The technological part of such a solution is important and will find support, especially within IBM.

The overall process of knowledge elicitation based on the interview with the knowledge management expert 2 can be seen in the following picture.
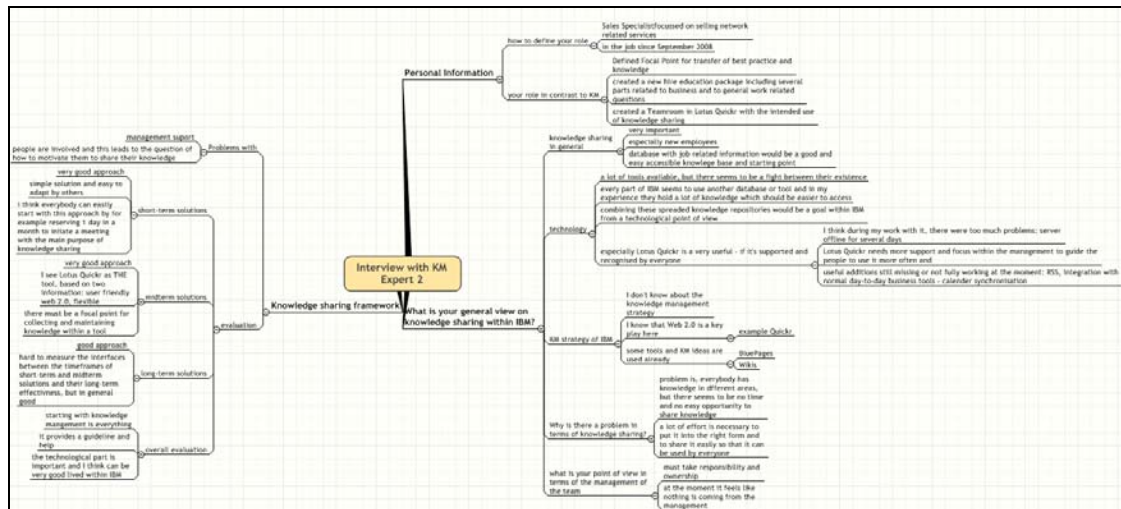
Figure 7.4 - Mind Map – Interview B

7.4 Conclusions

This chapter was used to demonstrate the evaluation of the project and the outcomes defined during the project phase. An important part of the evaluation part is the overall process of experimentation. It is important to understand that a project is always of a unique character and has not been done before. Therefore the decision of structuring

similar projects differently can only be supported by the author and formulated as one of the outcomes.

This chapter reflected on the overall experimentation done and evaluated it. The parts of the project that have been individually designed were considered from a scientific point of view. The author showed that the evaluation brought up the points that the experimentation was done in a scientific approach by questioning the methods of how this project was implemented.

The evaluation showed that by introducing a KM project to a small group of people the success of using several small steps can lead to success as well and can be used to discover the appropriate method of providing the appropriate strategy for an implementation. The survey introduced to the team was used to gain an insight view on the project area and was designed under the requirements the organisation. The outcomes were used to define parts of the framework and gave an evaluation point on the introduced parts of the framework.

The overall outcome of the defined framework for knowledge sharing can be evaluated as good as the gathered rating coming from the team shows.

This chapter underlined the importance of the factor "human" in the area of KM. All aspects of the project are designed based on previous findings in the field of KM and were collected from the interaction with the targeted group of people to decide about the experimentation, to design new concepts and to evaluate these ideas.

8. CONCLUSIONS

8.1 Introduction

This final chapter of this document will provide a conclusion about the work, especially the research and the works contribution to the body of knowledge. The author will reflect in this chapter on the done experimentation, the evaluation and limitations. In addition to the overall work it is important to show areas of future works and research.

8.2 Research Definition & Research Overview

This research project and its results gave an insight view on a team of Telesales Representatives in a sales organisation within a global player and a leader in KM – IBM. New knowledge often begins with the individual making personal knowledge available to others as the central activity of knowledge creating organisations. Through conversations people discover what they know, what others know and in the process of sharing, new knowledge is created. Technology such as e-mails, faxes, and telephones are invaluable aids in the process of information and knowledge sharing, but they are only supporting tools. Sharing depends on the quality of conversations, formal or informal, that people have, and whether, and between whom, these conversations occur are dependent on the organisational culture that is in place (Warne et al., 2005).

The role technology plays in all this is that of an enabler and aid in developing and supporting the right culture for information and knowledge sharing.

An organisational culture that recognises the value of knowledge and its exchange is a crucial element in whether information and knowledge work is successfully carried out or not. Such a culture provides the opportunity for personal contact so that tacit knowledge, which cannot effectively be captured in procedures or represented in documents and databases, can be transferred. Knowledge sharing is seen as a way to contribute against the knowledge loss in an organisation that is based on several

reasons and therefore a critical success factor for the implementation in a sales oriented environment. The previous chapters were used to demonstrate that collaboration and KM are inherently social activities, facilitating knowledge sharing and enabling communication in order to support teams working towards common goals (Gower & Trifkovic 2009, p. 2). The objectives that have been achieved with this work can be described as following:

- Creating a deep understanding on KM in the organisation;
- Providing an insight view on a team of sales employees in an organisation that
- The development of a strategy to assess a team in a sales oriented organisation;
- The introduction of methods and technologies for creating a framework for knowledge sharing based on the requirements of an assessment of the team;
- The evaluation of parts of the framework and the formulation of a strategy that needs to be enabled and supported by the management of the organisation.

8.3 Contributions to the Body of Knowledge

The literature states that the introduction of KM is enabled with a top-bottom approach that means to successfully start KM in an organisation it is important to have the support of the management available (North 2005, p. 65). Previous trials to integrate knowledge management in companies are often failed because of the distance of the actual user of KM (Menken 2009, p. 32). This distance led to the minor acceptance of methodologies and mostly tools (Rozwell 2009, p. 2). The author followed the question of how to design a knowledge sharing framework for taking on the general idea of benefits of KM that is accepted by the users.

The author developed the approach to work with that question starting from following the existing ideas on knowledge sharing and KM to deflect on how to design a framework for knowledge sharing that supports a dedicated team and allows them to use several benefits. The author developed the approach to analyse the group of users, to derive requirements that are necessary and build on existing knowledge sharing ideas within the group and assessed the developed outcomes. Parts of the solutions were proofed to be very good ideas, other parts still need development. In general the continuous optimisation should be taken into future consideration.

This research project was used as an example is a very characteristic situation where a unit of the organisation – a team of Telesales representatives was used to implement a system that enables knowledge sharing. The author discovered that assessing the unique requirements of this team and defining specific requirements to support the sharing of knowledge – it is possible to start from the bottom by analysing the general idea of KM in the overall organisation and discovering how the idea is implemented in a small unit of this organisation is done.

As there are not many existing studies available in the field of KM in sales organisations, this work can be understood as closing a gap in the following way:

The results of this work show that starting KM can be done coming from a small unit within an organisation as a possible basis for investigation of the perception of the general KM strategy of the organisation, and it reflects on individual developed ideas of implementing structured ways with short-term results that are accepted by the people in the organisation and matches the requirements of the small unit.

In addition to that the approach of doing interviews with knowledge management experts was used to present main characteristics and results of the overall investigation and the framework for knowledge sharing. These ideas were pointed out to the expert to let them decide on the general approach in this specific situation.

It shows that the effort of someone to be responsible for the implementation, the motivation and the involvement of several necessary parts of the organisation is enormous. The contribution can as well be seen in the need for future effort to maintain the developed structure of such a framework for knowledge sharing.

It is useful to use existent management systems, because the knowledge in these systems can be used to structure knowledge and information. It is therefore recommended to examine possible synergies and use them as an integration point.

The author came to the conclusion to express the content of this topic as optimised handling of knowledge and information to get to the team members and to get all

parties concerned support. The systematic analysis and the exploration of the existing status of the organisation are enormously important and shouldn't be underestimated.

8.4 Experimentation, Evaluation and Limitation

The experimentation part of the project delivered and underlined previous findings in the overall context of KM. The author showed that implementing KM can be done in small steps. Menken stated to such a ways: "*Instead of striving for an entire system to be put into place at once, the best that a KM initiative are small wins over time. The more wins available, the better acceptance to the next level of KM*" (Menken 2009, p. 167).

The basic model of IBM's knowledge oriented business management is existent, but based on the research of the author it lacks in the structured support up into the smallest level of execution, demonstrated with the example of the assessed organisation. Improvements in this area, which the existence of an appropriate organisational culture enhances, would provide the ability to build adaptive systems people will use to share the information and knowledge they have or need. Such systems would support the way they want to work and collaborate rather than expecting workers to adapt to using whatever systems are built for them, as tends to be the case currently (Hart & Warne 2008, p. 109).

The results show that it is possible – even in a sales environment, where the acceptance of such projects can fall behind – to successfully implement in small steps that are needed to support the business. On the other side it seems to be important that a strong character is necessary to push these topics and dedicated support is available coming from the management. The project was managed with the idea of bringing the team's motivation through clear communication of benefits for knowledge experts.

The overall experimentation was mainly characterised by the deep analysis of the team as a representation of a small unit within IBM. The results and the outcomes of the survey were taken into the consideration for the definition of the overall framework for knowledge sharing. The experimentation was able to reflect on short-term and part of midterm solutions for solving the knowledge sharing problem within the team. The

effectiveness and the success of the midterm and especially long-term solutions must be taken into future consideration for this topic.

The experimentation and the evaluation showed that the simple solutions – represented in short-term solutions within the framework – should not be underestimated as they can be understood, implemented and executed in an easy way. The research found limitation regarding the topic of overcoming the personal boundaries of communicating possible individual weaknesses of team members to the rest of the team. A system of communication rules should be implemented with all the solutions that are focussed on the interactions of people – a system that defines principal rules for addressing issues and concerns.

From other research perspective the idea was brought up during the implementation of technologies to support this knowledge sharing framework that it can be expected from team members to consult new knowledge management systems in their spare time, but based on the ideas of Gartner's analysts do most people either don't have, or don't believe they have, much spare time in their working days to successfully fill the system with possible knowledge. The reason behind this is that Gartner says that most knowledgeable people are generally too busy creating value to have any spare time to dedicate to an optional system (Mann 2007, p. 4). Therefore the selection of technologies should be brought to a level where several aspects and several analyses need to be used for further investigation.

The experimentation and the evaluation showed that rather than starting from the beginning to create value in a new area, looking for areas where knowledge is being used effectively, perhaps in informal systems, and finding ways to multiply that value with minimal spending or effort is very helpful – for reusing existing approaches and therefore for knowledge sharing. Starting from a new point and perspective is much more difficult than increasing the value of applications already in place. Recognising this idea the consideration to create a platform for knowledge sharing based on a relatively new system must be kept in focus and be revalidated especially in the beginning. The thing that people do not need is using another system that provides no real value in terms of a useful addition to their work. During the last stages of the project an intern was analysing the behaviour of the team for several systems and the

idea came up that using a simple platform of a Lotus Notes database team room would be a more accepted system for knowledge sharing as Lotus Notes as a collaboration tool is the tool that most people within the team use a lot. The idea behind this is looking for the small improvements that provide a lot of benefits must be taken into closer consideration. That means from the human interaction point of view that looking for informal communities or informal methodologies that are executing ideas that have been proved to be efficient in the practice. Especially in small teams within the analysed whole team simple ideas for fostering collaboration can be found and have to be assessed.

The experimentation and the evaluation highlighted another important topic that can be seen as limitation of this work. It must be important to show the manager of this team and for future work all managers of the team their role in the context of knowledge sharing and the management support with the team. The mentoring approach of IBM shows that holding managers accountable for the success is essential and therefore a must for the upper management of the organisation.

It must be highlighted to which extend the defined assumption apply to all kinds of different companies as this is depending on the complexity of the task and therefore it will be more important for one company than for another.

8.5 Future Work & Research

The previous chapter reflected already on some points that need to be kept in focus by executing the here developed starting points for the definition of a framework for knowledge sharing. The aspects of further work and research can be aligned with assessing the long-term results of the framework.

The outcomes in this area can be helpful to find out what can be done when introducing a structured way of sharing knowledge within small team and a smaller circle of participants. The investigations should also lead to the investigation of how possible positive results can be transferred to other teams and to the whole organisation in terms of the following questions:

  – What are the organisation's knowledge needs?

- What knowledge assets or resources does it have and where are they?
- What gaps exist in its knowledge?
- How does knowledge flow around the organisation?
- What blockages are there to that flow?
- To what extent do its people, processes and technology currently support or hamper the effective KM?

Future work and research should take the results of this project and use the ideas for other teams and organisations, but another aspect in this context is quite important from the author's awareness of sales organisations:

The perspective on the sales organisation's unique character and the related short-term thinking should be part of future investigations. Especially the point of an important issue with experts in the sales organisation could come up by assessing sales organisations from a psychological point of view. The reluctance to share knowledge and the fear of being not able to use another advantage for each individual sale compared to team members.

The results of selected studies showed that organisational culture, incentive system and the support of the management is more important than IT systems (North 2005, p. 168). Therefore it seems to be very important that organisation and especially the management plan and communicate how the role of experienced team members will change once KM has been implemented. Moreover, the ideal way to implement a system of incentives is coming to the surface as the sales person in general finds already an incentive system in place for every sale done. The motivation and the incentive system are two topics that seem to be very important to support these experienced people in the organisation to share their knowledge with the rest of the organisation.

The implementation of KM into an organisation will never be an easy project, but structured approaches that build on the reuse of existing ideas can lead to success by even implementing a framework of knowledge sharing into a small team.

The real part of the business of KM in an organisation is finding a way of introducing ways of storing knowledge, making knowledge accessible to everybody, using knowledge, manipulating knowledge and re-using it and the technologies that provide the infrastructure that enables the exchange of knowledge in this organisation is essential. Aspects highlighted within the previous chapters could be used to assess the organisation and to find possible gaps in this context, which could lead to general improvements in the area of KM.

Future work should therefore focus on the technology in this sense that the tools that are available and are intended to provide help are matched to the requirements not only in terms of the strategy, but also on the timescale of introducing an overall concept of knowledge sharing to an organisation. In this sense the saying *"Sometimes less is more."* can be seen as relevant, when pulling together all the parts incorporate organisation characteristics. The selection process should be put in focus in this context and as this work shows the assessment of an organisation brings up a lot of important points to the table.

Another important topic for future work and in relation the organisational change that every company has to work with is the change in the behaviour of the workforce and therefore the focus on the knowledge base that is available. Web 2.0 for example will be part of the new generation of workers and will be easier accepted in the organisation. The boundaries will be lower towards specific technology, but the same could happen in the behaviour towards knowledge management. The impact on education on technologies and especially the formal concept of knowledge management should be part of the questions raised.

The question of how to capture tacit knowledge in the best way from all perspectives – people, process and technology – should be investigated on in future projects. The way of how these three aspects in relation to knowledge sharing, knowledge management and knowledge elicitation can be incorporated to talk about managing wisdom is the future step in this chain.

One of the main results of this project is that an organisation named as one of the KM drivers is still dealing with issues in this context to implement knowledge sharing on

one of the most important areas (sales) in the overall organisation. Possible further investigation should always focus on the mentioned aspects of people, process and technology for bringing them together in the concepts of knowledge sharing, knowledge creation, knowledge elicitation and knowledge management in general.

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APPENDIX A

Survey documentation

The survey was named "Team Survey - Start of Project" and consists of 21 questions. This chapter will reflect on the usage of the survey tool used. The name of the tool is BlueSurvey. BlueSurvey is part of the Technology Adoption Program by IBM. The community has laid focus on innovation and is mainly used to introduce new tools.

Overview

1. Email to team

	To	Team
Joern Hussock/Ireland/IBM	cc	Manager
01.05.2009 14:41	Subject	Survey for Dissertation Project

Team,

as mentioned in the team meeting, attached you'll find the link to the survey:
https://dpev077.innovate.ibm.com/bluesurvey/surveys/97e7af3b8bc3bcf4c8e26ddec4264b89/responses

If you don't use Internet Explorer as default browser, please copy the link and start it with Internet Explorer.

Thank you all for the participation!

Mit freundlichen Grüßen/ Kind Regards

Jörn Hussock
Team Leader & Sales Specialist

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IBM Deutschland GmbH:
Vorsitzender des Aufsichtsrats: Erich Clementi
Geschäftsführung: Martin Jetter (Vorsitzender), Reinhard Reschke, Christoph Grandpierre, Matthias Hartmann, Michael Diemer
Sitz der Gesellschaft: Stuttgart
Registergericht: Amtsgericht Stuttgart, HRB 24938 WEEE-Reg.-Nr. DE 99369940

2. BlueSurvey User Interface

BlueSurvey
Beta on TAP!

| My Surveys | All Public Surveys | All Public Results | Create New Survey |

Draft
<< Previous Next >>

	Updated At	Responses	Title	Created By	Start	End
View	2009-05-21 06:15		Copy: Team Survey – Start of Project	joern.hu...	2009-05-04 (Mon)	2009-05-21 (Thu)

Ready
<< Previous Next >>

	Updated At	Responses	Title	Created By	Start	End

Published
<< Previous Next >>

	Updated At	Responses	Title	Created By	Start	End

Expired
<< Previous Next >>

	Updated At	Responses	Title	Created By	Start	End

Closed
<< Previous Next >>

	Updated At	Responses	Title	Created By	Start	End
View	2009-05-21 06:08	12	Team Survey – Start of Project	joern.hu...	2009-05-04 (Mon)	2009-05-21 (Thu)

Blue Survey : 0.7.0-alpha(TAP prototype M4)
TAP Offering Page
Development Wiki

3. *Dissertation Survey*

3.1 Survey Edit Mode

Type RadioButton

How long have you been in the organisation?

Path:

Selection

1 to 3 months,3 to 6 months,6 to 12 months,1 to 2 years,Over 2 years

(*) Input values seperated by commas or new line.

Required ☑
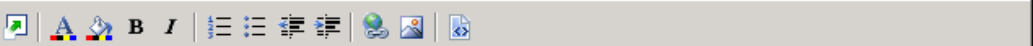
Include 'Other' ☐

With 'Free ☐
Comment'

Save   Cancel

3.2 Survey properties

Questions   **Properties**   Coeditors

Title | Copy: Team Survey - Start of Project

This survey will be used to assess the existing knowledge sharing capabilities of the team of Telesales Specialists (with a focus on ITS Services).

The results will be used to create starting points for managing knowledge sharing by bringing the skills of experienced team members to the surface and with the target to transfer and leverage the knowledge of all team members.

This survey is set to private mode. All responses will be held anonymously.

Thank you all for the participation!

Path: body » p

Optional

Start Date | 2009-05-04 | (YYYY-MM-DD)

End Date | 2009-05-21 | (YYYY-MM-DD)

Record   ☐ Email & Name ☐ Country ☐ Department
Respondent's
Attributes

Survey   ○ Public – Shared with all IBMers
Disclosure   ⦿ Unlisted – You have to notify this survey's URL to your respondents.

Result   ○ Public – Shared with all IBMers.
Disclosure   ⦿ Private – Shared with no one.

Update

3.3 Overview of survey

joern.hussock@ie.ibm.com

Survey Preview

You can test inputs before publishing.

Back To Edit

Survey: Team Survey - Start of Project (21 questions)

You can respond anonymously to this survey.

This survey will be used to assess the existing knowledge sharing capabilities of the team of Telesales Specialists (with a focus on ITS Services).

The results will be used to create starting points for managing knowledge sharing by bringing the skills of experienced team members to the surface and with the target to transfer and leverage the knowledge of all team members.

This survey is set to private mode. All responses will be held anonymously.

Thank you all for the participation!

Survey Disclosure: Private Result Disclosure: Private

Start Date: 2009/05/04 End Date: 2009/05/21

Questions

1) How long have you been in the organisation?

(Required / choose one)

◯ 1 to 3 months

◯ 3 to 6 months

◯ 6 to 12 months

◯ 1 to 2 years

◯ Over 2 years

2) How did you experience the start as a new hire?

(Required / choose at least one)

☐ Slow start

☐ Structured approach of learning

☐ Learning by doing

☐ Fast start

☐ Other [＿＿＿＿＿]

3) Which SPL are you covering?

(Required / choose at least one)

☐ SPL 1

☐ SPL 2

☐ SPL 3

☐ SPL 4

☐ SPL 5

☐ SPL 6

☐ SPL 7

☐ SPL 8

☐ SPL 9

4) How would you rate your experience in the Services Business in compared to the whole team?

(Required / choose one)

◯ Very inexperienced

◯ Inexperienced

◯ Average experience

◯ Experienced

◯ Very Experienced

5) Do you use any of the following tools or methods to share knowledge, experiences or best practices within your small team**?**

(Required / choose at least one)

- ☐ Colleague(s) (Mentor/Buddy/Mentee...)

- ☐ IBM Web 2.0 Tools

- ☐ Lotus Connection

- ☐ Lotus Sametime

- ☐ Lotus Notes

- ☐ Team meetings

- ☐ Other [   ]

6) Do you use any of the following tools or methods to share knowledge, experiences or best practices with the whole team**?**

(Required / choose at least one)

- ☐ Colleague(s) (Mentor/Buddy/Mentee...)

- ☐ IBM Web 2.0 Tools

- ☐ Lotus Connection

- ☐ Lotus Sametime

- ☐ Lotus Notes

- ☐ Team meetings

- ☐ Other [   ]

7) What do you think is the most effective way of sharing experiences or best practices?

(Required / choose one)

◻ Colleague(s) (Mentor/Buddy/Mentee...)

◻ IBM Web 2.0 Tools

◻ Lotus Connection

◻ Lotus Sametime

◻ Lotus Notes

◻ Team meetings

◻ Other [   ]

8) How motivated are you to share your experience, knowledge and best practices?

(Required / choose one)

◻ Very unmotivated

◻ Unmotivated

◻ Average motivation

◻ Motivated

◻ Very Motivated

9) How important is the experience of the whole team for your work?

(Required / choose one)

◻ Not important at all

◻ There are a very few things that I can learn

◻ I don't know

◻ I can learn from other and use it

◻ It's very important for me to use the experience of other team members

◻ Other [   ]

10) How important is the sharing of best practices, experiences, contacts and knowledge for you?

(Required / choose one)

☐ Not important

☐ Sometimes important

☐ Often important

☐ Always important

11) How did you experience the leave of a team member?

(Required / choose at least one)

☐ No handover

☐ Handover unsuccessful

☐ Structured handover

☐ Very successful handover

☐ Other [＿＿＿＿＿]

12) Do you think you are supported to provide enough information to all your team members?

(Required / choose one)

☐ Not supported

☐ Not enough supported

☐ Supported

☐ Very good support

13) Do you think you are able to receive enough information from all your team members?

(Required / choose one)

☐ No

☐ Improvable

☐ Acceptable

☐ Yes

14) How important is it for you to share best practices, knowledge and skill with your team members?

(Required / choose one)
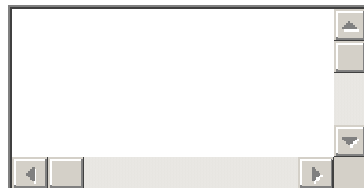
☐ Very unimportant

☐ Unimportant

☐ Average importance

☐ Important

☐ Very important

☐ Other [＿＿＿＿]

15) In which way did you have the chance to experience support for sharing experience, knowledge and best practices? Please provide an example for your selection(s) of how the support was realised!

(Required / choose at least one)

☐ Management support

☐ IT support (i.e. through tools)

☐ Integration in daily business

☐ Communication (i.e. information and internal marketing)

☐ Other [   ]

Free Comment:

[text area]

16) In which way do you experience the management support for sharing best practices, experiences and knowledge?

(Required / choose at least one)
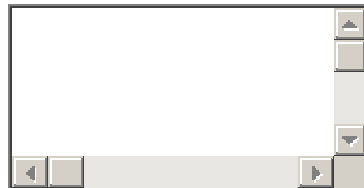
☐ Establishing regular meetings

☐ Receiving feedback

☐ Giving feedback

☐ Support - but no action

☐ There is no support

☐ Other [   ]

17) In which way does the management not **support sharing best practices, experiences and knowledge?**

(Required / choose at least one)

☐ Communication

☐ Receiving feedback

☐ Giving feedback

☐ Platform for sharing knowledge

☐ Other [_____]

Free Comment:

[text area]

18) If you think you are not able to provide, share and receive best practices, knowledge and leverage the experience of team members at the moment - what is/are the prohibition/s?

(Required / choose at least one)

☐ Time

☐ No support to share

☐ No motivation to share

☐ Not the right tool(s)

☐ Other [_____]

19) How useful were past projects focussed on sharing information (i.e. Web 2.0) for you?

(Required / choose one)

⬜ Very useless

⬜ Useless
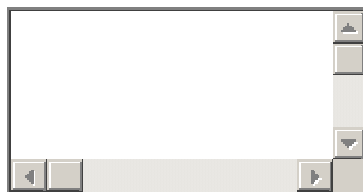
⬜ No impact

⬜ Useful

⬜ Very useful

20) How successful were past projects focussed on sharing information (i.e. Web 2.0) in your opinion?

(Required / choose one)

⬜ Very unsuccessful

⬜ Unsuccessful

⬜ No impact

⬜ Successful

⬜ Very Successful

21) What would you like to change coming from a knowledge sharing point of view? What would you like to add when talking about these topics?

(Optional)

3.4 Survey results in BlueSurvey and CSV export

Home Help joern.hussock@ie.ibm.com

Report Sheet

This report sheet is an experimental module and just provides an overview of the results. In the current implementation, some restrictions exist such as follows:

- It sometimes takes long time regardless of the number of your respondents.

- You can find 'Save Image Locally' on clicking the right mouse button over graphs, but it does not work.

- Graph data is not sorted.

You can get the complete data with CSV format (Download) and check the correct data.

If any problems are found in this report page, please input them on our forum.

1) How long have you been in the organisation?

(Required / choose one)

1) How long have you been in the organisation?					
Answer	1 to 3 months	3 to 6 months	6 to 12 months	1 to 2 years	Over 2 years	Total
Responses	0	0	5	3	4	12

2) How did you experience the start as a new hire?

(Required / choose at least one)

2) How did you experience the start as a new hire?						
	Slow start	Structured approach of learning	Learning by doing	Fast start	other	Total
Responses	3	1	12	1	1	17

Others

- confusing as my area responsibilities exploded within days without possible sources of knowledge to gain from

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3) Which SPL are you covering?

(Required / choose at least one)
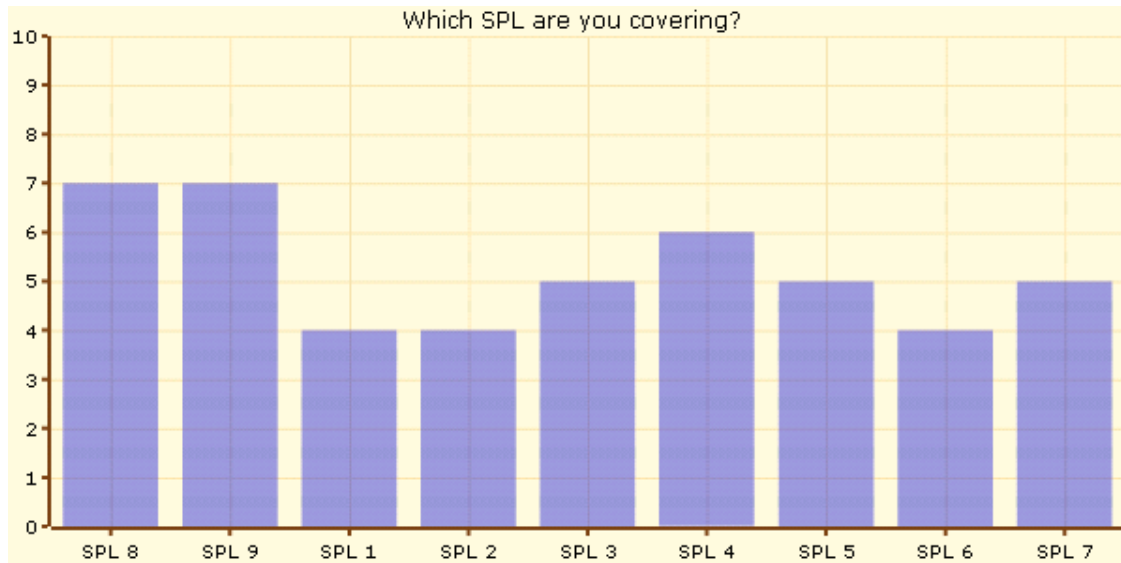
3) Which SPL are you covering?									
	SPL 1	SPL 2	SPL 3	SPL 4	SPL 5	SPL 6	SPL 7	SPL 8	SPL 9	Total
Responses	4	4	5	6	5	4	5	7	7	47

4) How would you rate your experience in the Services Business in compared to the whole team?

(Required / choose one)
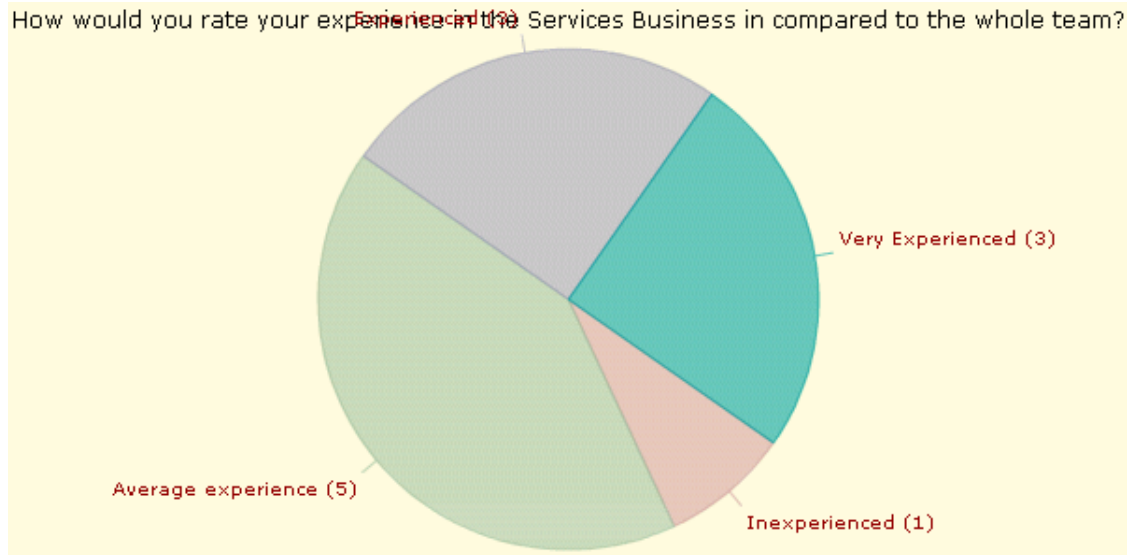
4) How would you rate your experience in the Services Business in compared to the whole team?						
	Very inexperienced	Inexperienced	Average experience	Experienced	Very Experienced	Total
Responses	0	1	5	3	3	12

5) Do you use any of the following tools or methods to share knowledge, experiences or best practices within your small team?

(Required / choose at least one)

5) Do you use any of the following tools or methods to share knowledge, experiences or best practices within your small team?								
	Colleague(s) (Mentor/Buddy/ Mentee...)	IBM Web 2.0 Tools	Lotus Connection	Lotus Sametime	Lotus Notes	Team meetings	other	Total
Responses	11	2	2	8	9	6	0	38

Others

6) Do you use any of the following tools or methods to share knowledge, experiences or best practices with the whole team**?**

(Required / choose at least one)

6) Do you use any of the following tools or methods to share knowledge, experiences or best practices with the whole team?								
	Colleague(s) (Mentor/Buddy/ Mentee...)	IBM Web 2.0 Tools	Lotus Connection	Lotus Sametime	Lotus Notes	Team meetings	other	Total
Responses	11	3	2	7	8	9	1	41

Others

- Internet

7) What do you think is the most effective way of sharing experiences or best practices?

(Required / choose one)

What do you think is the most effective way of of sharing experiences or best practices?

other (2)
Team meetings (1)
Lotus Notes (1)
Colleague(s) (Mentor/Buddy/Mentee...) (8)
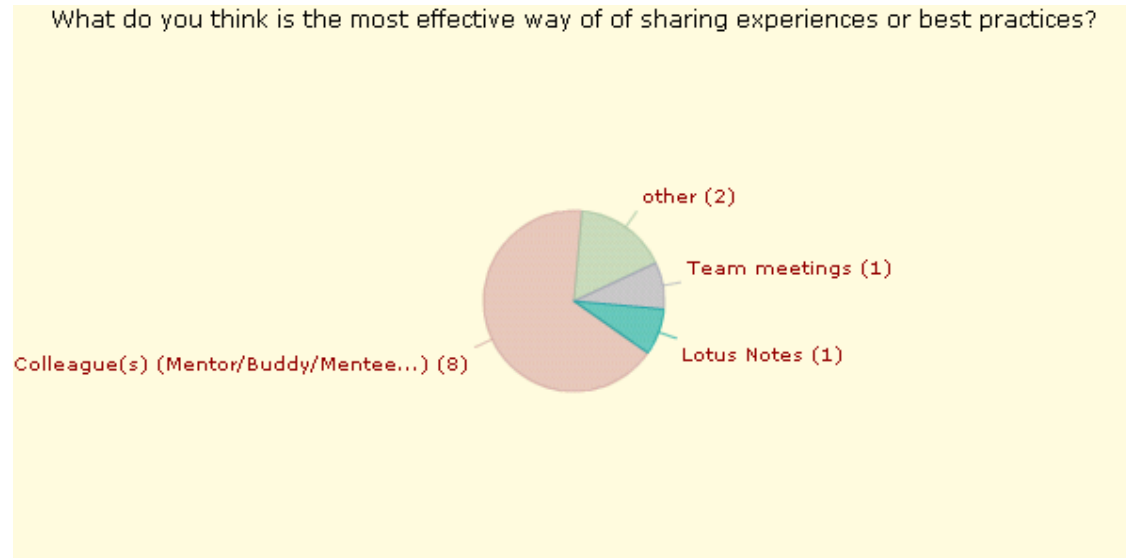
7) What do you think is the most effective way of sharing experiences or best practices?								
	Colleague(s) (Mentor/Buddy/ Mentee...)	IBM Web 2.0 Tools	Lotus Connection	Lotus Sametime	Lotus Notes	Team meetings	other	Total
Responses	8	0	0	0	1	1	2	12

Others

- Quickr

- clear documentations and the access on hand

8) How motivated are you to share your experience, knowledge and best practices?

(Required / choose one)
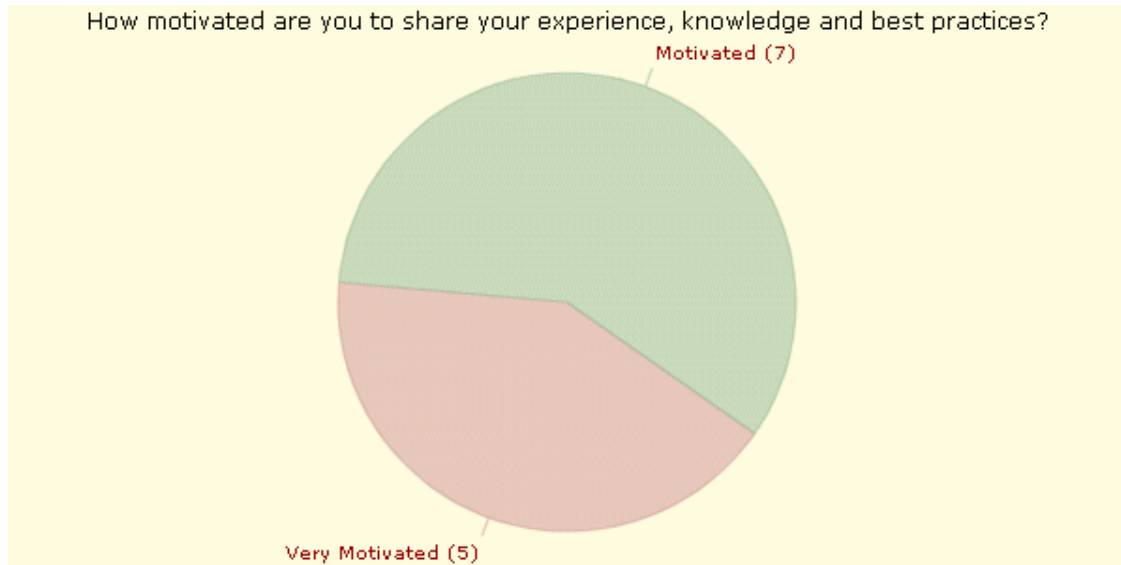
8) How motivated are you to share your experience, knowledge and best practices?					
	Very unmotivated	Unmotivated	Average motivation	Motivated	Very Motivated	Total selections
Responses	0	0	0	7	5	12

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9) How important is the experience of the whole team for your work?

(Required / choose one)

How important is the experience of the whole team for your work?

There are a very few things that I can learn (1)
I can learn from other and use it (3)
to use the experience of other team members (8)
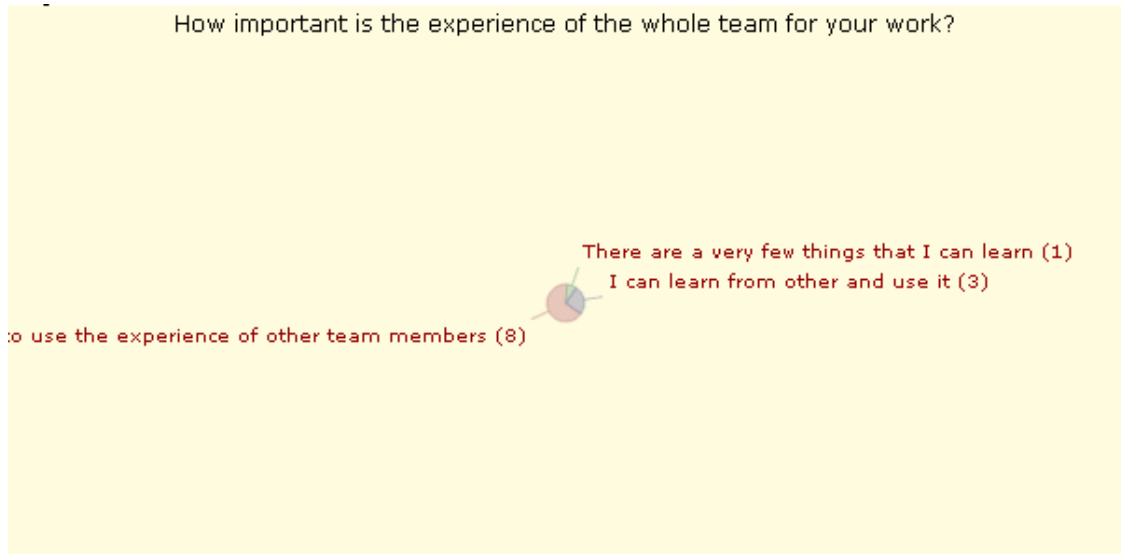
	9) How important is the experience of the whole team for your work?						
	Not important at all	There are a very few things that I can learn	I don't know	I can learn from other and use it	It's very important for me to use the experience of other team members	other	Total
Responses	0	1	0	3	8	0	12

Others

10) How important is the sharing of best practices, experiences, contacts and knowledge for you?

(Required / choose one)
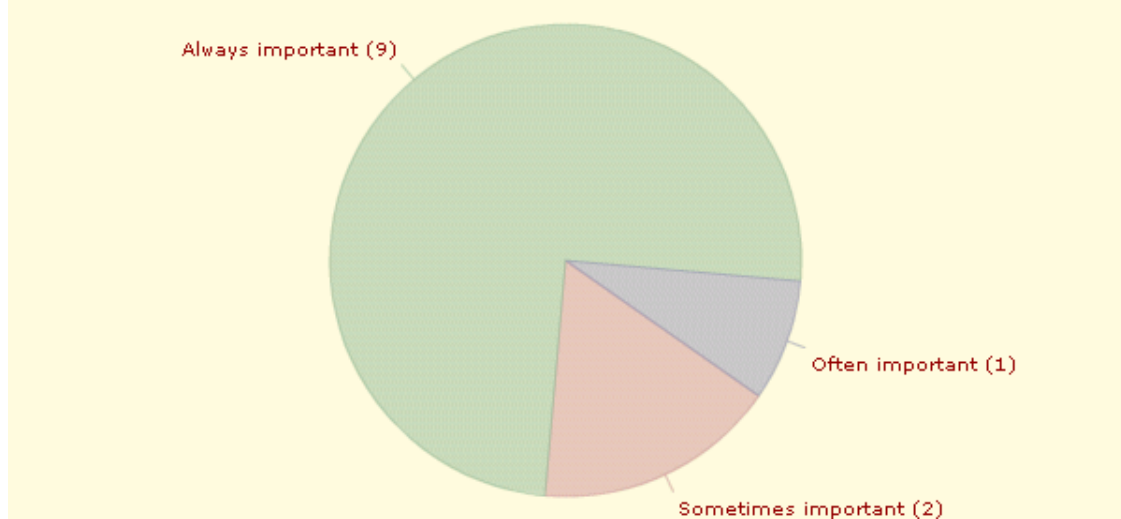
10) How important is the sharing of best practices, experiences, contacts and knowledge for you?				
	Not important	Sometimes important	Often important	Always important	Total
Responses	0	2	1	9	12

11) How did you experience the leave of a team member?

(Required / choose at least one)
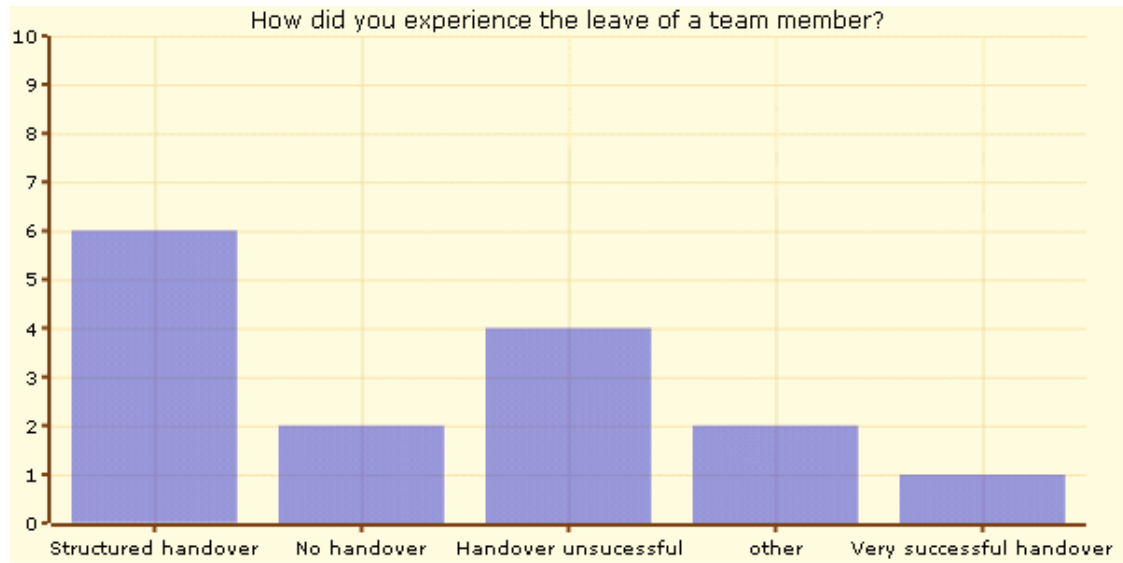
11) How did you experience the leave of a team member?					
	No handover	Handover unsuccessful	Structured handover	Very successful handover	other	Total
Responses	2	4	6	1	2	15

Others

- no leaving at all

- chaotic and disastrous!!

12) Do you think you are supported to provide enough information to all your team members?

(Required / choose one)
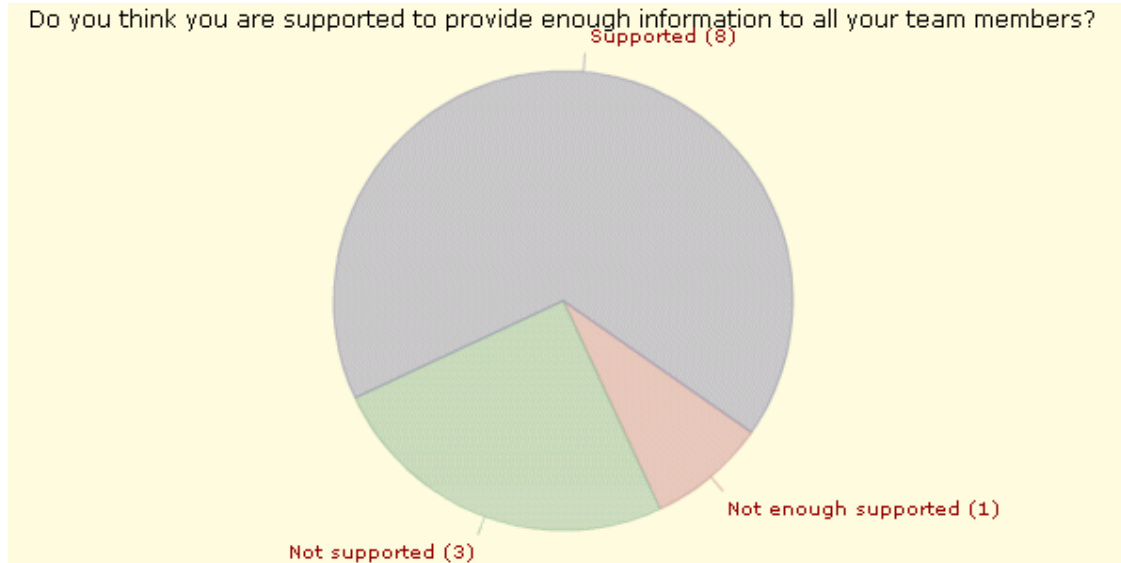
12) Do you think you are supported to provide enough information to all your team members?					
	Not supported	Not enough supported	Supported	Very good support	Total
Responses	3	1	8	0	12

13) Do you think you are able to receive enough information from all your team members?

(Required / choose one)
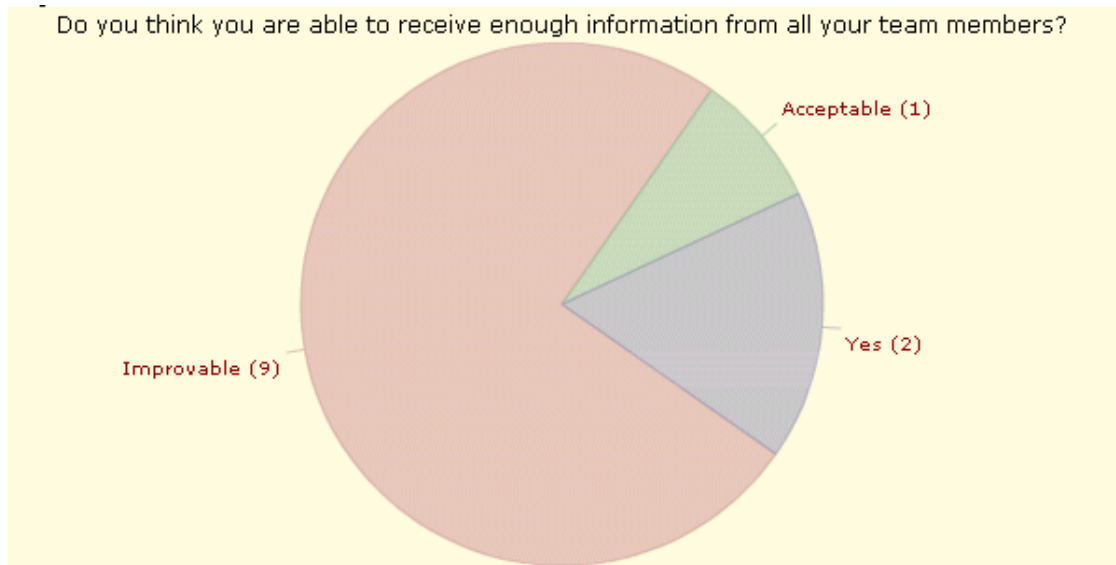
13) Do you think you are able to receive enough information from all your team members?					
	No	Improvable	Acceptable	Yes	Total
Responses	0	9	1	2	12

14) How important is it for you to share best practices, knowledge and skill with your team members?

(Required / choose one)
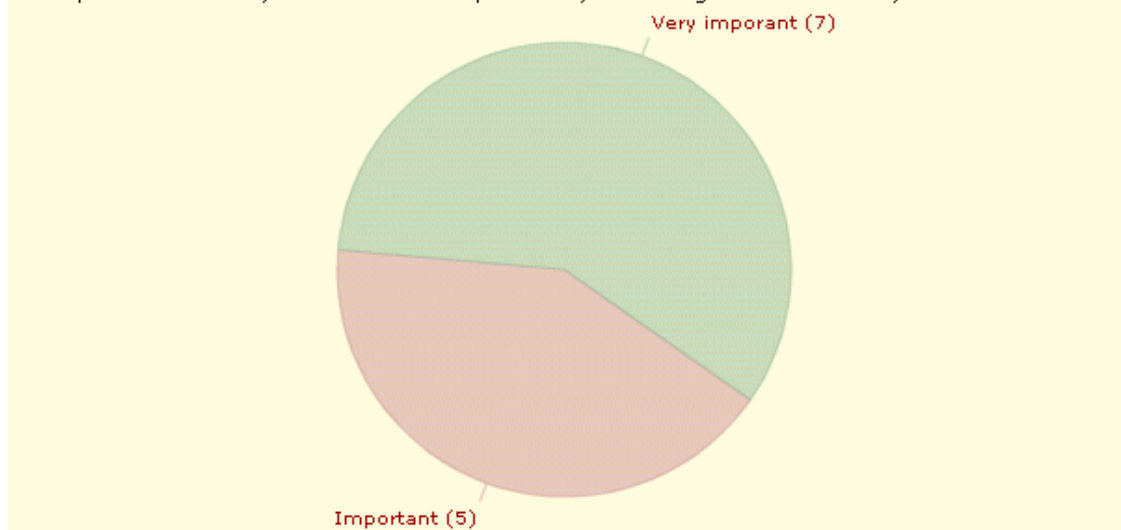
14) How important is it for you to share best practices, knowledge and skill with your team members?							
	Very unimportant	Unimportant	Average importance	Important	Very important	other	Total
Responses	0	0	0	5	7	0	12

Others

15) In which way did you have the chance to experience support for sharing experience, knowledge and best practices? Please provide an example for your selection(s) of how the support was realised!

(Required / choose at least one)

15) In which way did you have the chance to experience support for sharing experience, knowledge and best practices? Please provide an example for your selection(s) of how the support was realised!						
	Management support	IT support (i.e. through tools)	Integration in daily business	Communication (i.e. information and internal marketing)	other	Total
Responses	2	2	5	2	2	13

Others

- Team meeting especially for sharing best practices an knowledge

- n.a.

Free Comments

- In our small team, there are often questions concerning processes etc. asked to everybody like "Who knows how to do..."?

- Weekly Meeting, which has been addressed not to discuss targets or other general information's.
  Meeting which was initiated to specially discuss issues each team member has in certain bids, and where the other team members tried to solve the issue, or answer the questions one team member had.

- Value for money (Buying behaviour) introduction - online education...useless.

- peer to peer experiences

- communication with my buddy or team colleagues in every difficult case.

- asking, asking, asking!

- There are DBs which are Lotus Notes based and provide Information about the Offerings. It allows finding main information and also the contacts within IBM who can provide further help.

16) In which way do you experience the management support for sharing best practices, experiences and knowledge?

(Required / choose at least one)
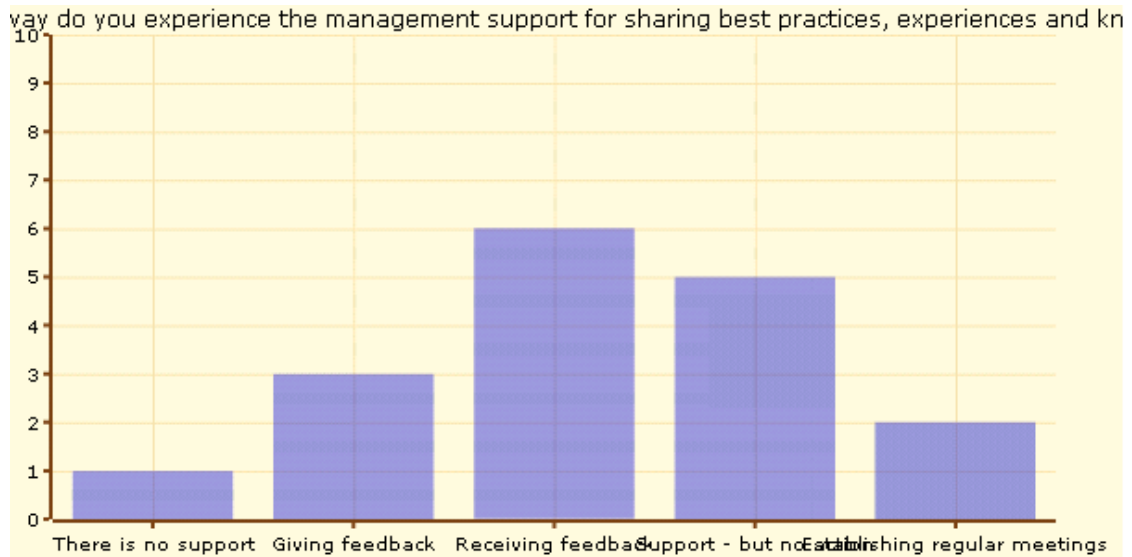
16) In which way do you experience the management support for sharing best practices, experiences and knowledge?						
	Establishing regular meetings	Receiving feedback	Giving feedback	Support - but no action	There is no support	other	Total
Responses	2	6	3	5	1	0	17

Others

17) In which way does the management not **support sharing best practices, experiences and knowledge?**

(Required / choose at least one)
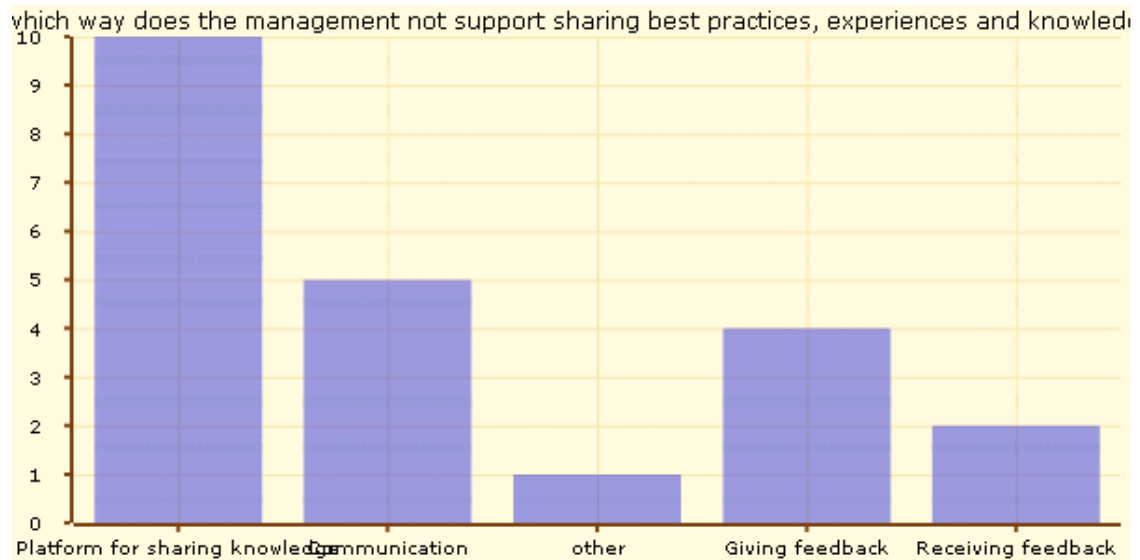
	Communication	Receiving feedback	Giving feedback	Platform for sharing knowledge	other	Total
Responses	5	2	4	10	1	22

Others

- stopped having these regular meetings.

Free Comments

- communication is just forwarded, st. multiple and unstructured

18) If you think you are not able to provide, share and receive best practices, knowledge and leverage the experience of team members at the moment - what is/are the prohibition/s?

(Required / choose at least one)

18) If you think you are not able to provide, share and receive best practices, knowledge and leverage the experience of team members at the moment - what is/are the prohibition/s?						
	Time	No support to share	No motivation to share	Not the right tool(s)	other	Total
Responses	11	4	2	3	1	21

Others

- to forget about to share

19) How useful were past projects focussed on sharing information (i.e. Web 2.0) for you?

(Required / choose one)
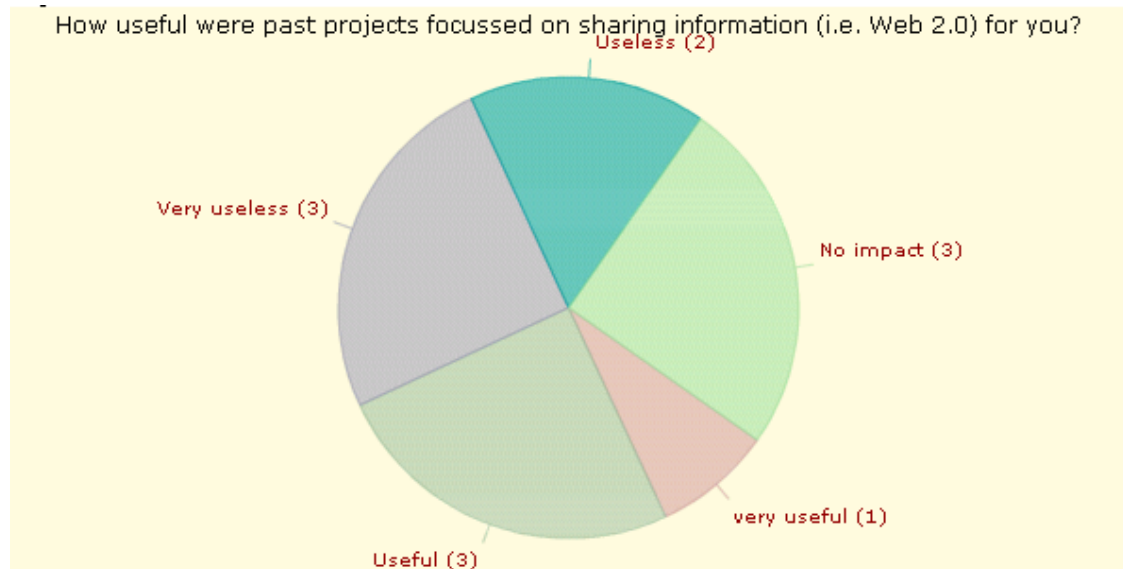
19) How useful were past projects focussed on sharing information (i.e. Web 2.0) for you?					
	Very useless	Useless	No impact	Useful	very useful	Total
Responses	3	2	3	3	1	12

20) How successful were past projects focussed on sharing information (i.e. Web 2.0) in your opinion?

(Required / choose one)
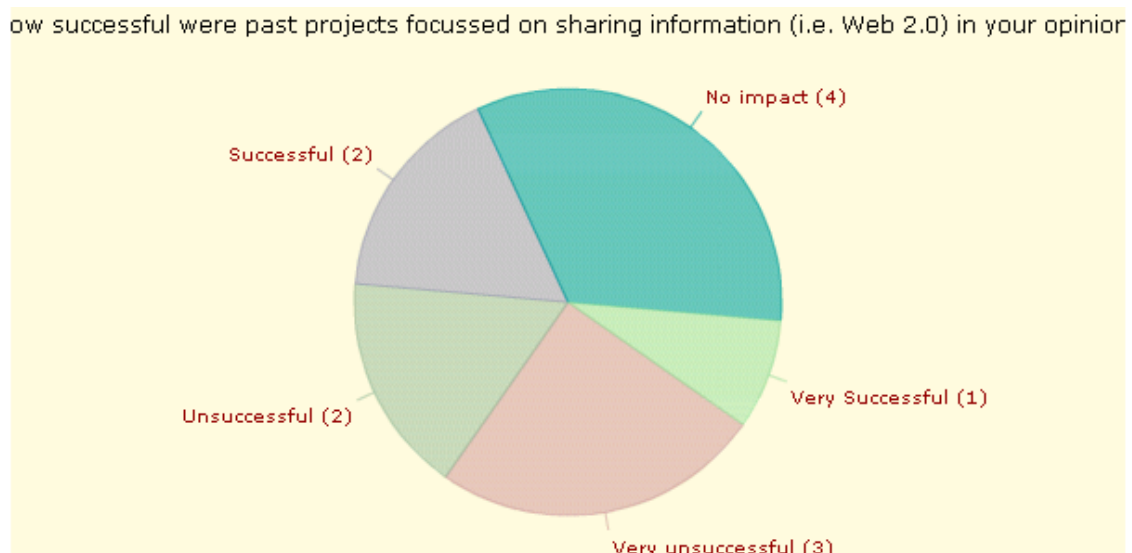
20) How successful were past projects focussed on sharing information (i.e. Web 2.0) in your opinion?					
	Very unsuccessful	Unsuccessful	No impact	Successful	Very Successful	Total
Responses	3	2	4	2	1	12

21) What would you like to change coming from a knowledge sharing point of view? What would you like to add when talking about these topics?

(Optional)

21) What would you like to change coming from a knowledge sharing point of view? What would you like to add when talking about these topics?	
Total responses	8

- boost motivation to share, more interaction in meetings concerning best practices and file the results on common platforms

- weekly team meetings are a good platform to address special questions or to address knowledge to team members which really need that information at a certain time.
  The IBM Web 2.0 platform is a good tool but not useful very often, because I have the feeling I get an information overload and not the actual question I have is answered directly.

- I think it's necessary that a process will be simulated before it will be implemented in the daily business. Knowledge shows that many projects failed because of missing communication how to avoid and improve processes. Mostly the persons who have to deal with these processes were not asked if it is useful or not or which mistake might occur. Finally less automation and more communication would be the most efficient way to make daily business most successful!

- Regular Team meetings, more Communication in it. In my opinion we are talking too much about sales figures, during the Team meeting. I think it is better, too have more conversation in it, like problems in current opps.. etc..

- Lotus Quickr is a good starting point for knowledge sharing. This has to be improved further on. In my opinion with institutionalisation of knowledge sharing, e.g. tools or regular meetings, the outcome is not that efficient. You can share basic knowledge, but for detailed information you need a human network, which can provide the information on demand. With this line of argumentation something like lotus connection is a good starting point, but to general and anonymous regarding the information you need. People you are working with on a daily basis are the best knowledge pool you can get.

- It should be spent more time in activities (i.e. meetings) to share knowledge than for reporting (SSL). That would help people to learn more about their business and increase their figures. I think there is no time left for Knowledge sharing after SSLs and on air sessions without any results.

  Thank you for your support to improve the processes.

- structure is crucial!

- * Regular meetings for knowledge sharing in the whole team or in small teams
  --> Platform for sharing knowledge
  * more management support

3.5 Survey closed

Home Help joern.hussock@ie.ibm.com

Copy

Result 12 responses Download as CSV | Browse

Survey: Team Survey - Start of Project (21 questions)

You can respond anonymously to this survey.

This survey will be used to assess the existing knowledge sharing capabilities of the team of Telesales Specialists (with a focus on ITS Services).

The results will be used to create starting points for managing knowledge sharing by bringing the skills of experienced team members to the surface and with the target to transfer and leverage the knowledge of all team members.

This survey is set to private mode. All responses will be held anonymously.

Thank you all for the participation!

Survey Disclosure: Private Result Disclosure: Private

Start Date: 2009/05/04 End Date: 2009/05/21

Blue Survey : 0.7.0-alpha(TAP prototype M4)

TAP Offering Page
Development Wiki

APPENDIX B

The following pictures show the results of the integration of Lotus Quickr into the framework by using it as a basis for documentation, information and knowledge sharing.
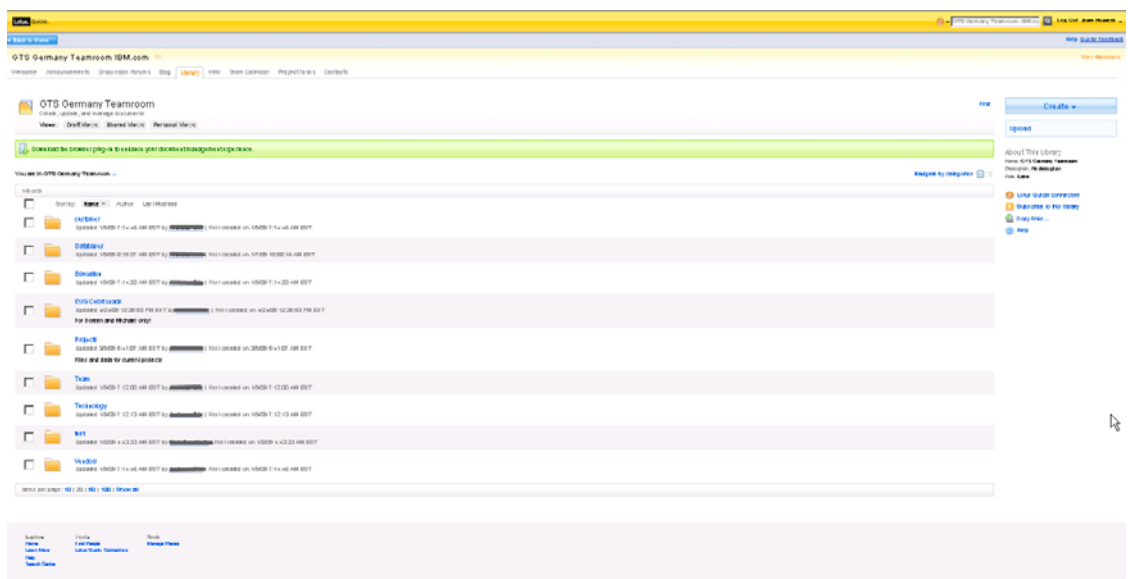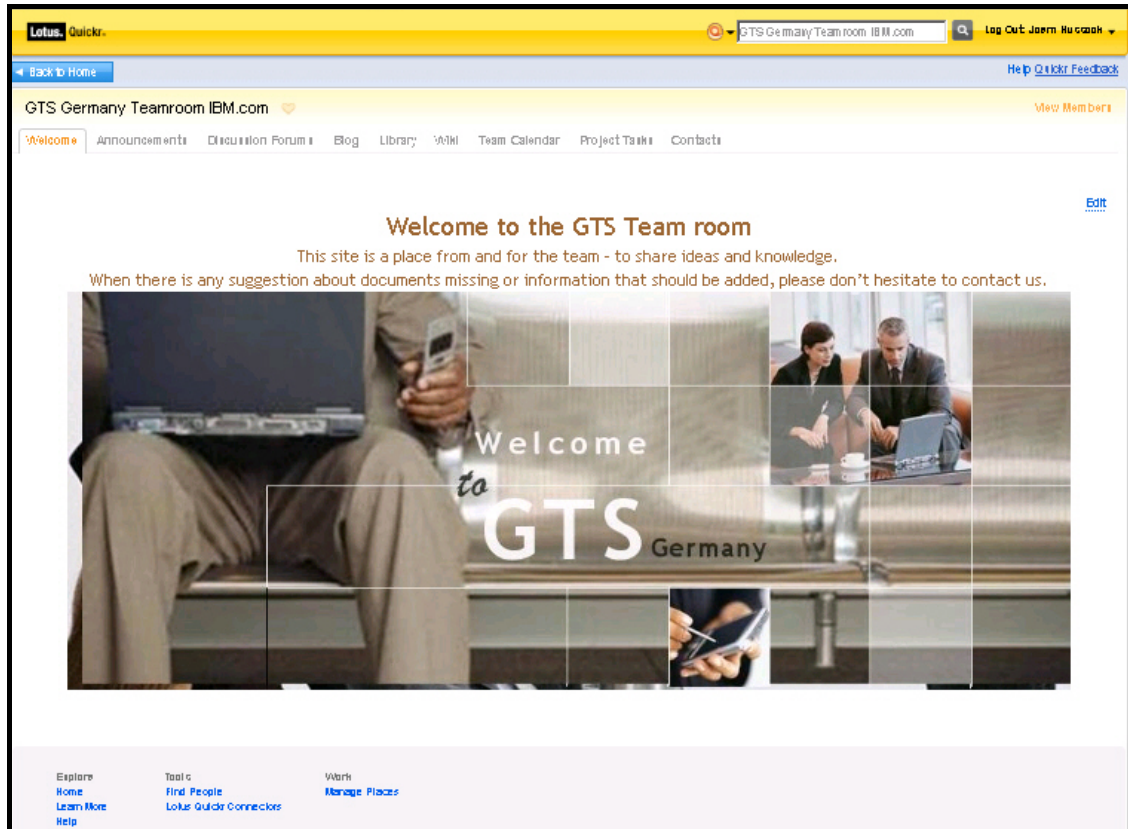
APPENDIX C

Interview 1 - Rating of the knowledge sharing framework

Target group	Sales team (Sales Person 1-13);
	Manager of the sales team;
	Knowledge management expert 1;
	Knowledge management expert 2.
Date	10th of June 2009

Questions

Please provide a rating for the following parts of the framework for knowledge sharing earlier presented with the following scaling:

– "1" – No value;

– "2" – Some value;

– "3" – Average;

– "4" – Good;

– "5" – Very good.

1) How would you rate the short-term solutions within the framework?

2) How would you rate the defined midterm solutions and the introduced tool (Lotus Quickr)?

3) How would you rate the presented long-term solutions and the strategy?

4) How would you rate the overall knowledge sharing framework?

Participation

Person	Participation
Manager	Yes
Sales Person 1	Yes
Sales Person 2	Yes
Sales Person 3	Yes
Sales Person 4	Yes
Sales Person 5	Yes
Sales Person 6	Yes
Sales Person 7	No
Sales Person 8	Yes
Sales Person 9	Yes
Sales Person 10	No
Sales Person 11	Yes
Sales Person 12	Yes
Sales Person 13	Yes
KM Expert 1	Yes
KM Expert 2	Yes

Answers

Question 1 – How would you rate the short-term solutions within the framework?

Person	Rating
Manager	5
Sales Person 1	4
Sales Person 2	5
Sales Person 3	4
Sales Person 4	4
Sales Person 5	5
Sales Person 6	5
Sales Person 8	5
Sales Person 9	5
Sales Person 11	4
Sales Person 12	5
Sales Person 13	5
KM Expert 1	5
KM Expert 2	5

Question 2 – How would you rate the defined midterm solutions and the introduced tool (Lotus Quickr)?

Person	Rating
Manager	5
Sales Person 1	3
Sales Person 2	3
Sales Person 3	2
Sales Person 4	3
Sales Person 5	4
Sales Person 6	4
Sales Person 8	3
Sales Person 9	2
Sales Person 11	2
Sales Person 12	2
Sales Person 13	5
KM Expert 1	4
KM Expert 2	5

Question 3 – How would you rate the presented long-term solutions and the strategy?

Person	Rating
Manager	4
Sales Person 1	4
Sales Person 2	5
Sales Person 3	4
Sales Person 4	5
Sales Person 5	5
Sales Person 6	4
Sales Person 8	4
Sales Person 9	5
Sales Person 11	5
Sales Person 12	4
Sales Person 13	4
KM Expert 1	4
KM Expert 2	4

Question 4 – How would you rate the overall knowledge sharing framework?

Person	*Rating*
Manager	5
Sales Person 1	4
Sales Person 2	4
Sales Person 3	4
Sales Person 4	4
Sales Person 5	5
Sales Person 6	4
Sales Person 8	4
Sales Person 9	4
Sales Person 11	3
Sales Person 12	4
Sales Person 13	5
KM Expert 1	4
KM Expert 2	5

Overview of the gathered information

Interview based rating for the knowledge sharing framework					
Person	Participation	Personal perception of defined short-term solutions	Personal perception of defined midterm solutions and introduced knowledge base (Lotus Quickr)	Personal perception of defined long-term solutions and strategy	General perception of ideas for knowledge sharing
Manager	Y	5	5	4	5
Sales Person 1	Y	4	3	4	4
Sales Person 2	Y	5	3	5	4
Sales Person 3	Y	4	2	4	4
Sales Person 4	Y	4	3	5	4
Sales Person 5	Y	5	4	5	5
Sales Person 6	Y	5	4	4	4
Sales Person 7	N	-	-	-	-
Sales Person 8	Y	5	3	4	4
Sales Person 9	Y	5	2	5	4
Sales Person 10	N	-	-	-	-
Sales Person 11	Y	4	2	5	3
Sales Person 12	Y	5	2	4	4
Sales Person 13	Y	5	5	4	5
KM Expert 1	Y	5	4	4	4
KM Expert 2	Y	5	5	4	5

Interview A – Knowledge Management Expert 1

Target person	Knowledge management expert 1
Date	27th of July 2009

The interview was recorded and written down.

Author	For the purpose of this interview, I have to start with a short introduction about how this interview is structured.
	Because of the reason that the whole project can not record any personal information I will call you KM Expert 1, because you are the first of the KM Experts interviewed for this project. I'm recording this interview and will create a mind map with notes to catch the main ideas of your answers.
	The main structure of my questions can be seen in this mind map.
	Do you agree to all these topics?
KM Expert 1	Yes, I agree. Just to be sure, you will take the notes down on a mind map and we will work on the final overview after the interview.
Author	This is the way it should work.
	So, if there no more questions, I would like to start with the first question. How would you define your own role in the organisation and how would you highlight your role in contrast to knowledge management?
KM Expert 1	I'm the team leader of the IMT Alps team within this part of IBM. I would describe my area of responsibility as being responsible for the organisation aspects within the team. I'm supporting the manager of my team and I'm working as a Telesales Rep.
	In terms of knowledge management I would say that my education background is representing part of the things that I have to say about knowledge management. I have an MSc in Computing with the focus on Knowledge Management. I studied at the DIT here in Dublin and worked in my dissertation project on the introduction of Communities of Practice within several teams in this organisation to enable the team members to share best practice, information and especially knowledge.
Author	Ok. Would you please describe your general view on knowledge sharing within IBM and the KM strategy of IBM?
KM Expert 1	In my opinion the KM strategy of IBM is not really clear when it comes to measuring if the benefits that are targeted with the strategy can be recognised within ibm.com. I think that the actual existent knowledge management strategy of IBM is not very usable for this organisation, because of the following things: There is no detailed plan to implement it on every level of the organisation like ibm.com or more concrete the sales teams like my team. I'm asking myself that there seems to be no plan in place to make knowledge management work or sometime I think that the strategy doesn't seem to be in place. There are a lot of things within IBM that are being used already in the sense of knowledge management, but

	nobody knows actually that they are using it already. There are several good ideas, tools and other databases with useful information available, but they are slowly being adapted by the people in the organisation. I think that this is just related to the felt non-existent of the plan to implement KM on every level of the organisation.
Author	You mentioned already existent tools within IBM. Can you explain some of these tools or give examples?
KM Expert 1	The tools that are being used by everyone within IBM are for example – tagging or BluePages, which is a concept of Yellow Pages within knowledge management. Tagging is used already, because when you use our IBM intranet search – it's not delivering very good results, but there are tags available with the search results that are very useful. I would even say that they are often better than the search results. I know several departments within IBM that are using Wikis. In general the idea is very good, but the lack in this context is the way of which the people are working with it. I think that they sometimes forget that it is always about working with people. There are teams within IBM that build up a Wiki, but where is the sense in it, when each team is just pointing people to these Wikis and say: here use it, everything you need is in here.
Author	What is your point of view on the importance of a knowledge sharing culture?
KM Expert 1	In my opinion a knowledge sharing culture must be enabled within the organisation by using some help that knowledge management can provide. For example the introduction of knowledge sharing must be supported and something like that can be done with the introduction of an incentive system. An incentive has to be in place to support the participation and to support knowledge sharing. Titles like knowledge sharer of the month or maybe using virtual dollars can help to support the cultural change when it comes to a knowledge sharing culture. The important steps, not only in terms of supporting a knowledge sharing culture, are to overcome barriers of upfront existing negative associations towards a better knowledge sharing within the organisation. Of course, there are initial efforts that have to be overcome, but even when the outcomes may take a while; I think they are worth the effort. The system and the culture must support the topic of knowledge sharing in general This leads to the responsibility of the management and of key knowledge workers as well. The transfer of experience and especially trying to transfer contacts or more general the personal network are things that have to be supported.
Author	What comes to your mind when you think about prohibitions towards knowledge sharing? Let's say from the organisational point of view with the focus on people and processes and from a technical point of view.
KM Expert 1	At the moment prohibitions can be seen in a lot of parts of the organisation. I would even say that the main parts of the

	prohibitions are caught within the organisation. I think, looking at the sales organisation in particular it is quiet easy to see some flaws within the thinking of this kind of sales organisation. I wouldn't even say that this is unique to IBM, but I can only speak of ibm.com at the moment. The typical a short-term thinking and not wasting a thought about the future or what happens in the next year – this is typical for this sales organisation. It just creates a conflict with long-term strategic planning and how it is used to create value from knowledge management ideas. This kind of short-terms thinking creates time related challenges so that the resources you need are not available or don't have time. Key knowledge workers seem to be busy, but there are needed to transfer knowledge and best practices to other people – like new hires in the team. The management must take ownership and responsibility that time and short-term thinking doesn't create an issue. The technological side is different. As I told you before there are already tools available within IBM that represent the idea of knowledge management within IBM. From a collaboration perspective there are a lot of tools available that can support knowledge sharing and knowledge storing. But I see more problems in the process and people perspective at the moment within IBM, because tools can only be used as supporters, not as a key element to support knowledge sharing in this organisation.
Author	Coming to the presented framework for knowledge sharing. What do you think about the challenges of formulating such a framework and how would you rate the framework with its solutions?
KM Expert 1	Let me start with the challenges I see. I already told you about my view and I think that the previous answers showed some points to this question. Essential and a challenge is the management support and making sure that the management takes a big responsibility towards knowledge sharing. The long-term perspective within sales – this will stay a challenge, but maybe it can be solved. Here the management plays an important role again. The problem with this topic is that measuring the effectiveness and showing it the upper management, is very hard. And what will you do when the motivation is not existent as well. All these things can create a circle of dependencies which will make it hard to succeed and in my opinion these are the challenges.
Author	How would you rate the short-term solutions of the framework for knowledge sharing?
KM Expert 1	I think the short-term solutions are a very good approach to start with an easy and pragmatic idea to bring people to the situation where they can share their knowledge in relation to problems or to other actual topics within the team. Everybody can use it for they own benefit and this creates a good motivation as well. They are usually people within the teams that are new or not experienced, who can benefit from bringing there questions to the surface and letting the experienced people from different points of views answer their questions. On the other side the people that are experienced are often not really supported to share knowledge,

	because they are often busy. These experienced people now can boost their motivation, because they see what they are worth to other people and what they can show in terms of their knowledge and experience.
Author	What do you think about the midterm solutions?
KM Expert 1	I would just rate the midterm solutions as good, because of the main reason that I don't have a feeling about this tool. I saw based on the survey results you presented that only a few people are using it at the moment and I think it has to be kept in focus, if this is the right tool and I'm concerned at the moment if it will be accepted within the team. From my point of view the part where short-term solutions – these meetings – are really made to a regular occurrence this would really bring benefit to the team.
Author	What do you think about the long-term solutions and how would you rate them?
KM Expert 1	In my opinion the solutions focussed on a long-term perspective are a good approach, as well. It is hard to rate it at the moment, but if everything is supported and somebody is coordinating everything it really can take off. The development of the short-term and the midterm solutions needs to be investigated. The management and a person coordinating the overall framework have to take responsibility on the one side and take real ownership on the other side. The continuous optimisation with taking feedback out of the team and looking for helping things within IBM and maybe other teams has to be put in focus. A strategy like you defined it, helps to remind all participants and how the framework should work and what it should bring.
Author	How would you rate the framework in general?
KM Expert 1	My rating will be good for the overall framework. I like the ideas that are quiet easy and help to create starting points for knowledge sharing within the team. I would just like to add that the goal needs to be clear defined to everybody involved. The person taking over responsibility should be chosen well; because it needs a lot of enthusiasm to keep the framework working The management must help and must be committed to the overall idea of the framework and must take over responsibility.
Author	Thank you for your participation. I will create the mind map based on your feedback and present it back to you.
KM Expert 1	Thank you.

Interview with KM Expert 1

Personal Information
- how to define your role
  - Team lead of IMT Alps Telesales team
  - responsible for all organisational aspects within the team
- your role in contrast to KM
  - MSc in Computing (Knowledge Management)
  - worked on introducing CoP within several sales team in this organisation

What is your general view on knowledge sharing within IBM?
- knowledge sharing culture
  - must be enabled within the organisation
  - incentive system/awards
    - "knowledge sharer" of the month
    - virtual dollars
  - IMPORTANT
    - initial effort must be overcome
    - the outcome may take a while, but is worth the effort
    - a system / culture must be in place to support this issue
    - Responsibilies of Managment
    - Responsibilies of Key Knowledge Workers
      - transfer of experience
      - transfer of network
- prohibition for knowledge sharing
  - no support
  - short-term focus conflicts with lont-term strategic planning for KM approach
  - time related issues
  - resources not available
- technology
  - collaboration tools can support knowledge sharing and knowledge storing
  - use only as supporter, not as key part to let the knowledge sharing work
- KM strategy of IBM
  - not very usable, because the detailed plan to implement it on every level of the organisation, doesn't seem to be in place
  - things available witin IBM that are slowly being adapted by everyone
    - Wikis for several departments
    - Tagging is useful for search
    - Intranet search

Knowledge sharing framework
- What are the challenges
  - hard to measure effectivness
  - long-term perspective
  - management support
  - ensuring the responsibility of the management
  - motivation of the participants
- evaluation
  - short-term solutions
    - very good approach
    - starting with pragmatic ideas to bring the people within the team together
    - it is important to get everyone involved and have the same understanding about the idea of knowledge sharing
    - motivation is boosted, when people experience that they can benefit from this simple solution
    - motivation is supported, when the experienced people actually see what they are worth within the team in terms of knowledge
  - midterm solutions
    - good approach
    - consideration about the tool (Lotus Quickr) should be investigated furtheron, when the first content is brought to the system
    - concern: the acceptance of this tool within the team
    - very good to incorporate the short-term solutions into the framework
  - long-term solutions
    - good approach
    - no comment as the development of the short-term and midterm solutions must be investigated
    - defining a strategy very useful
    - somebody must take responsibility for continous optimisation
  - overall evaluation
    - good general approach
    - starting point for knowledge sharing within a team
    - initial basis for overview on KM technology within IBM
    - target must be defined very precisely
    - very difficult to answer the question who can coordinate the overall topic of knowledge sharing as somebody with a lot of enthusiasm should be chosen - how to measure?

Interview B – Knowledge Management Expert 2

Target person	Knowledge management expert 2
Date	5th of August 2009

The interview was recorded and written down.

Author	Let me please introduce the structure of this interview. As one of the requirements coming from the management for working on this project was to keep the whole project anonymously, I will refer to you as KM Expert 2, because you have been the second person to be interviewed as a person, who is meant to be an expert in terms of knowledge management. I will record the interview and create a mind map to summarise the main points. You will be asked to agree, change or if necessary add topics to the mind map. Do you agree to this structure or do you would like to change anything about it?
KM Expert 2	I don't see any open topic and I can agree to the structure.
Author	Thank you very much. Let me start with the first question. The idea is to get an insight in your role within the organisation of ibm.com to find on the one side and to create an understanding about your view on knowledge management on the other side. Would you please shortly describe your role in this organisation and how long you've been working in your current role?
KM Expert 2	I'm working as a Maintenance Sales Specialist within one of the teams working for the German market. I started in September 2008 in this job.
Author	That's perfect. Would you please describe your role within the team in contrast to knowledge management?
KM Expert 2	First of all I would like to describe my view about the knowledge management practice in my team, because it became more or less the initiator towards my understanding about knowledge sharing in our team. As I started I couldn't find a structured way of finding information or even ways to work in my job. I was assigned to a team member, who showed my around some tools and clarified some questions that I had at the beginning. The personal interaction was good at the beginning, but my so called buddy was sometimes very busy and I wasn't able to use that time. I was looking for a way of getting to information. During this search I created a catalogue of questions and wrote them down. I basically used Word to write everything down and copied some links into the document. After some time I heard about the availability of tools that might be useful. I heard about Lotus Connections and Lotus Quickr and asked my manager, if it's possible to work on such a tool, but he wasn't really aware of it. I asked some other colleagues and nobody was really into the tools. I just started creating a team room in the Lotus Quickr environment and looked for some help. I put in all the information that I found and basically created my own platform for the intended use of

	knowledge sharing. After presenting some of the ideas to my colleagues I got the chance to be the focal point for the transfer of best practice and knowledge. I created a new hire education package including several parts related to business and to general work related questions. The input was collected by me at the beginning and time after time I was able to select more and more from other people.
Author	What is your view on knowledge sharing in general?
KM Expert 2	I can answer to that question right away. I think especially for new employees it is important to have something like a guideline for knowledge sharing available. I can imagine that this database with job related information would be a good and easy accessible knowledge base and starting point. Overall it is very important and should be integrated into the organisation.
Author	You mentioned before that you worked a lot already with Lotus Quickr. What do you think about technology in the context of knowledge sharing?
KM Expert 2	There are a lot of tools available within IBM, but there seems to be a fight between their existences. Every part of IBM seems to use another database or tool and in my experience they hold a lot of knowledge which should be easier to access. It could be even better when it's possible to combine these spreaded knowledge repositories within IBM from a technological point of view. From what I learned about Lotus Quickr – I might be too much into the tool at the moment, but – I think it is a very useful tool and it can bring a lot of value into teams, when it's supported and recognised by everyone. The only thing that might be even more useful could be additions that are still missing or are not fully working at the moment. For example RSS and integration with normal day-to-day business tools, like Lotus Notes and a working calendar synchronisation would be very handy. Another point is that I think I'm really looking forward to use new tools and new features, but I even know other people that are not really into the tools and from this perspective Lotus Quickr needs more support and focus within the management to guide the people to use it more often. I think during my work with it, there were too much problems. There was the server offline for several days and I couldn't access it.
Author	Ok, when you are talking about the support and focus – what do you think about the knowledge management strategy within IBM?
KM Expert 2	Honestly, I don't know about the knowledge management strategy. I know that there is a focus on Web 2.0 tools as they are more flexible and it was already pushed as a key play within IBM. Lotus Quickr is just an example and in my point of view a really good one. There are already tools and knowledge management available within IBM. Wikis are used a lot and BluePages is known by everyone, but overall I can't see anything more. Maybe I even use some things that are related to knowledge management, but I don't know about them. Then the knowledge management strategy of IBM is good.

Author	Why is there a problem in terms of knowledge sharing?
KM Expert 2	There is a problem in this sense that everybody has knowledge in different areas, but there seems to be no time and no easy opportunity to share knowledge. When I look to the situation where I started I can see that there is a lot of effort is necessary to put knowledge into the right form and to share it easily so that it can be used by everyone.
Author	What is your point of view in terms of the management of the team?
KM Expert 2	I think the management must take responsibility and ownership. At the moment it feels like nothing is coming from the management and everything is just accepted. If you want to change something, nobody will stop you, but nobody will really support you either.
Author	Coming to the framework of knowledge sharing – what do you think about letting the framework work or about possible problems with the framework?
KM Expert 2	I think, as mentioned in my previous answer, a problem is that the management must support and must really get into the topic of knowledge sharing. From my own experience there is problem with answering the question of motivation easily. People are involved and this leads to the question of how to motivate them to share their knowledge.
Author	What do you think about the parts of the framework for knowledge sharing, starting with the short-term solutions of the framework?
KM Expert 2	I think it's an easy approach and because of this a very good approach. It shows a simple solution, which is easy to adapt by others. I think everybody can easily start with this approach by for example reserving 1 day in a month to initiate a meeting with the main purpose of knowledge sharing.
Author	What do you think about the midterm solutions in the framework for knowledge sharing?
KM Expert 2	Again I have to say that it's very good approach. I personally see that Lotus Quickr is the tool that should be used by a lot more within the teams. It's user friendly and it is a Web 2.0 technology and therefore flexible. But I also think that there must be a focal point for collecting and maintaining knowledge with this tool.
Author	What do you think about the long-term solutions in the framework of knowledge sharing?
KM Expert 2	In my opinion it's a good approach, but it is hard to measure the interfaces between the different solutions or the timeframes of the overall framework. The short-term solutions and the midterm solutions have to be measured in relation to their long-term effectiveness to decide about their usefulness, but in general I think that the approach is good.
Author	After the information you've given me, what do you think about the overall framework?
KM Expert 2	It seems to be a good starting for knowledge management and this is everything looking at this organisation. It provides a guideline and help to start with knowledge sharing in the teams. The technological part is important and I think can be very good lived

	within IBM
Author	Thank you very much for your time. I will now present to you the points I've collected and ask you to comment on the topics covered.
KM Expert 2	Fine. Thank you!

Interview with KM Expert 2

Personal Information

how to define your role
- Sales Specialistfocussed on selling network related services
- in the job since September 2008

your role in contrast to KM
- Defined Focal Point for transfer of best practice and knowledge
- created a new hire education package including several parts related to business and to general work related questions
- created a Teamroom in Lotus Quickr with the intended use of knowledge sharing

What is your general view on knowledge sharing within IBM?

knowledge sharing in general
- very important
- especially new employees
- database with job related information would be a good and easy accessible knowlege base and starting point

technology
- a lot of tools available, but there seems to be a fight between their existence
- every part of IBM seems to use another database or tool and in my experience they hold a lot of knowledge which should be easier to access
- combining these spreaded knowledge repositories would be a goal within IBM from a technological point of view
- especially Lotus Quickr is a very useful - if it's supported and recognised by everyone
  - I think during my work with it, there were too much problems: server offline for several days
  - Lotus Quickr needs more support and focus within the management to guide the people to use it more often and
  - useful additions still missing or not fully working at the moment: RSS, integration with normal day-to-day business tools - calender synchronisation

KM strategy of IBM
- I don't know about the knowledge management strategy
- I know that Web 2.0 is a key play here
  - example Quickr
- some tools and KM ideas are used already
  - BluePages
  - Wikis

Why is there a problem in terms of knowledge sharing?
- problem is, everybody has knowledge in dfferent areas, but there seems to be no time and no easy opportunity to share knowledge
- a lot of effort is necessary to put it into the right form and to share it easily so that it can be used by everyone

what is your point of view in terms of the management of the team
- must take responsibility and ownership
- at the moment it feels like nothing is coming from the management

Knowledge sharing framework

Problems with
management suport
- people are involved and this leads to the question of how to motivate them to share their knowledge

evaluation

short-term solutions
- very good approach
- simple solution and easy to adapt by others
- i think everybody can easily start with this approach by for example reserving 1 day in a month to iniiate a meeting with the main purpose of knowledge sharing

midterm solutions
- very good approach
- I see Lotus Quickr as THE tool, based on two information: user friendly web 2.0, flexible
- there must be a focal point for collecting and maintaining knowledge within a tool

long-term solutions
- good approach
- hard to measure the interfaces between the timeframes of short-term and midterm solutions and their long-term effectivness, but in general good

overall evaluation
- starting with knowledge mangement is everything
- it provides a guideline and help
- the technological part is important and I think can be very good lived within IBM

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APPENDIX D

Company Security Clearance and Confidentiality

Dublin Institute of Technology

Name: Joern Hussock

Project: "Defining a framework for Knowledge Sharing in a dynamic sales oriented organisation."

Company Security Clearance

Please initial as appropriate

1.   We agree that the student may undertake a dissertation of the nature indicated above and that he will be given access to appropriate information sources within our Organisation

2.   We agree that copies of the finished project will be made available for assessment by staff of Dublin Institute of Technology (DIT), and External examiners.

3.   We request that the completed dissertation be treated as confidential and not used for any other purposes other than assessment

Company Name:

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Registered office: Oldbrook House, 24-32 Pembroke Road, Ballsbridge, Dublin 4