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**EXTERNAL KNOWLEDGE TRANSFER MECHANISMS IN  
SERVICE BUSINESS ACQUISITION**

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## SUMMARY

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In knowledge-intensive economy an effective knowledge transfer is a part of the firm's strategy to achieve a competitive advantage in the market. Knowledge transfer related to a variety of mechanisms depends on the nature of knowledge and context. The topic is, however, very little empirically studied and there is a research gap in scientific literature. This study examined and analyzed external knowledge transfer mechanisms in service business and especially in the context of acquisitions. The aim was to find out what kind of mechanisms was used when the buyer began to transfer data e.g. their own agendas and practices to the purchased units. Another major research goal was to identify the critical factors which contributed to knowledge transfer through different mechanisms.

The study was conducted as a multiple-case study in a consultative service business company, in its four business units acquired by acquisition, in various parts of the country. The empirical part of the study was carried out as focus group interviews in each unit, and the data were analyzed using qualitative methods.

The main findings of this study were firstly the nine different knowledge transfer mechanisms in service business acquisition: acquisition management team as an initiator, unit manager as a translator, formal training, self-directed learning, rooming-in, IT systems implementation, customer relationship management, codified database and e-communication. The used mechanisms brought up several aspects as giving the face to changing, security of receiving right knowledge and correctly interpreted we-ness atmosphere, and orientation to use more consultative touch with customers. The study pointed out seven critical

factors contributed to different mechanisms: absorption, motivation, organizational learning, social interaction, trust, interpretation and time resource. The two last mentioned were new findings compared to previous studies. Each of the mechanisms and the related critical factors contributed in different ways to the activity in different units after the acquisition.

The role of knowledge management strategy was the most significant managerial contribution of the study. Phenomenon is not recognized enough although it is strongly linked in knowledge based companies. The recognition would help to develop a better understanding of the business through acquisitions, especially in situations such as where two different knowledge strategies combines in new common company.

## TIIVISTELMÄ

<b>Tekijä:</b>	Riitta Forsten-Astikainen
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Tehokas tietämyksen siirtäminen on tietointensiivisessä taloudessa osa yritysten strategiaa saavuttaa kilpailuetua markkinoilla. Tietämyksen siirtämiseen liittyy erilaisia mekanismeja riippuen sekä tiedon luonteesta että vallitsevasta kontekstista. Siirtomekanismeista on kuitenkin erittäin vähän empiiristä tutkimusta sekä tieteellistä kirjallisuutta. Tässä tutkimuksessa tutkittiin ja analysoitiin ulkoisia tietämyksen siirtämisen mekanismeja palveluliiketoiminnan yritysostokontekstissa. Tutkimuksen tavoitteena oli selvittää yrityskaupan jälkeen käytettyjä tietämyksen siirtämisen mekanismeja tilanteessa, missä ostava osapuoli alkoi siirtää ostettuihin yksiköihin yritystoimintaan liittyvää tietoa ja tietämystä mm. toimintamalleista ja käytännöistä. Toisena keskeisenä tutkimustavoitteena oli pyrkimys löytää käytetyistä mekanismeista niitä kriittisiä tekijöitä, jotka liittyivät kiinteästi eri mekanismeihin sekä vaikuttivat oleellisesti tietämyksen siirtoprosessiin.

Tutkimus toteutettiin useana tapaustutkimuksena ja tutkimuskohteena oli konsultatiivista palveluliiketoimintaa harjoittavan yrityksen neljä yritysostolla hankittua yksikköä eri puolella maata. Tutkimuksen empiirinen osa toteutettiin ryhmähaastatteluna kussakin yksikössä ja aineisto analysoitiin kvalitatiivisia menetelmiä käyttäen.

Tutkimus tuotti ensinnäkin yhdeksän erilaista tietämyksen siirtämisen mekanismia: yritysostojen johtoryhmä tavoitteena yhteistoiminnan käynnistäjän rooli, yksikönvetäjä roolinaan tietämyksen tulkinnan oikeellisuus, itseohjautuva oppiminen, "vierihoito", järjestelmäosaaminen, asiakkuudenhallinta, kodifioidut tietokannat sekä sähköinen kommunikointi. Mekanismituokittelussa havaittiin eri mekanismien tuottamia organisaation käyttäytymiseen liittyviä tekijöitä kuten uuden

yrityksen ”kasvojen” tuottamisen merkitys, oikean ja oikein tulkitun tiedon saavuttaminen, me-hengen syntyminen sekä uudenlaisen konsultatiivisen toiminnan omaksuminen asiakassuhteissa. Tutkimus osoitti seitsemän kriittistä tekijää, jotka vaikuttivat osaltaan eri mekanismeihin: omaksumiskyky, motivaatio, organisaation oppiminen, sosiaalinen kanssakäyminen, luottamus, tulkinta sekä aikaresurssi, joista kaksi viimeksi mainittua olivat uusia löydettyjä tekijöitä verrattuna aiempiin tutkimuksiin. Kunkin mekanismin ja siihen liittyvät kriittiset tekijät vaikuttivat eri tavoin yritysoston jälkeiseen toimintaan eri yksiköissä.

Tutkimuksen merkittävin manageriaalinen kontribuutio oli yrityksen tietostrategian merkityksen ymmärtäminen osana johtamista. Ilmiötä ei kuitenkaan tunnusteta tietointensiivisissä yrityksissä riittävästi. Se parempi ymmärtäminen auttaisi kehittämään yritystä etenkin yritysostojen kaltaisissa tilanteissa, missä kaksi eri tietostrategian omaavaa yritystä yhdistetään. Tällöin saavutettaisiin nopeammin yritykseen yhtenäinen ja tehokas toimintakulttuuri.

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I have achieved one of my dreams; Master's Thesis is bound in black leather. The journey has been quite short and racy including a lot of new knowledge, insight, application, stepping outside of one's own comfort zone many times vested hopefully a little bit of wisdom as well.

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I devote this Master's Thesis to my children Petteri and Katariina. I hope I can be an example of lifelong learning to you. Our family's cat Neptunus, who sometimes jumped on the keyboard and deleted some of my text, cannot be left without acknowledgements either. Well, maybe it was not a good text at all. Finally, I address the warmest and dearest thanks to my husband Kari. You have always understood my requirements of self-fulfilling. It has demanded a lot from you. However, you have always supported me in your own silence way. The value of it is more than gold. Thank you my mate! One step on the ladder of dreams and life is passed. The next is waiting...

Riitta Forsten-Astikainen

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## **1. INTRODUCTION**

The study is a part of the research project InnoSpring Services carried out at Technology Business Research Center (TBRC), Lappeenranta University of Technology. The project is funded by TEKES (National Technology Agency in Finland). The object of the research project is to increase understanding, firstly about the nature and type of service business capability and skills and, secondly, about knowledge transfer mechanisms related to service capability. The research is important because a variety of studies discuss knowledge transfer, but only a few focuses on transfer mechanisms and their appropriateness. The definitions and classifications of mechanisms are scarce because of the complexity of knowledge transfer. There is a lack of studies exploring knowledge transfer in services as well; they highlight the role of experience-based tacit knowledge but the intangible nature of services requires different kind of approach. In the project, this study settles itself under the topic external knowledge transfer mechanisms related to service business and especially acquisition context.

### **1.1 Background of the study**

In knowledge based societies and economies effective knowledge transfer is the base of successful business and value creation related to a firm's growth and viability; this study will research the mechanisms used in knowledge transfer processes in service business acquisition context. All products and services are fundamentally tangible or intangible embodiments of human knowledge and therefore knowledge is nowadays considered to be the fundamental asset and the most strategic input for the sustainable competitive advantage of firms and organizations (Grant, 1996b; Grand & Baden-Fuller, 2004; Kogut & Zander, 1992), and it is the main inimitableness and the most strategically significant resource of the firm (Grant, 1996b). Liebeskind (1996) has defined knowledge as

information the validity of which has been established through test of proof and can therefore be distinguished from opinion, speculation, beliefs or other types of unproven information; therefore knowledge transfer is reasonably linked to organizational development and learning. The aim of knowledge transfer is to organize, create, capture or distribute knowledge and to ensure its availability to other users.

In order to maximize the competitive advantage arising from knowledge, *knowledge must be effectively transferred for firms*. Parallel to this, knowledge transfer is widely emphasized as a strategic issue for organizations competitive advantage and as a source for firm competitiveness (Argote & Ingram, 2000; Jasimuddin, 2007). The main purpose of transfer is the organizations' effective use of resources by transferring e.g. best practices from one unit to another or from one organization to another. Advantage should always be taken of good, effective and economically viable methods, practices and modes. However, there is surprisingly little research about various mechanisms in various contexts which should be applied to different transferring processes (Jasimuddin, 2007).

Knowledge transfer is therefore a process through which one unit or individual is affected by the experience of another unit or individual (Argote & Ingram, 2000). The capability of the receiver to use transferred knowledge must also be taken into consideration (Cohen & Levinthal, 1990). The process approach of Szulanski (1996, 2000, 2003) consists of dyadic exchanges of knowledge between the sender and the receiver, where the effectiveness of transfer depends, to some extent, on the disposition and ability of the source and the recipient and on the strength of tie between them. In this process the organization recreates and maintains a complex, causally ambiguous set of routines in a new setting.

The problem in earlier studies has been a too narrow perspective of the phenomenon called knowledge transfer. The focus has been on

technological approach or related only to research and development function (Bresman, Birkinshaw & Nobel, 1999; Simonin, 1999). Due to this, different circumstances of knowledge transfer have also been missed. Little is known about the situations under which one particular mechanism is the most appropriate and useful and the other one is not (Jasimuddin, 2007). These two factors together constitute two research gaps which this study tries to fill by linking the research questions to service business and acquisition context.

Research activity is a service business sector which is increasingly important to Finnish economy representing nearly two thirds of the GNP. Knowledge-intensive services particularly are a dynamic and rapidly growing area of the service sector. Service can be defined as the application of knowledge and skills for the benefit of another party (Vargo & Lusch, 2008) and services are needs, processes and performances (Zeithaml & Bitner, 1996). This definition means that services are intangible things which cannot be seen, smelled or touched. Service business includes mainly human-related service with tacit knowledge. That is why it is reasoned to criticize previous research as well, because of its technological approach. For example in service business acquisition the human based knowledge transfer mechanisms are very important to convey the new knowledge to the purchase company, it's employees and even customers and other interest groups. Technology is important, of course, but it's role in the new situation is to play more as a background and supporting element.

Acquisition (takeover) is the buying of one company (target) by another. The transaction means a situation in which the purchaser acquires control or share control of another company. In publicly traded shares the buyer must be prepared to pay the market value on the premium. The acquisition is rational if it is implemented and generates economic benefits, synergies. This means that trading partners together form a more valuable entity than they would have as separate units.

According to Kay (1996) acquisitions can be classified into horizontal and vertical groups based on how closely buyer and seller activities are linked. In horizontal transactions parties operate in the same area and at the same time. In this type of transaction the company pursues a larger size. In vertical transaction both parties act in the same industry but with different distribution levels. In this study the case companies operate in vertical transaction, in the same industry, but the financial and organizational size is different between the parent company and the purchased companies.

This study will be a *case study*. One knowledge-intensive company, which has grown rapidly via acquisitions during the last decade and represents a good model of a firm operating in service business sector, was selected as the case. It produces routine expert services and consulting type of services for its B2B customers. The reason for many acquisitions has been a desire to grow strategically, to gain new customers via new units and to get a bigger market share. The strategic growth includes increasing profitability via e-business and new IT products. The case is practically a unique case showing how knowledge transfer process can occur in acquisitions. Some of mergers have succeeded but there have also been quite challenging cases. If these cases are studied it may be possible to find mechanisms which are suitable for receiving the success better. Those mechanisms are like the “soft face” of acquisition; channels through which the parent company begins to transfer knowledge to the subsidiary company.

The theoretical contribution of the study will provide empiric evidence about knowledge transfer mechanisms which are needed in service business acquisition and critical factors related to mechanisms. Managerial contribution of the study will firstly describe and show the most efficient mechanisms which best help the subsidiary companies feel that they fit perfectly in the new company and get all the knowledge they need.

Secondly it is important to show the critical factors related to established mechanisms. The results of this study are also important to the case company itself, because if they are still going to grow by acquisitions in the future, it is important to know which mechanisms are the most effective and useful, and to get a new perspective how to handle takeovers better.

## **1.2 Objectives and problems of the study**

The main objective of this study is to analyze knowledge transfer mechanisms which are needed in service business acquisition. The approach is knowledge flow and from parent company to subsidiary company and necessary mechanisms. To understand various mechanisms a-state-of-the-art literature review was conducted of knowledge transfer mechanisms.

There is a need to pay attention to various mechanisms and Buchel & Raub (2001) identify two reasons for this: 1) organizational members spend more than 70 % of their time managing knowledge by using a wide variety of media and 2) information technology has changed organizational routines and that's why the effective and efficient use of appropriate mechanisms has become an ever more difficult task. Little attention has been paid to the role of technological integration between two companies in acquisition context. Also identification of knowledge strategy has got little or hardly any attention, but the strategy normally defines the use of mechanisms (Hansen, Nohria & Tierney, 1999).

There are two types of knowledge transfer: internal and external. In this study the approach is *external knowledge transfer* because of the foregoing approach; direction of flow. The theoretical background of this study is *knowledge-based view of the firm (KBV)*. The theoretical review will present previous studies and clarify key concepts about *knowledge, knowledge transfer, knowledge transfer process and knowledge transfer*

*mechanisms*. The research framework is constructed of the theoretical framework.

This research used a qualitative research method. In qualitative research the aim is not to make statistical generalizing. The question is more about being able to describe a phenomenon or to understand a certain activity (Eskola & Suoranta, 1998.) A single case study is employed, because the use of the case study approach is reasonable for this kind of exploratory research (Metsämuuronen, 2003).

The pseudonym company Alpha is used as the case organization because it operates in service business; it produces consultation-based accounting services and firmware for financial planning, thus supporting the ability of entrepreneurs and corporate management to make decisions. Regarding the research questions Metsämuuronen (2003) argues that research questions have to explain, describe, specify or replace previous knowledge as well as predict and classify new knowledge.

The main research question of this study is: *what kind of knowledge transfer mechanisms are needed in service business acquisition?* The main research problem can be divided into two sub-questions as follows (table 1):

**Table 1. Research questions and problems of the study**

<b>Research problem:</b>	
<b>WHAT KIND OF KNOWLEDGE TRANSFER MECHANISMS ARE NEEDED IN SERVICE BUSINESS ACQUISITION?</b>	
<b>1<sup>st</sup> question:</b>	<b>2<sup>nd</sup> question:</b>
What kind of mechanisms has been found?	What kind of critical factors are there in knowledge transfer processes?

The study addresses critical to knowledge transfer mechanisms which are used in case acquisitions. The study makes a conceptual contribution to the literature of knowledge transfer and knowledge transfer mechanisms by providing a critical review of the state-of-the-art literature on the above concepts. Because there is no comprehensive and integrated literature of various mechanisms, the results have been collected and grouped together in the table presented later.

The empiric data was collected in *focus group interviews*. Prior to the FG interviews there were two background interviews in the parent firm. Theme questions were composed on the basis of theoretical framework and analysis was submitted against it. The phenomena were studied to understand every merger and all knowledge transfer mechanisms used in case. After that the cases were compared to find pro and distinctive elements related to knowledge transfer mechanisms. Figure 1. illustrates the theoretical framework of the study.

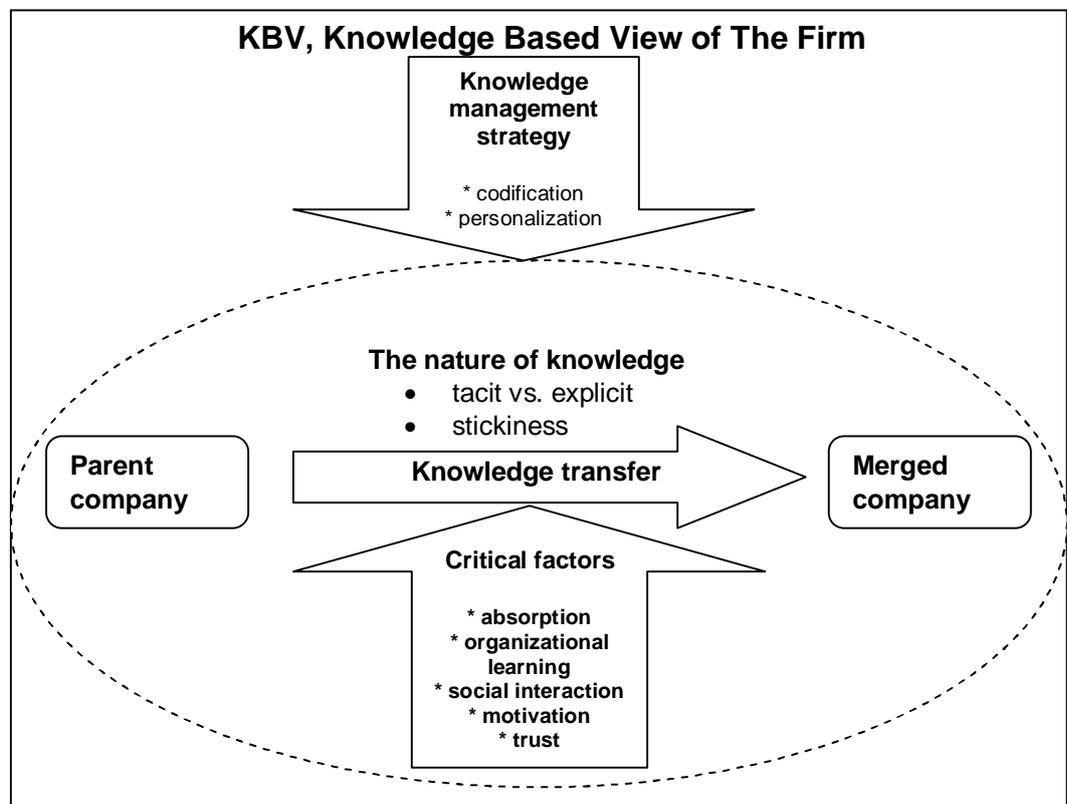


Figure 1. Theoretical framework of the study

### **1.3 Exclusions and the level of analysis of the study**

There are three exclusions in this study. Firstly, the flow of knowledge can occur in both directions between organizations but in this study the research aspect is parallel only from parent company to subsidiary company. Secondly, this study concerns the present state of knowledge transfer mechanisms. The mechanisms can be classified at micro and macro level. Micro level mechanisms are e.g. written documents such as guide books, manuals and model books; official social activities such as meetings and teams; unofficial social activities such as seminars, conferences, visits, mentoring, coaching, benchmarking, storytelling, task circle etc. (Epple, Argote & Devades, 1991; Darr & Kurtzberg, 1996; Ingram & Baum, 1997; Bresman, Birkinson & Nobel, 1999; Jasimuddin, 2007). This study reviews only micro level mechanisms and therefore does not concern macro level such as strategic alliances and joint ventures.

Thirdly, knowledge transfer can be classified as internal and external transfer in organizations, but the distribution is not well-defined. Many studies describe internal and external knowledge transfer alike. In this study only external knowledge transfer is analyzed; knowledge which the parent company transfers to subsidiary companies over the boundaries. The flow of knowledge is studied in one direction only.

The level of analysis is both individual and organizational. In focus group interviews the merged companies' employees talk about their own experiences and approaches as an individual. The organization is collective because of daily work activities, routines and tasks, but acquisition is always a big and significant transaction that affects on emotional level. For this reason it is important that individuals in organization analyze and describe their own experiences, too.

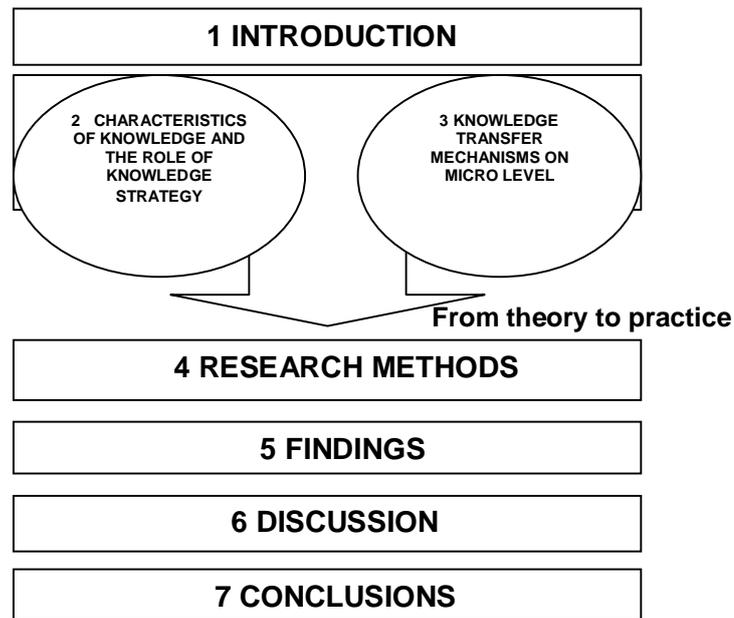
## 1.4. Structure of the study

According to Hirsjärvi, Remes and Sajavaara (2007) qualitative research has the following structure: introduction and arguments why the research topic is important to examine as well as any exclusions, literature review and definition of concepts, methodological approaches, research design, a description of the data, analysis, interpretation, and conclusions and, finally, an analysis of research reliability and validity. This study goes through all the phases listed above.

The framework of this thesis is built on the structure of scientific debate related to knowledge transfer and knowledge transfer mechanisms. Introduction Chapter 1 presents the theoretical background of the study, research questions and the general purpose of the research.

Chapters 2 and 3 present a state-of-the art based literature review (conclusions from the previous research), previous theories and concept definitions of knowledge, knowledge management strategy, knowledge transfer, external knowledge transfer and knowledge transfer mechanisms. Critical factors related to knowledge transfer and various typologies of mechanisms are presented and summarized as well.

Chapter 4 presents research methodology and research design, methods and data collection. Chapter 5 includes the analysis and empirical findings of the study. It describes the nine found typologies of knowledge transfer and the critical factors related to the phenomenon. Chapter 6 includes the discussion where findings are discussed within the theoretical framework and found patterns are analyzed together with previous studies. Also the answers to research questions are given. The chapter also sums up the research. Chapter 7 includes conclusions of research and suggestions of topics for further study. In addition, there are also descriptions of theoretical and managerial contributions and a few proposals for future research topics. Figure 2 illustrates the framework of the study.



**Figure 2. The outline of the study**

The following chapter leads to theoretical discussion and empiric studies related to the main concepts of this study. It is divided into three sub-chapters: definitions of knowledge, knowledge management strategy and knowledge transfer. The main purpose of each sub-chapter is to open concepts deeply and to demonstrate the theoretical background or the critic linked to the concepts.

## 2. CHARACTERISTICS OF KNOWLEDGE AND THE ROLE OF KNOWLEDGE STRATEGY

This chapter reviews the key definitions of knowledge and knowledge transfer strategies which determine a firm's way to create, share, transfer and store knowledge and thus knowledge transfer mechanisms, as well. The concepts are defined as *knowledge management perspective*. Knowledge management is a multidisciplinary research field, but other sectors are defined inappropriate for this study. Key definitions introduced in this chapter include: *knowledge, tacit knowledge, explicit knowledge, stickiness, knowledge strategy and knowledge transfer*.

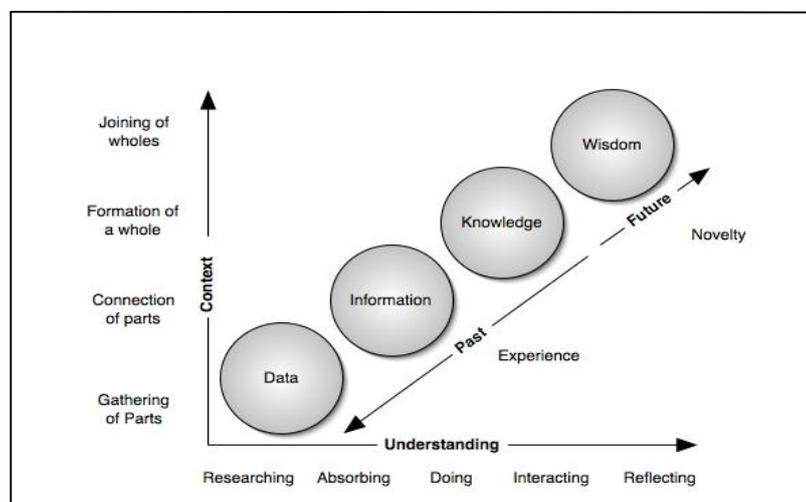
### 2.1 Definitions of knowledge

The definition of knowledge has been developed over a long period of time. The traditional definition of knowledge is as follows: "justified true belief". This idea comes from Plato and from other Greek philosophers. Information is different from mere belief, which is not properly justified, error, which is false, as well as a hypothetical guess, as it lacks the general public approval pursuant to which it is rational to believe (Niiniluoto, 1996). His view of everyday knowledge and scientific knowledge concepts do not necessarily meet the classic definition of knowledge requirements of the truth, even if the truth is, however, like a target of science (Niiniluoto, 1996). It must be remembered, that the ancient Greeks used the data as an example of the geometric information. This "forever unchanged," a permanent information separates clear perception of the modern world of information.

Knowledge can be defined in many ways based on different perspectives (Alavi & Leidner, 2001). In knowledge management literature the concept of knowledge is related to individuals, tacit knowledge, context and as a dynamic perspective (Spender, 1996b). Edvinsson and Malone's (1997) divided knowledge in three parts of intellectual capital: 1) human capital

including staff, creativity, technical skills, business capability, customer capability, selling capability, education, motivation etc., 2) structural capital including management, flexibility, renewal capability, service concepts, innovation etc. and 3) relational capital including customers, networks, brands, images and cooperation. This approach focuses on the fact that knowledge is always embedded somewhere and it occurs indirectly as individuals' competence, organizational structures or human relationships and networks (Edvinsson & Malone, 1997).

Knowledge is commonly distinguished from data, information, knowledge, knowing, intelligence, wisdom and truth (Thierauf, 2001). Data represents objective facts about events and out of special context. Information consists of data within meaningful context or interpretation and it is some kind of form of message. That is why knowledge contains a lot of framed experiences, values, contextual information and insight, which provides a framework for evaluating and incorporating new experiences and information. Knowledge can also be viewed both as a thing to be stored and manipulated and as a process of simultaneously knowing and acting that is applying expertise (Zack, 1999; Blackler, 1995). Figure 3 presents the continuum of understanding by Cleveland (1982), which shows also the implication of context.



**Figure 3. Continuum of understanding (Cleveland, 1982)**

In organizations, knowledge is embedded in documents or repositories and also in organizational routines, processes, practices, and norms (Argote & Ingram, 2000) and there is a relationship between data, information and knowledge; data is raw numbers and facts, information is processed data, and knowledge is authenticated information. As Nonaka (1994) describes, information is a flow of messages and knowledge consists of the information flow.

In general, knowledge can be seen as understanding, awareness or acquired through study, investigation, observation, or experience over a course of time. It is an individual's interpretation of information based on personal experiences, skills and competencies (Bollinger & Smith, 2001). Grayson & O'Dell (1998) define organizational knowledge as what people know about customers, products, processes, mistakes and success. This kind of knowledge is based on databases or through sharing of experiences and best practices. In addition, organizational knowledge accumulates over time.

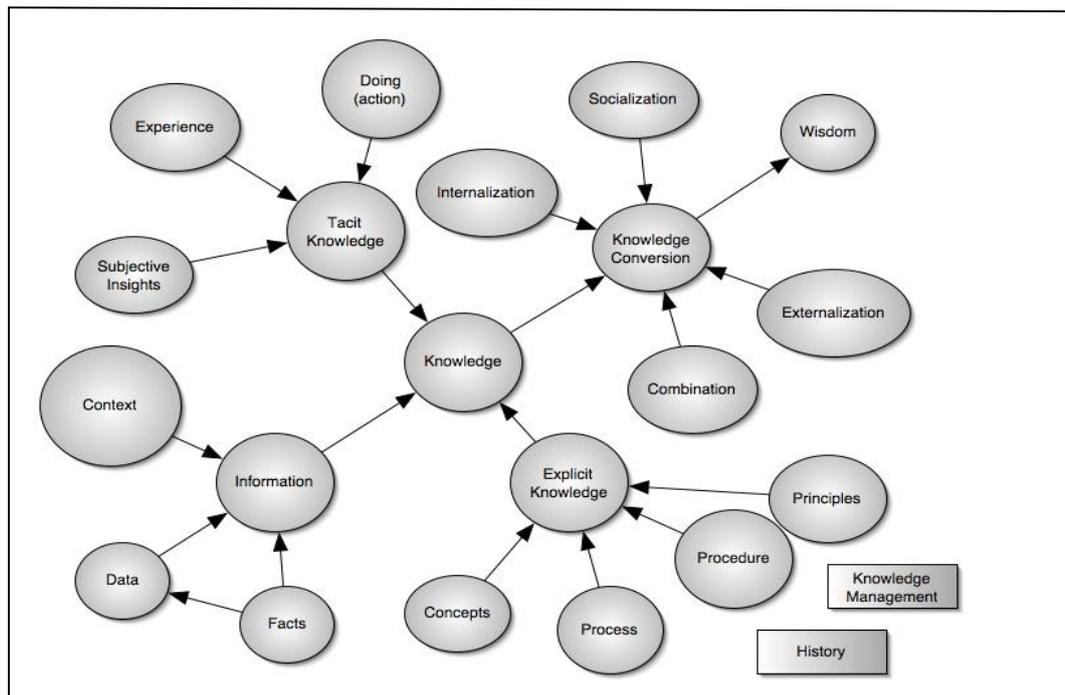
The character of knowledge can be seen from a dynamic view, too. According to Nonaka & Takeuchi (1995) knowledge is a dynamic human process of justifying personal belief toward the truth as well as a process of applying expertise, and it is created in social interactions among individuals. Definition of knowledge includes two classifications: explicit knowledge (information) and tacit knowledge (know-how) (Nonaka, 1994). Explicit knowledge as information implies knowing what something means and it can be written down and codified (Nonaka, 1994). Tacit knowledge as know-how is a practical skill or experience that allows one to do something in an individual way. Tacit knowledge is difficult to formalize and to communicate because it involves cognitive elements (Nonaka, 1994).

The above demonstrates knowledge either as a structural or process approach e.g. objective or functional approach. The structural point of view

focuses on knowledge owned by people and organizations. Nonaka's (1994) SECI model is a good example of structural approach (the model to create new knowledge by tacit and explicit knowledge and conversion as well, where individual knowledge is transferred to organizational knowledge). On the contrary, Spender (1996b) emphasizes the distinction between individual and social knowledge. It is essential in process approach that knowledge has a special social character e.g. the nature of knowledge is social and embedded in practices.

In order to receive competitive advantage firms have to own capability to create, transfer and share knowledge. Creation of new knowledge can occur when accumulated knowledge is combined with internal innovations or new external knowledge. Many companies have challenges to get balance between exploration (search for new knowledge) or exploitation (existing knowledge resources) (Levinthal & March, 1993).

In summary, Wigg, de Hoog & van der Spek (1997) identify knowledge based on several characteristics which differ from other resources. According to them knowledge is intangible and difficult to measure, volatile, increases with use, can be used in various process at the same time, often has long lead times, is usually embodied in agents with wills and has wide-ranging impacts on the organization. Figure 4 presents the knowledge typology map; all elements and factors related to knowledge concept based on literature of knowledge management.



**Figure 4. Knowledge typology map (Cleveland, 1982)**

As mentioned before the definition of knowledge includes two classifications: explicit knowledge (information) and tacit knowledge (know-how) (Nonaka, 1994). In the following sub-chapter the two classifications are presented in detail.

### 2.1.1 Tacit and explicit knowledge

Knowledge has two types: tacit and explicit (Polanyi, 1962; Hedlund, 1994; Nonaka & Takeuchi, 1995). Tacit knowledge is difficult to articulate, develops from direct experience, needs face-to-face interaction and shared experience. However, according to Nonaka & Takeuchi (1995) it is possible to assign tacit knowledge to explicit formal via SECI process. Polanyi (1983) defines both types of knowledge together as interpretation. Allen (2003) explains Polanyi's notions unlike other authors; Polanyi's idea was that human has innate knowledge, cognition and inference capability but, on the contrary, Allen does not agree the idea of interpretation but thinks it is impossible at all to create explicit knowledge via tacit knowledge.

Tacit knowledge is embedded in individual members (Argote & Ingram, 2000) and it includes lessons learned, know-how, judgment, rules of thumb and intuition (Grayson & O'Dell, 1998). Knowledge can also be embedded in an organization's tools, technology, tasks, relationships and in the various networks formed by combining members, tools and tasks (Argote & Ingram, 2000). Davenport, De Long & Beers (1998) explains by saying:

*"Unlike data, knowledge is created invisibly in the human brain (i.e. tacit), and only the right organizational climate can persuade people to create, reveal, share and use knowledge. Data and information are constantly transferred electronically, but knowledge travels most felicitously through a human network."*

Spender and Grant (1996) stress the paradox of tacit knowledge: because the articulation is so difficult, it may happen that the members in organization don't understand enough the nature of tacit knowledge. As a result the interpretation can be wrong and cause problems and costs.

In contrast, explicit knowledge is written and formally articulated (Nonaka, 1994). It is also clearly formulated or defined, easily expressed without ambiguity or vagueness, and codified and stored in a database (Bollinger & Smith, 2001). Even if tacit knowledge is arguably more valuable, explicit knowledge is easy to acquire and can be exploited quickly (Polanyi, 1966) and it is more precisely and formally articulated, although removed from the original context of creation or use (Zack, 1999). According to Polanyi (1983) and Pöyhönen (2004) tacit and explicit knowledge are not opposites but they support each other in building knowledge.

Even there can be difficulties to understand the nature of knowledge, especially tacit knowledge, there is also one factor which related to knowledge. The problem of stickiness, which slows down the transferring of knowledge between sender and recipient, brings more challenges. The following subchapter defines more the phenomenon.

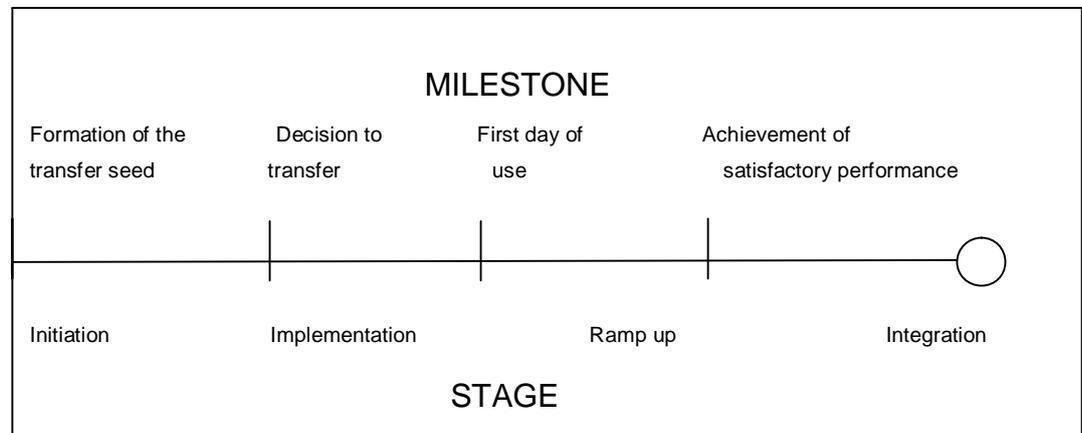
## 2.1.2 Impact of stickiness

Why is it often difficult to transfer knowledge between and within organizations? Or even if the transfer seems initially to be successful, still any impact on the situation may change rapidly. Szulanski (2003) has recognized so called “sticky” and “stickiness” related to knowledge transfer. Stickiness includes the transfer process and it can be predicted by examining a number of conditions relating to knowledge, sources, context and characteristics of the recipient ((Elwyn, Taubert & Kowalczyk, 2007). Adjective sticky has various synonyms such as immobility, inertness and inimitability. Porter (1994) has used the word inert and Foss et al. (1995) has defined sticky as difficult to imitate. Von Hippel (1994) points out, that stickiness is a function of multiple factors including the nature of knowledge and the choices and attributes of its seekers and providers. The same professional group representatives feel stickiness lower than the representatives from a different approach and that is the reason why in the latter case stickiness is higher and the cost of knowledge transfer will increase.

Not just the knowledge but also the actual transfer could be said to be sticky. Stickiness is an attribute to particular transfer of knowledge which reflects both the characteristics of the transfer situation as well as those of the knowledge being transferred. (Szulanski, 2003.). Szulanski (1996) suggests that problems with stickiness come from language barriers, lack of absorptive capacity, casual ambiguity and problems with the relationship between sender and receiver.

It has already been mentioned that it is important to recognize that transfer is not an act but a process (Szulanski, 1999). The nature of transferring process can be slow, costly and unsuccessful. Many problems occur because knowledge is sticky and difficult to move. Szulanski (2003) noticed that the best practices are so difficult to transfer and many

attempts of transfer fail. Szulanski has described so called knowledge transfer milestones (See figure 5).



**Figure 5. The process of knowledge transfer (Szulanski, 1999)**

A diachronic analysis of stickiness points out four distinct stages of a transfer: initiation, implementation, ramp-up and integration (Szulanski, 1999):

- *initiation stickiness* is the difficulty to recognize opportunities to transfer and to act upon them to initiate the transfer.
- *implementation stickiness* is recognized as a decision process. The purpose is to begin a recognizable activity between the source and the recipient. Difficulties occur when there are e.g. communication caps between the source and the recipient, or technical caps. Also poor coordination is a difficulty.
- *ramp-up stickiness* occurs when the recipient begins to use acquired knowledge. The main problem will be identifying and resolving unexpected problems that keep the recipient from matching or exceeding a-priori expectations of post transfer performance.
- *interaction stickiness* occur when satisfactory results are initially obtained and the use of new knowledge becomes gradually a routine.

After defining knowledge and illustrating the factors as explicit and tacit knowledge and stickiness related to the concept, there is still reason to collect the wholeness and view its strategic point of view. The following subchapter defines knowledge management strategy which has a significant role in the whole knowledge management perspective. Knowledge management strategy determines how a firm creates, shares, transfers and stores knowledge, and the strategy affects how to choose right knowledge transfer mechanisms as well.

## **2.2 Knowledge management strategy**

Already Drucker (1968) and Bell (1973) described in due time that the society will in the course of time turn into a “knowledge society”. The predicted evolution has emerged in the 1990s and it is accelerating even more as knowledge-intensive economy expands through global network activity. Knowledge is a critical organizational and strategic resource and a critical factor that provides a sustainable competitive advantage in dynamic economy (Davenport & Prusak, 1998; Foss & Pedersen, 2002; Grant, 1996a; Hedlund, 1994). Spender (1996) describes knowledge as the most important asset of a company:

*“So long as we assume markets are reasonable and the competitive advantage is not wholly the consequence of asymmetric information about those markets, or the stupidity of others, the rent-yielding capabilities must originate within the firm if they are to be the value.”*

Before an organization is able to use resources effectively, it must first identify its knowledge management strategy. How do organizations manage knowledge? There are a lot of techniques and technologies to be used. Some organizations capture preferably explicit knowledge and others collect tacit knowledge through the use of expert systems and artificial intelligence (Bollinger & Smith, 2001).

Management strategies can also link into knowledge transfer. According to Jasimuddin (2008) mechanisms which are used for organizational knowledge transfer can be classified into two groups based on the tacit-explicit dichotomy. Focusing on knowledge-as-a-category they can be called as soft and hard mechanisms. Soft mechanisms transfer tacit knowledge through face-to-face interface. Hard mechanisms represent transfer of explicit knowledge using information and communication technology (Jasimuddin, 2008).

The above mentioned view supports Hansen, Nohria & Tierney (1999). They have divided the knowledge management strategy into two dimensions. According to them some companies automate knowledge management; others rely on their people in sharing knowledge through more traditional means. Authors emphasize that a wrong approach, or trying to pursue both at the same time, can undermine the business.

Many knowledge based firms employ two different knowledge management strategies. In some firms the strategy concentrates on computers. It is called the codification strategy, knowledge is codified and stored in databases where it can be assessed and used easily by anyone in the company (Hansen et al., 1999).

In some firms knowledge is tied to person who develops it and shares it mainly through direct person-to-person contacts. The aim of computers in such companies is to help and support people to communicate knowledge but not to store it. This kind of strategy is called the personalization strategy (Hansen et al., 1999).

According to Hansen et al. (1999) companies, which use knowledge effectively, pursue one strategy predominantly and use another strategy to support the first. The best ratio is 80-20 split: 80 % of knowledge sharing follows one strategy, 20 % the other. Those companies, who try to excel in both strategies risk failing both (Hansen et al., 1999). The company, which

has chosen the codification strategy, can produce to its customer value-added by offering fast, reliability and high quality services to low price. Low cost will improve business efficiency: re-used knowledge reduces costs, save work, reduces communication costs and allows multiple simultaneous projects Hansen et al., 1999).

Person to person based on expertise benefits strategy. It is possible to get higher profits because of high tailoring degree and special expert services. Company can offer very deep services based on special tacit knowledge (Hansen et al., 1999). Naturally the cost to customer is quite high because of special service.

How to choose the right strategy then? One justification is the nature of product according to Hansen et al. (1999). The codification strategy is justified when the product is a mass product, less tailored or otherwise simple. Simple knowledge is easier to change into information and further codify. High tailoring degree, expertise or complex product need more personal petting and the knowledge is very difficult to change of informational and codify. Foray (2004) presents partly the same criteria as Hansen et al. (1999) and adds the development of company and structural possibilities i.e. both strategies are a possibility to implement.

Scheepers, Venkitachalam & Gibbs (2004) have criticized Hansen's et al. (1999) conclusions. Scheepers et al. (2004) suggest that 20/80 strategy combination is not enough but the choice of the strategy should be seen as a "journey". According to them there is no prevailing strategy journey starting from one point. A company just chooses another strategy and begins to strength it in its organization. Between the main strategies there should be a small but a growing part of another strategy. Scheepers' et al. (2004) idea is that the goal of journey is an efficient share of both strategies.

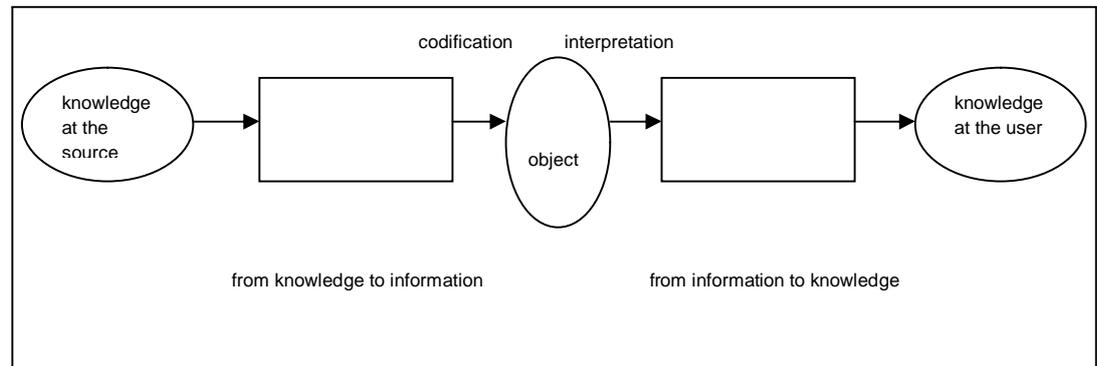
## 2.2.1 Codification strategy

Codification strategy focuses on connecting people with content through technical networks, developing added value that supports organizing, applying and transferring knowledge. Codification makes the content organized, portable, explicit, and understandable. Codification is the way to save and codify knowledge as databases or user guides, work schedules or benchmark data. Knowledge is codified using a “people-to-documents” approach (Hansen et al., 1999). Conversion from knowledge into information is an essential part of codification (Cowan, 2001). The purpose of codification is to disseminate and develop both “know-how” and “know why” knowledge in right place and at right time (Hansen et al., 1999). The codification strategy is assumed to be successful for the companies whose business strategy requires re-using existing knowledge (Hansen et al., 1999; Malhotra, 2004). Figure 6 presents a schematic illustration of the knowledge codification process.

Codification strategy is justified when:

- Written knowledge products, such as doctrinal manuals, exist.
- Similar knowledge is required
- The explicit knowledge relates to similar categories and formats
- Products or services are standardiz

Garavelli, Gorgoglione & Scozzi (2002) have demonstrated the codification process as follows: the holder of knowledge codifies knowledge in various databases using his own cognitive skills. The user of knowledge seeks the knowledge in database and processes the knowledge using his cognitive skills. At this point information in databases has changed into knowledge or is still information. This depends on the user of knowledge and his needs. What is he doing with knowledge and what is the context? If the information is needed to solve new problems, then information has changed into knowledge (Garavelli et al., 2002).



**Figure 6. A schematic representation of knowledge codification process (Garavelli, 2002)**

This approach gives a possibility to search for and retrieve codified knowledge without having to contact the developer of knowledge. That gives a possibility to achieve scale in knowledge reuse (Hansen et al., 1999).

### 2.2.2 Personalization strategy

Personalization strategy focuses on developing social networks, informal teams and communities, to link people with tacit and explicit knowledge. Tacit knowledge is distributed through managed conversation. Personalization means providing creative problem solvers – individuals with the tacit knowledge to solve one-off problems means to identify and communicate effectively with other experts (Hansen et al., 1999). The modern technology sets the strategy a new approach. Thus, the purpose of personalization strategy is to use computers just to help people communicate knowledge, not to store it. Technology just helps people to communicate their knowledge; personalization strategy is to transfer, communicate and exchange knowledge via knowledge networks.

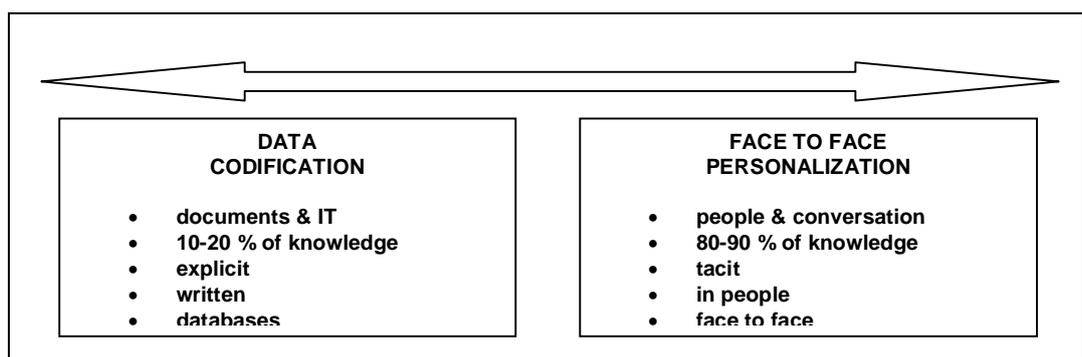
Personalization strategy is justified when:

- Innovation is required
- Knowledge to solve different types of problems, for example cultural awareness, is needed

- Highly customized knowledge to meet particular needs is required
- If knowledge is not easily codified, for example expertise and experience for a special task

Personal contacts, meetings and brain storming are the most valuable ways to achieve knowledge. The process can proceed slowly, knowledge is often very complex, tacit and transfer by codification is impossible. This strategy provides creative, analytically rigorous advice on high-level strategic problems by channeling individual expertise (Hansen et al., 1999).

In summary knowledge strategy consists in the way to use and to transfer knowledge: whether to put emphasis on explicit (hard) or tacit (soft) approach. Knowledge strategy determines the focus of company's practices linking content or linking people. Without any knowledge strategy implementations will undermine impact and effectiveness. One aim of knowledge strategy is to support knowledge creation and knowledge transfer and give priority to one over the other. Figure 7 illustrates the idea of knowledge strategy and the factors to be considered.



**Figure 7. Spectrum of knowledge strategies**

The above summary presents well in advance the indicators and approaches affected to knowledge transfer which is characterized in the following sub-chapter. So it is time to analyze one of the main concepts of this study; knowledge transfer and related important critical factors.

## 2.3 Knowledge transfer

This chapter presents the constructs of knowledge transfer and various types of it as well as some findings of knowledge transfer as a process. There is also a short description of difference between internal and external knowledge transfer. Finally, the most critical factors related to knowledge transfer have been introduced, too.

Knowledge transfer has been defined in several ways and is often used as a general term of an organizational knowledge interaction. Knowledge transfer can be seen as the communication of technology and knowledge from one agent to another, to locations where knowledge is needed and can be used (Hedlund & Nonaka, 1993; Hong et al. 2009). According to Argote & Ingram (2000) knowledge transfer in organizations is the process through which one unit is affected by the experience of another. It is a part of knowledge management related to individual and organizational activities and is transferred at many levels: between individuals, from individuals to explicit sources, between and across groups and from group to the organization (Alavi & Leidner, 2001), and movement of knowledge across the boundaries created by specialized knowledge domains (Carlile & Rebentisch, 2003).

The value of knowledge transfer is notified involving in globalization and beginning of internalization of companies. Intense of competition and the pace of change are involved as well. According to Hedlund (1986) and Barlett & Goshal (1989) knowledge transfer over organizational boundaries to alliances subscribed the rise of new ideas and re-stimulation of old scheme of things. Successful knowledge transfer occurs when transfer results in accumulating or assimilating new knowledge in the receiving unit.

Although there is no transparent theory in literature concerning knowledge transfer, few researchers describe and deal the concept as such. Kalling

(2003), Murray & Peyrefitten (2007) and Dixon (2006) emphasize that the theory of concept of knowledge transfer includes mainly describing the nature of process. Numerous theoretical approaches have made their own contribution to the analysis of the concept as RBV (resource-based view of the firm), KBV (knowledge-based view of the firm), dynamic capabilities view and organizational learning theories.

Each theory has tried to understand the phenomena related to knowledge transfer process and to classify the key factors. According to Szulanski (2000) the factors can be divided into four groups: knowledge characteristics, disseminative capacity, absorptive capacity and relationship characteristic between senders and recipients. Minbaeva (2007) proposes that characteristics do not explain the process alone, but the features of senders and recipients are more important. In organization where employees have superior skills and competences in absorptive capacity and knowledge sharing achieved significant results in knowledge transfer. The degree is the higher the closer relationship has been developed between sender and recipient (Minbaeva, 2007).

### **2.3.1 Characteristics of knowledge transfer**

Stähle & Grönroos (1999) have stated that know-how, impacts of relationships and the flow of knowledge are constantly interacting with each other in the organization. Knowledge flow requires active relationships between people and a propitious structure to transfer of knowledge. Without the knowledge flow between people organizations committed competence is not possible to grow. Szulanski (1996) confirms this; internal knowledge flow is embedded in organizational context.

Theoretical approaches try to explain the promotional and preventive factors that affect the transfer of knowledge. The vast majority of empiric research speaks about accomplished transfer (von Hippel, 1994; Szulanski, 1996). The theory is also described as “product quality” or

“performance effect” (Ingram & Baum, 1997; Levin, 2000; Tsai, 2001; McEvily & Chakravarthy, 2002). Accomplished transfer has been measured in many ways. Measuring is based on either individual evaluation of successful transferring (Szulanski, 1996) or how routines have progressed e.g. costs of labor per production unit (Epple, Argote & Devadas, 1991).

To understand the nature of knowledge is critically important because understanding helps organizations and firms create share and transfer knowledge. Organizations possess specific knowledge, skills, abilities and competencies which play a critical role. As Argote & Ingram (2000) have noticed knowledge transfer in organizations is the process through which one unit is affected by the experience of another. It can occur explicitly, e.g. a unit communicates with another unit about a practice that it has found to improve performance. When knowledge transfer occurs implicitly, the recipient unit is not able to articulate the knowledge it has acquired. (Argote & Ingram, 2000.)

Argote & Ingram (2000) argue that the organization’s members can be motivated either intrinsically or by exterior routes. Knowledge can be transferred by moving a knowledge reservoir from one unit to another, or by modifying a knowledge reservoir at a recipient site. In organizations members and technology can be moved from one unit to another and routines can be transferred from one organization to another. The reservoirs at the recipient unit can also be modified through communication and training (Argote & Ingram, 2000). Knowledge transfer involves either active communication with others about things one knows or consulting others about matters one wants to learn of (Hooff & Ridder, 2004).

Dixon (2000) proposes that there are five knowledge transfer forms within organizations. *Dixon’s typology* is described in the following table 2.

**Table 2. Knowledge transfer forms according to Dixon (2000)**

<b>KNOWLEDGE TRANSFER FORM</b>	<b>DESCRIPTION</b>
Serial transfer	frequent, non-routine tasks including explicit and tacit knowledge
Near transfer	frequent and routine tasks using explicit knowledge
Far transfer	tacit knowledge transferred socially; frequent and non-routine
Strategic transfer	once-off projects, where tacit and explicit knowledge is shared among managers to complete a task
Expert transfer	generic and explicit knowledge is transferred from an expert source inside/outside to solve problems

Knowledge transfer is a very generic term; however, many studies describe its nature as an important factor in knowledge based firms (von Hippel, 1994). The more tacit knowledge and complexity, the harder transfer process is (Argote & Ingram, 2000; McEvily & Chakravarthy, 2002). The more knowledge is included in the causes and consequences of ambiguity, the harder transfer is (Szulanski, 1996). According to Szulanski (1996) there are ambiguities associated with the tacit knowledge transfer process because it involves exchanges between individuals and the mutual communication. Ambiguity also increases both the sender (Foss & Pedersen, 2002) and the recipient's (Gupta & Govindarajan, 2000; Tsai, 2001) cognitive skills. The most difficult part of the knowledge transfer area is associated with interactivity between people, tasks and tools. Therefore, knowledge is both a challenge and an opportunity (Argote & Ingram, 2000).

Knowledge can be divided to internal and external knowledge transfer. In literature the distinction is unclear but in the firm and organization context the definition can be seen as follows: internal knowledge is knowledge which flows inside the firm and organization. External knowledge flows from the outside into the company; i.e. the flow of knowledge exceeds the boundaries of the company. Argote & Ingram (2000) defines the same

concept describing knowledge transfer explicitly and implicitly: explicit flow can occur for example when a unit communicates with another unit about a practice that it has found to improve performance. On the contrary, implicit flow can take place for example when an individual uses a tool that has been modified to improve its performance and an individual can benefit from the productivity enhancement of the tool without necessarily understanding the modifications.

There is a controversy among researches about the question whether there are relevant geographical and regional facts. E.g. according to Saxenian (1994) and Audretsch & Feldman (1996) the local character of knowledge flows is important, because it allows the ideas flowing easier between firms operating in adjacent areas. That means that the geographical social relation affects the nature of knowledge flow. Amin & Cohendet (2004) and Giuliani & Bell (2005) argue the phenomenon to be exactly opposite. According to them the external knowledge flow is a learning process which cannot be limited by geographical or regional differences. However, it is clear, that the rapid development of communication tools has reduced the importance of companies and organizations physical distance (Howells, 2000).

Generally speaking the external knowledge transfer across organizational boundaries is difficult. There are many reasons e.g. 1) organization's own expertise may be better than in another organization 2) the diversity of capabilities, culture, structure or technology 3) intrinsic difference in the experience of knowledge transfer (Minbaeva, 2007). The same factors affect both the external and internal knowledge transfer. Transferring is possible only if there is a close relationship between the sender and the recipient: communication bridges, debates over the possibility of the organization hierarchy, the opportunity to team learning and the opportunity to get the organization to learn and share knowledge (Levitt & March, 1988; Argyris & Schön, 1996).

The purposes of firms are to obtain tacit knowledge which usually related primarily to hiring, research and development cooperation as well as informal networking. Particularly the interaction between the sender and the recipient is the key mechanism for external data assimilation and transfer (Malecki, 2000). The rapid development of communication tools has reduced the companies and their various organizations needs to physical interaction (Howells, 2000). Advanced techniques and technologies enable more and more as the transfer of explicit knowledge, such as tacit knowledge, codification, and thus the transmission from one place to another.

The intangible nature of knowledge transfer causes many problems and important aspects. Transfer aspect shows e.g. problems with tacit knowledge, problems with organizational culture and problems to understand the importance of interaction and motivation. Looking at the firm's aspect there seems to be the similar domain knowledge, similar structures and systems, experience, ability to use new knowledge and time dimension to transfer. The relation aspect consists of social ties and trust between sender and receiver.

### **2.3.2 Knowledge transfer as a process**

At the most general level knowledge transfer can be seen as a process of communication. Every single process has to function before the knowledge can be transferred to share (Dyer & Nobeoka, 2000). According to Kalling (2003) knowledge transfer means in its context process where the members of organization learn from each other without integration to environment. The process of knowledge transfer is related to situated cognition; the knowledge is bounded in social context and interaction relationships (Argote & Ingram, 2000; Nonaka, Toyoma & Konno, 2000; Tsai, 2001; Szulanski, 1996, 2000, 2003) and firms are social communities which have expertise to create and transfer knowledge as a process (Kogut & Zander, 1993).

The theory of knowledge transfer tries to explain the phenomenon as a driver of function or an inhibitory of it. But there are many various approaches to the object. Main studies describe the object as an accomplished transfer (von Hippel, 1994; Szulanski, 1996). Meanwhile Ingram & Baum (1997), Levin (2000), Tsai (2001), McEvily & Chakravarthy (2002) talk about product quality or performance effect.

Hoffman (2008) proposes that knowledge transfer requires at individual level such mental models which the other party is able to understand and that is why disseminate processes describe different types of roles. Parties are equal during the process. Definitions of Szulanski (1996, 2000) support Hoffman's ideas. Szulanski (1996, 2000) supplements the process as follows: organization creates a new complex and causal relationship through unclear routines. The purpose is to create completely new routines which serve the task of organization by using senders and recipients common understand of knowledge transfer. The benefit of the process is to develop organizational learning. Possible difficulties can be noticed immediately as well.

Shariq's (1999) approach is that knowledge transfer as a whole is an interactive and dynamic process, also modifying of knowledge during the process is fundamental. Because transferring of tacit knowledge is difficult and depending on individual capabilities and context, the value of successful transfer process in organization is very high (Shariq, 1999).

In summary, it can be said that process model describes continuity. Organization maintains and re-creates a complex of routines in context. The benefit of the process is that it draws attention to right issues. The process defines how relevant the systematic effort is. It helps to observe the complex situation, as well, and gives an opportunity to stocktaking and improving operations.

The next question is where knowledge transfer occurs? The first step has been transferring knowledge inside the organization. Intra-organizational knowledge transfer has been researched already since 1970's (Pavitt, 1971; Vernon & Davidson, 1979), but Zander (1991) and Szulanski (1996) took a broader approach to the concept in question: there is also an external aspect in knowledge transfer. Between internal and external transferring there is a third stage: inter-organizational knowledge transfer between organizations within informal networks, communities of practice and groups of individuals. External knowledge transfer occurs inside the company in relation to the operating environment, from the outside of its borders to the inside of the company. In literature there have been limitations related empiric research because external knowledge transfer has been studied mainly in multi-national companies (Minbaeva, 2007; Gupta & Govindarajan, 2000; Hong & Nguyen, 2009; Björkman, Barner-Rasmunsse & Li, 2004; Foss & Pedersen, 2002), international acquisitions (Bresman, Birkinshaw & Nobel, 1999; Empson, 2001; Castro & Neira, 2005), strategic alliances (Simonin, 1999) and teams (Oshri, van Fenema & Kotlarsky, 2008). Small companies and the approach of flow from parent company to its units are lacking completely.

A few critical factors are related to knowledge transfer. They affect each in different ways in transfer process and in sender and recipient action. Absorptive capacity is a critical factor in external knowledge transfer (Van Wijk, Jansen & Lyles, 2008; Szulanski, 1996; Kogut, 1988; Pak & Park, 2004) and interaction between sender and recipient (Malecki, 2000). Also Szulanski (1996) argues that without absorptive capacity the organizations are not able to function. Kogut (1988) stresses organizational learning and Pak & Park (2004) motivation. In the following subchapter describes five most active critical factors based on literature and empiric research.

### 2.3.3 Critical factors in knowledge transfer

Transfer of knowledge involves many critical factors that appear in literature whether it is question about internal or external knowledge transfer. In addition, critical factors appear also as micro-level activities such as two co-operating or merged organizations between global multinational companies and organizations. Based on the literature the following critical factors are the most important: *absorptive capacity, organizational learning, social interaction, motivation and trust*. Table 3 summarizes the typology of studies on critical factors based on literature review.

**Table 3. Critical factors related knowledge transfer according to literature**

Absorptive capacity	Organizational learning	Social interaction	Motivation	Trust
Minbaeva (2007)	Argote&Ingram (2000)	Hansen (1999)	O'Dell&Grayson (1998)	Bromiley&Gummings (1996)
O'Dell&Grayson (1998)	Zander&Kogut (1995)	Szulanski (1996,2000, 2003)	Hansen (1999)	Blomqvist (1997, 2002)
Zhao&Anand (2009)	Zsai (2001)	Sveiby (1996)	Szulanski (1996,2000,2003)	Warkentin&Beranek (1999)
Zsai (2001)	Argyris&Schön (1996)	Zsai (2001)	Minbaeva (2007)	Das&Teng (1998)
Reagans & Mc Evily (2003)	Argote,Ingram,Levine&Moreland (2000)	Hoffmann (2004)	Dyer&Nobeoka (2000)	Jones&George (1995)
Szulanski (1996)	Darr&Kurzberg (2000)	Stähle&Grönroos (1999)	Osterloch&Frey (2000)	Cotigan,Iter&Beraman (1998)
Simonin (1999)	Garvin (1993)	Argote&Ingram (2000)	Zhao&Anand (2009)	Gilbert&Tang (1998)
Cohen&Levinthal (1990)	Granovetter (1973)	Granovetter (1973)	Graham et al. (2006)	Morgan&Hunt (1994)
Gupta&Govinda-rajan (2000)		Foss&Pedersen (2002)	Stein&Ridderstråle (2001)	

#### Absorptive capacity

Absorptive capacity (absorption) is an organization's or an individual's ability to recognize the value of external knowledge, embrace it and change it to common use (Szulanski, 1996; Simonin, 1999; Cohen &

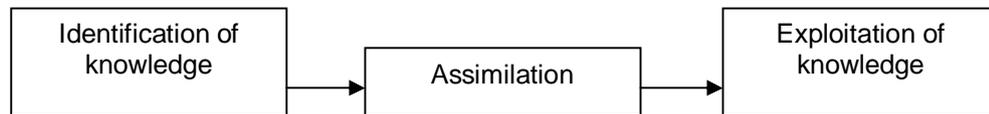
Levinthal, 1990). It depends on organization members own capacity and it is not a cumulative feature in the organization but depends on relationships between individuals and internal and external knowledge transfer. Organization's absorptive capacity is dependent on individuals who are involved, either in another company or external environment. Cohen & Levinthal (1990) describe the organization of separate "gate guards". When a few people have the role of gate guards, other members of the organization are so exempt from observing the business environment. But this could cause difficulties in rapidly changing uncertain fluctuations. In this case, absorptive capacity depends not only on the gate guards, but also on experts to whom knowledge is sent.

The value of the stocks of knowledge is a critical element in transfer. The more valuable is the stock of knowledge located, the more willing the recipient is to receive and use the knowledge (Gupta & Govindarajan, 2000). In this case, absorptive capacity is decisive only if somebody wants to receive the knowledge.

Absorptive capacity and internal communication may occur in balances. If all in organizations share the same specific knowledge, they can communicate effectively and they do not necessarily achieve the diversification of external knowledge. The result could be even NIH-phenomenon (not-invented-here) which could lead to complete blockade. People's understanding of overlapping levels of internal communication is needed, but the diversification of knowledge between the members in organization is necessary and useful (Cohen & Levinthal, 1990).

The communication of knowledge transfer relates to transmission of recipient requirements, absorption of individual or group, and willingness to change (Davenport & Prusak, 1998). Bender and Fish (2000) relate the transfer of knowledge to the recipient and the recipient's knowledge, absorption and transformation. Recipient may be a single person or group and the aim is always that knowledge transfer should lead to changes in

behavior, new ideas, processes and practices in order to make it a valuable organization (Bender & Fish, 2000). In summary, the absorption process has three stages which are illustrated in figure 8.



**Figure 8. The three stages of absorptive capacity**

Absorption and organizational learning are closely interwoven together i.e. acquiring new knowledge and common practices into a context of learning where knowledge is accumulated and shaped by organizational learning. The following subsection describes in detail organizational learning.

### **Organizational learning**

Knowledge transfer between organizations is one of the most important forms of organization-level learning. (Argote, Ingram, Levine & Moreland, 2000). Transfer of knowledge is a dynamic process of learning, where one unit of organization's ideal experience affects another unit. The unit may be an individual, group, department or division. Organizational learning is a possible addition to individual's own experiences and even indirectly, the experience of others (Argote et al., 2000; Argote & Ingram, 2000).

Organization's internal knowledge is typically very context-related and at least partially hidden. Individuals in organization itself may not even be aware of the fact that they have all the knowledge which they have accumulated during their experience. Argyris & Schön (1996) consider that organizational learning of individuals is an outgoing process. Organizations cannot learn unless individuals work in a manner that promotes learning. The organization often has more knowledge than its individual members. Generally, organization's knowledge is ,however, less than its members', because all latent intellectual capital has not been raised. (Argyris & Schön, 1996; Argyris, 1999). According to Senge

(1994), an important factor in organizational learning is organization's members unconscious thought patterns that govern their activities.

Zander & Kogut (1995) and Tsai (2001) emphasize the individual's capability to learn in order to spread knowledge in the organization and through a common learning. In addition, learning capability directly affects the knowledge transfer speed in. Large and complex organizations such learning takes place partly as a social process (Tsai, 2001).

Knowledge transfer is one of the organizational learning mechanisms. It could encourage new methods and practices of innovation which thus can be included in routines and organizational culture (Darr & Kurzberg, 2000). The organization is not always identified at the individual and organizational level as an item of knowledge or practices as such a valuable asset which should be transferred into knowledge (Argote & Ingram, 2000). Identification is also difficult because of individuals personal tacit knowledge, argumentation and sharing is difficult and sometimes impossible (Nonaka et al., 2000). Organizations should acquire such information especially what they have not yet held (Argote & Ingram, 2000; Szulanski, 2000). Knowledge transfer is one aspect of organizational learning, which may be established by acquiring new knowledge from outside the organization (Garvin, 1993).

In summary, if organization has capability to learn, its members must act with social relationships and thereby contribute to knowledge acquisition and transfer into organization. The following subsections describe the social interaction as well as strong and weak ties, which are considered to be an important factor in finding new information (Granovetter, 1973).

### **Social interaction**

According to Tsai (2001), the organization's capability to transfer knowledge depends on its member's capability to keep relationships with

each other, mutual interaction and sharing of experiences and information. The more organizations are exchanging information and the more knowledge is transferred in every direction through social relations, the better the competition and the company is regenerative (Tsai, 2001).

Transfer of competence (know-how) requires the knowledge source and its recipient. Since tacit knowledge is difficult to change to words or taught from others to codify, knowledge transfer is primarily a social activity. It requires social processes such as sharing, interpretation and finally maintenance and retention. The aim of the process is stability of knowledge even if e.g. staff will changes (Argote et al., 2000) Ståhle and Grönroos (1999) argue that tacit knowledge can be transferred only through the adoption and speech because the modification of tacit knowledge into words is difficult and it is often uneconomic as well. Instead, the success takes quite well place visualizing with various ways and the interpretation should be done by mutual discussion (Ståhle & Grönroos 1999). This is the way to a common understanding of the matter and finding the interpretation of contact related to organizational context.

The members in same organization are similarly compared to various organization members (Argote & Ingram 2000). This is due; inter alia, the organizational culture and "in-house ways of learning." Similarity facilitates the transfer of knowledge interaction in demanding situations and the protection of knowledge where the transfer outside the organization can be difficult. The value of process, assertion and transfer protection contribute the competitive advantage as well. Protection of knowledge is also the fact that skills are transferred to persons who are likely to be a source of the organization and are ready to commit it (Argote & Ingram, 2000).

The utility of weak ties in social interaction is based on inclusions of acquisitions of useful information (Granovetter, 1973). Socially broader people are more important for the flow of information. People form variety

forums, close social groups. There is a direct and strong link between the members; bridges between each other. Within a single group one member has weak ties to other people and other groups. Strong and tight social ties represent continuously maintainable friendship relations as a close circle of friends or workplace. Less frequent are friends and familiar who represent weak links. In closely familiar community the same knowledge shall be distributed and transferred.

Via *weak ties* through other forums or communities it is possible to receive entirely new knowledge. New knowledge, new ideas, possibilities and perspectives are spread more easily through weak ties. (Granovetter, 1973). Communality has been found through networks research and the importance of strong ties related strongly to it. Strengthening of relations and development of networks require members confidence and willingness to cooperate (Nahapiet & Ghoshal, 1998).

Cognitive capability is a critical factor related to senders and recipients of knowledge. Foss & Pedersen (2002) emphasize both as well as the source of knowledge and the recipient's capability to transfer, Gupta & Govindarajan (2000) and Tsai (2001) only the recipient's capability. Tsai (2001) proposes that the organization's capability to transfer knowledge affects firstly the capability of different levels, and secondly the capability of each individual's mutual interaction and sharing of experiences and experience circulation. The more organizations exchange and transfer knowledge in every direction through social relations, the better competition strength the company has (Tsai, 2001).

Organizations and individuals should own enough absorption and functional social relationships but if they do not have the motivation to transfer knowledge, all the valuable knowledge will remain dark and untapped. In the following subsection the significance of motivation as a critical factor in knowledge transfer has been analyzed.

## **Motivation**

At individual level motivation can be divided either external or internal motivated individual. Externally motivated workers satisfy their needs indirectly in form of financial compensation. There, however, lies a risk of opportunism when an individual does not prejudice any longer (Osterloch & Frey, 1999). Transaction costs theory tries to set institutional constraints that prevent the excess of moral hazards and opportunistic behavior (Williamson, 1996). Internally motivated individual pays attentions to the future needs of herself; self-motivation is in itself significant. Internal motivation is a source of activity, individual goals and personal identity (Osterloch & Frey, 1999).

Osterloch & Frey (2000) argue that the organization's members may be motivated either individually or routed to the outside. Different kinds of organizations allow different motivation and different capacities to produce and transfer knowledge. Since knowledge generation and transfer are essential to the firm's sustainable competitive advantage, it is important to analyze the different types of motivation for effective knowledge transfer support. To achieve a strong motivation it requires high level of social participation in joint practices and personal relationships with members of organization (Osterloch & Frey, 2000). Also various individual skills and abilities related factors contribute to motivation (Zhao & Anand, 2009).

Knowledge transfer problem may be lack of motivation because individuals may not clearly understand the importance of company's business and its strategy or the meaningful application of best practices (Szulanski, 2000). "Stickiness" (sticky, the cost of which knowledge transfer to another area resulting) appears as the reluctance and lack of motivation to share and receive knowledge, ignorance of the fact that knowledge can be interesting and valuable to someone, and the inability and unwillingness to themselves to acquire new knowledge and store it in organizational memory ( Goh, 2002; Szulanski, 1996). Von Hippel's

(1994) concept of "knowledge stickiness" describes what the cost of transferring knowledge to another is suffering. In a team consisting of members of the same profession knowledge stickiness is low whereas in groups representatives various profession knowledge stickiness is high and the transfer costs are increasing.

In literature, however, the role of motivation is partly contradictory. The vast majority of researchers consider motivation as a critical factor. Stein & Ridderstråle (2001), referring to Polanyi (1962), suggest that the problems related to motivation such as reluctance to absorption and knowledge sharing rather related to social interaction, substitutability, documentation, tolerance, communication, and fluctuations in desire. Although Gupta & Govindarajan (2000) consider the motivation as a driver of knowledge transfer especially and the source of knowledge, a part of the studies did not confirm it. However, the reason may be that the phenomenon has not been studied enough, or research results have not been considered important enough (Kalling, 2003). Szulanski (2003) argues that numerous studies have found no clear link between motivation and transfer of execution. Szulanski (2003) believes that cognitive and relationship factors are more important and that's why he suggests that it would be better to encourage learning and internal relations instead of supporting motivation.

Szulanski (2000) justifies the criticism of the fact that his opinion matters very motivated adopters might aggravate the problems of transfer process, because they can combat the possible assistance before their time, focus on the seemingly clear patterns to important projects, render superfluous models which would help to make visible the owners of the role and status and to show hidden resentment towards others, or move to new practices in a bad moment, just because they do not know how to manage their enthusiasm.

In the last decade the role of trust and motivation has become more important in firms and organizations inter function and both internal and

external relationships. The following subchapter deals with the role of trust related to knowledge transfer process.

## **Trust**

The importance of trust in teams and organizations is significant and undeniable. According to Morgan & Hunt (1994) and Bromiley & Cummings (1996) trust in workplace relations promotes cooperation, reduces conflict, increases commitment to organization and reduces intentions to withdraw from the organization and the company. Trust reduces complexity, opportunistic behavior, uncertainty and transaction costs (Blomqvist, 2002). In business context trust related expectations of validity of another actor and his benevolence (Blomqvist, 1997). Jones & George (1998) describe the benefits of trust as follows: roles broaden, creation of common relationships, creation of high trust between other people, ability to request assistance, open communication, shared prosperity setting their own needs ahead of high binding.

People have trust, but trust in property is not always trust to other persons, but may also relate to non-personified subjects, for example, another organization, department or company and its leadership (Blomqvist, 2002).

Trust is a critical factor in problem solving, organizations functionality, communications between organizations and receiving feedback. (Warkentin & Beranek, 1999). It is based on the experiences and social learning and it develops progressively; the first impression has a significant role. Trust is also vulnerable and sensitive. It can be difficult to generate, slowly evolving and easy to lose. Trust can also develop and create; it requires work and effort in the organization and it does not come free (Das and Teng, 1998; Blomqvist, 1997). According to Jones & George (1995), trust arises gradually in three stages: motion, conditional trust and unconditional trust. Parties' cooperation towards a common goal

determines the conditional trust. It is based on knowledge and expectations of another's activities. Absolute trust is based on common values, common the same joint sitting.

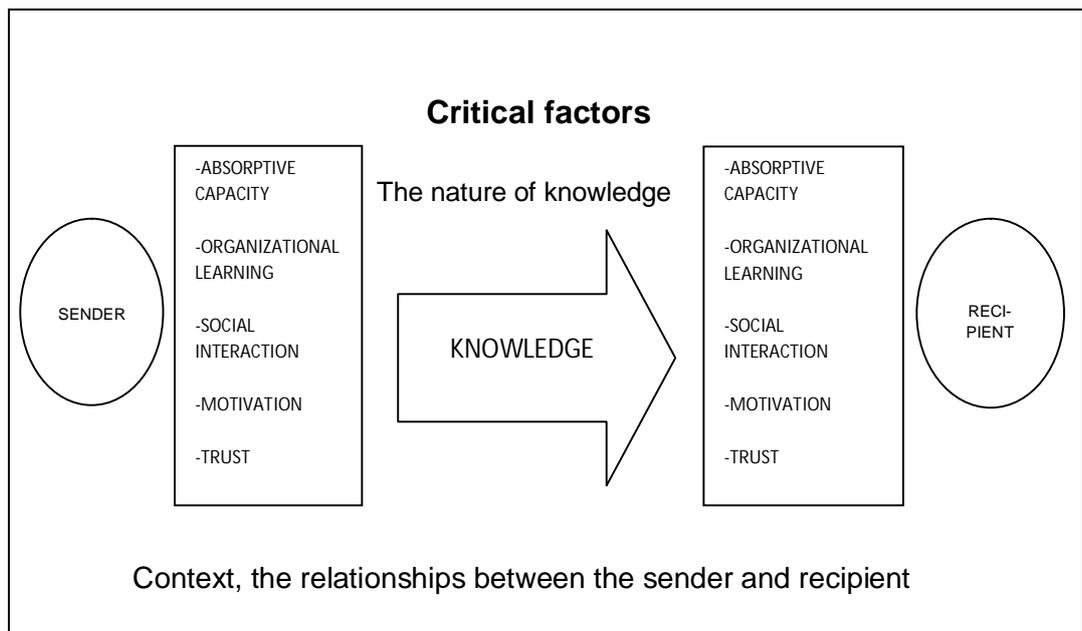
Trust inside the organization can be divided into personified and non-impersonal trust (Costigan, Iter & Berman, 1998). Impersonal trust is based on trust between humans. A person may be assessed by competence, benevolence and integrity approach. Non-impersonal (organizational trust, institutional trust) is based on organizations way of acting as a reliable organ (Costigan et al., 1998). At the enterprise level trust is based on the company's good reputation and resources, which, therefore, is partly a matter of trust between business persons. (Blomqvist, 1997.) According to Mayer et al. (1995), there are two types of individuals; person count and trusted. The purpose of the model is to achieve the willingness to show own activity to the other party. The basic idea is wait that the other party acts in a certain way. It does not matter if there is possible control.

Ability to trust is according to Mayer et al. (1995) the most important attribute of knowledge transfer between units. Gilbert & Tang (1998) propose that there are the four basic elements affecting trust: open communication, employees' inclusion in decision-making, critical knowledge sharing and sharing of feelings and expectations. An important non-personifies trust factor is communication.

The role of trust in transferring knowledge via technology is challenging. It is comparable to the role of trust in virtual teams, communication and knowledge transfer context. Leidner & Järvenpää (1999) have examined trust, the development and maintenance of it in global virtual teams. They argue that there are three factors which affect to the development of trust: 1) team activities should be based on a common objective and problem-solving, 2) the development of trust requires support to the team

members, which in turn requires that the group participates and commits itself, 3) the group must be successful and it has impact on team interaction, roles, strengths and common rules. Supporting team members and well-being of the team has a direct impact on relationships and trust development in the team. (Leidner & Järvenpää,1999).

Critical factors demonstrate the multi-dimensional and generic character of the concept. There is interplay between various critical factors forming a causal relationship and even dependencies of each other. In summary, figure 9 illustrates the knowledge transfer process related to critical factors between sender and recipient.



**Figure 9. Knowledge transfer process and the critical factors**

After the organization has identified and defined knowledge which is critical to it, it can use a knowledge transfer mechanism to acquire particular knowledge. The following chapter 3 describes distinction between different mechanisms, nature of various mechanisms and classifications to be made on the basis of literature.

### **3. KNOWLEDGE TRANSFER MECHANISMS ON MICRO LEVEL**

Knowledge transfer mechanisms have not been studied as a single homogeneous mechanism system. Main research findings relate to the mechanisms of individual or macro-level mechanisms (hybrid mechanisms) for multi-national knowledge transfer between firms in the process descriptions. The concept of mechanism is not exactly defined in the literature. Based on the literature the descriptions of knowledge transfer mechanisms can be defined as policies, models or new institutions through which knowledge can be transferred at individual, organizational and enterprise level. The nature of mechanisms depends on context and is multidimensional. Some of the mechanisms are based on the way people are working, some mechanisms are purely regulated and some have a predetermined approach.

A few knowledge transfer mechanisms have been in use for a long time and they have proven effective elements such as face to face communication, mentoring, learning model, different training programs, codified knowledge documents in form of manuals and guides negotiations and training. The 1990's technology has enabled new kinds of mechanisms that companies and organizations introduce at accelerating pace. Existing literature is, however, written mostly before technology empowered new mechanisms. New mechanisms such as internet, intranet, mobile phone, skype, instant messaging, etc. are described only in a few written articles from the early 2000 (Foss & Pedersen, 2002; Peyrefitte & Murray, 2007; Hong & Nguyen, 2009; Ambos & Ambos, 2009; Gorovaia & Windsperger, 2010). Articles relate to knowledge transfer mechanisms in multi-national corporations, alliances, strategic partners, and between virtual teams.

Knowledge transfer can occur in several different models and at different levels in various business units or subsidiaries. Ultimately, the transfer

process may take place at the level of hierarchical governance or in another extreme, it can be purely market driven between two independent companies (Bresman, Birkinshaw & Nobel, 1999).

It has been said many times that context is an important factor in knowledge transfer process. Geographical or functional proximity of individuals helps strengthen the communication between different parts of company. Generally, successful transfer of knowledge between departments occur as personal appointments, meetings and telephone conversation (Epple et al., 1991; Ingram & Baum, 1997), intensive interactive practices such as department or company cross border meetings and appointments and participation in various events (Hoopes & Postrel, 1999 ). Communication tools richness (interactive mechanisms such as cooperation in conferences, workshops and other human close features) contribute to the process significantly (Gupta & Govindarajan, 2000) as well as a pre-existing relationship networks, which contribute to the organization's members in their activities, tools used and each members tasks (Argote & Ingram, 2000 ).

The success of knowledge transfer process can also be evaluated through interaction relationships, ease of communication and single strategy approach (Szulanski, 1996; Tsai, 2001). In addition, network between recipients of knowledge, where communication is linked across unit boundaries, transfer of knowledge is seen as a positive. In this case reliability of knowledge can be seen as critical factor (Tsai, 2001).

Information richness theory will examine what knowledge transfer processes related to communication mechanisms are effective when communicating with various degrees of ambiguity (Daft & Lengel, 1984, 1986, 1988). Effective knowledge transfer requires the compatibility between communication mechanisms and information process (Sheer & Chen, 2004).

The conditions in process of information vary directly due to function ambiguities. "Richness" is consisting of the communication mechanisms four attributes: feedback capability; the availability of cues such as voice, body, gesturing, words (availability of multiple cues); the language variety; as well as feelings of self-concentration and personal focus. The more mechanism has access to these attributes, the higher the degree of IR mechanism is, and the greater is the capacity to handle ambiguity and, therefore, the greater the knowledge transfer capacity. A relatively high IR with knowledge transfer mechanism applies to operate face to face interaction and teamwork as appointments, meetings, trainee, seminars, workshops, visits and audio conferencing. Low IR level of knowledge transfer is licensed in written media, manuals, reports, databases, pattern rules, and electronic media (Gorovaia & Windsperger, 2010).

Face to face communication is the richest of mechanisms, because in situations there is a possibility to direct exchange of experience, multiple exchange of information and communication, immediate feedback and personal influence. Impersonal written documents, databases and listings are printed on the lowest level of information richness. This level is not possible to provide feedback (Gorovaia & Windsperger, 2010).

Information richness theory can be summarized as follows: the higher the role of ambiguity is, the richer knowledge transfer mechanisms are needed for effective knowledge transfer (Daft & Lengel, 1984). If the transferred knowledge is as an explicit codified knowledge, sufficient the low degree of IR (LIR) is enough to efficient knowledge transfer. If the knowledge is tacit and difficult to codify, the higher the need for knowledge transfer mechanism of IR (HIR) is. Teece (1985) has argued that tacit knowledge is extremely difficult to transfer without teaching, observation and presence of motion. The more the growth of tacit knowledge is, the wider knowledge transfer capacity is needed, and therefore a higher degree of knowledge transfer is needed for effective IR transmission process (Gorovaia & Windsperger, 2010).

Argote (1999) and Kogut (1999) argue that rich mechanisms which include a lot of information facilitate both explicit and tacit knowledge transfer between them due to complementarity. In other words, the more there is removable tacit knowledge, the higher the degree of IR must be (Daft & Lengel, 1984).

Knowledge transfer mechanisms between organizations have many various forms for example training programs, mentoring, social activities, recycling of key personnel in different organizations, recycling of documents and various routines to symbolize the data and transfer it to the receiving organization (Argote, 1999). Organizations reciprocity allows the comparison of different knowledge systems and thus encourages it to obtain comprehensive information about their surroundings. In this way structures of transferring can be further developed (Sammara & Biggiero, 2008).

Hislop (2003) refers to three mechanisms of knowledge transfer:

- intensive team-based interaction
- formal education
- dissemination and utilization of formal documentation

Also von Krogh et al. (2001) suggest that it is necessary to have concrete learning targets. In that case both sender and receiver of knowledge can assess the value and applicability of knowledge. Von Krogh et al. (2001) continue that even knowledge needs to be transferred effectively and efficiently, but knowledge transfer is a mechanism to be used selectively because not everybody needs to know everything at all times.

Cummings & Teng (2003) have identified nine successful knowledge transfer variables (drivers), namely articulability, embeddedness, physical distance, knowledge distance, norm distance, learning culture, project priority, organizational distance, transfer activities and transfer success. Variables can be incorporated to four contexts as SWOT table (Table 4).

The nine drivers can be divided under four contexts which are based on specific challenges under consideration.

**Table 4. Knowledge contexts (Cummings & Teng, 2003)**

<p><b>The Knowledge Context</b></p> <ul style="list-style-type: none"> <li>• embeddedness</li> <li>• articulability</li> </ul>	<p><b>The Relational Context</b></p> <ul style="list-style-type: none"> <li>• organizational distance</li> <li>• physical distance</li> <li>• knowledge distance</li> <li>• norm distance</li> </ul>
<p><b>The Recipient Context</b></p> <ul style="list-style-type: none"> <li>• the project priority</li> <li>• the learning culture</li> </ul>	<p><b>The Activity Context</b></p> <ul style="list-style-type: none"> <li>• the transfer mechanism</li> </ul>

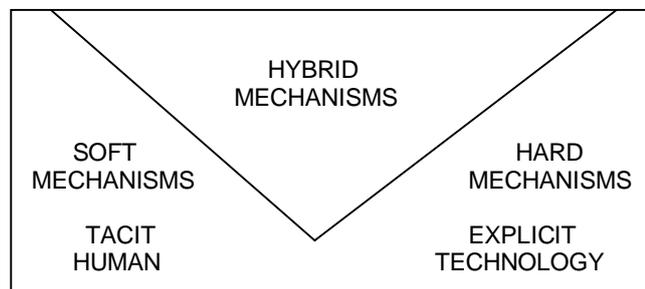
Although knowledge transfer is a challenge and it is modeled as a process or not, it is needed to realize practical methods and guidelines as well as the right conditions. According to DeLong (2004) methods can be either direct or indirect. Indirect methods often deal with some kind of media, when the information is edited and preserved for later use. In indirect methods it is not generally possible to question the received knowledge because the recipient does not know the sender. Direct methods are generally consist of personal interaction, which may be contributed by technology (DeLong, 2004). In modern-day businesses and organizations information technology has become an effective, economical and rapid knowledge transfer facilitator.

Bresman's et al. (1999) study shows that external knowledge transfer is a significant contributor to personal communication such as visits and meetings. Gupta & Govindarajan (2000) emphasize personal communication, but also the richness of communication mechanisms; informality, transparency and communication density.

Jasimuddin (2008) argues that there are strengths and weaknesses in all mechanisms available for the transfer of knowledge, so called “hybrid” approach which is a kind of combination of soft and hard approaches. In this context, Gupta and Govindarajan (2000) propose the followings:

*“To be both effective and efficient, transmission mechanism must be tailored to the type of knowledge being transferred. When it comes to transmission mechanisms, “effectiveness” refers to whether the receiver actually receives what the sender has sent; “efficiency” refers to the cost and speed of the transmission channels. Document exchange is a highly effective and efficient mechanism for sharing codified knowledge. It is often highly ineffective, however, for transmitting tacit knowledge. Conversations and the transfer of people, by contrast, are relatively inefficient mechanisms for sharing codified knowledge. But, for transferring tacit knowledge, they may be the only effective mechanisms.”*

Dixon (2000) exhorts not to trust using technology too much to replace face-to-face interaction in knowledge transfer. She recalls that the use of technology to replace face-to-face conversation has only had limited success. Figure 10. displays knowledge transfer mechanisms incorporating a hybrid approach.



**Figure 10. Appropriateness of knowledge transfer approach (Jasimuddin, 2008)**

## **Micro level mechanisms**

There are many ways to classify various mechanisms at micro level: internal vs. external mechanisms, human vs. technology mechanisms, explicit vs. tacit mechanisms and structural vs. un-structural mechanisms. Micro-level mechanism is a knowledge transfer mechanisms between two or more companies or organizations and directly concerns both people and technology. On the contrary, macro-level mechanism relates institutions and systems including alliances, strategic partnerships, joint ventures, acquisitions, and virtual teams. The following micro level knowledge transfer mechanisms are described briefly through various classifications. All classifications are divided into “soft” and “hard” mechanisms.

### **Internal vs. external mechanisms**

Classification means the various mechanisms in a company which are used only inside the company (internal) or focus on mechanisms outside the company (external). Therefore the context determines mechanisms (Easterby-Smith, Lyles & Tsang, 2008). As shown in table 1 almost all mechanisms can be applied within a firm or between organizations. Mechanisms can be codified information or an individual associated with knowledge transfer as benchmarking, joint problem solving or mentoring.

External mechanisms, in turn, are those that refer to the outside of a firm. For example, conferences and seminars are external mechanisms, which are organized outside the enterprise environment, and knowledge flows into the firm through organizational participants. External mechanisms can be classified in the firms' stakeholders such as suppliers, customers and competitors (Escribano, Fosfuri & Tribo, 2009).

In acquisitions and strategic alliances organizations need to establish some sort of new common format before knowledge can flow across

organizational boundaries (Hagedoorn & Narula, 1996). When organizations merge into one, the new organization can gradually begin to apply internal transfer mechanisms instead of external mechanisms.

### **Human vs. technology mechanisms**

Technological breakthrough has enabled the introduction of new technical knowledge transfer mechanisms. In this case transfer processes were strategically better targeted and disseminated best practices in the right places (Goh, 2002). Traditional mechanisms such as explicit instructions, manuals and documents are transferred quickly nowadays by technology. Increasing virtuality stresses Internet, company's internal intranet, mobile phones, various instant messengers, and at any location meetings as video conferencing.

However, it is undisputed that knowledge transfer between people is essential, particularly in case articulate and codified tacit knowledge. Meetings, negotiations and across organizational boundaries placed connections are traditionally successful ways to knowledge transfer (Epple et al., 1991, Darr et al., 1996, Ingram & Baum, 1997). The richness of communication channels as well as consistent mechanisms in collaboration, teamwork and we-ness enable successful transfer process (Govindarajan & Gupta, 2000). Model of learning, mentoring, coaching, benchmarking, work recycling and general social interaction and learning are purely objective human-driven activity, which is mutually difficult to change into explicit or technologically forwarding form. Ambos & Ambos (2009) describes the same phenomenon as a personal coordination mechanism (PCM) and technology-based coordination mechanisms (TCM).

### **Explicit vs. tacit mechanisms**

Knowledge transfer mechanisms can also be divided according to how much each mechanism is related to a clear and concrete action,

instruments (explicit) or tacit, empiric knowledge, which is aimed to transfer at individual level.

Lubit (2001) has listed a number of mechanisms how tacit knowledge can be transferred to an explicit, conscious form. Mechanisms are also suitable for external knowledge transfer among other things acquisitions, where the combination of the two organizations takes place:

- working together with an expert making the findings and learning from coaching
- team-working and networking as in the form of brainstorm
- storytelling, both positive and negative
- developing routines and their testing for suitability in various circumstances, and in certain circumstances proven routines for dissemination throughout the organization

The promotion of both external and internal knowledge transfer either at the individual level or in groups and organizations can in each situation take place in two ways: try to keep moving people and tasks or try to modificate people's paradigms. The recycle of tasks can be done either in unit or from one organization to another. Technology enables the exploitation of external knowledge transfer effectively when it is used between organizations (Lubit, 2001).

SECI-model (Nonaka & Takeuchi, 1997) is a well known theory of knowledge creation and transfer. In socialization tacit knowledge is collected from the inside of community and also sometimes from outside as well. The decisive factor is a direct interaction with people in order to obtain the most recent tacit knowledge. Tacit knowledge capital is built up gradually and systematized. At the initial socialization systematized tacit knowledge disseminates and transfers directly to colleagues and with players such as ideas, pictures, images, different operating practices and in the form of metaphors. Externalization means the articulation of tacit

knowledge, ideas and images said in words, concepts, analyzes, metaphors and analogies. The goal is the conversion of tacit knowledge in general and commonly understandable form.

Combination is the integration of newborn, new public knowledge to earlier knowledge, but also the pre-data collection and networking. Combinations goal is to disseminate the public knowledge. That is why the public knowledge is formatted in documents such as plans, reports, publications, etc. Internalization means that the public knowledge assimilating through practice and at the same time new concepts, methods, strategies and innovations are testing. Public Information internalized gradually simulations, exercises and experimentation. (Nonaka, 1997).

Public Information is internalized gradually using simulations, exercises and experiments. Finally, new concepts and practices are merging to operation and converted back to a silent notification of tacit knowledge. According to Nonaka (1997) it is necessary for successful conversion procedure to have genuine development efforts, sufficient autonomy of actors, organizational and functional variation in both randomness and diversity chaotic (Nonaka, 1997).

Hansen (1999) has suggested that the tacit knowledge and the strength of social ties (weak or strong) have a connection. He has stated that because the network of weak ties is inexpensive to maintain, so in such networks, there is usually an explicit transfer of knowledge. In other words, the stronger ties, the more tacit knowledge contributes in some way or another, to transfer to others. In general, social relationships with strong ties lead to greater circulation of knowledge (Ghoshal, Korine & Szulanski, 1994; Hansen, 1999; Szulanski, 1996). Strong ties are expected to be justified to use in order to ensure knowledge seeker looking for the opportunity to get access to knowledge (Hansen, 1999).

## **Structural vs. non-structural mechanisms**

Knowledge transfer process can be divided into structural and non-structural process. Structural transfer mechanisms are formal, structured, and intentional, and they require precise knowledge (Szulanski, 1996). For example, precise instructions, guide books and documentaries of codified information representing the structural mechanisms. Szulanski (1996) presents a best practice model knowledge transfer mechanism as follows:

- *exploration*; problem identification, exploration of related knowledge and after finding the necessary knowledge outpouring to implementation into the organizational learning process
- *learning*; problem-solving related knowledge included to the recipients, and hence the organization's functions
- *practice*; settlement related knowledge "ramp up" to ensure that the knowledge of the recipient in organization is aware of the options and starts taking advantage of best practices
- *integration*; application of best practice sharing with others and the purpose is to begin to generate new practical activities.

Non-structural mechanisms are informal and difficult to predict. They are based on spontaneity and they proceed according to a rule (Chen & McQueen, 2008). Non-structural knowledge transfer is essential to the success of the organization (Davenport & Prusak, 2000) because it is intrinsically linked to daily routines. In this case, as well as the knowledge source and recipient is often the same "arena" and will be able to share common practices immediately. For example, model learning, mentoring, coaching, storytelling, a common problem-solving, and various social activities represent non-structural mechanisms.

Here are three non-structural knowledge transfer areas, which generally relate to businesses and organizations daily activities (Chen & McQueen, 2008):

- *unstructured copy*; this means copying the respective situations and selectively transfer them to own purposes. Knowledge is based on the sources such as libraries, archives, databases or imitation of special work performance. Knowledge is then more explicit than tacit, and it includes an essential part of acquiring knowledge absorption and motivation to each situation to find the necessary knowledge sources (Chen & McQueen, 2008).
- *unstructured adaptation*; this means the situation when the data is not able to find because of changes in the environment of knowledge. Businesses and organizations fast cycle changes affect everything, including the storage of knowledge. In this case, tacit knowledge is becoming increasingly important because it moves automatically to the members of the organizations involved (Chen & McQueen, 2008). Also Nonaka (1994) argue that individuals collect tacit knowledge itself directly from their experiences.
- *unstructured fusion*; the new knowledge generated by the group process in which individuals who have different levels of knowledge meet to exchange knowledge. In such circumstances, it is possible to create radically different knowledge. This type of mechanism requires the participants the experience of new knowledge creation and absorption as well as to receive the tacit and explicit knowledge (Chen & McQueen, 2008).

In table 5 knowledge transfer mechanisms are classified into four different categories on the basis of literature. The mechanisms are those described the most in the literature. The classification is done in pairs: *internal vs.*

*external, tacit vs. explicit, human vs. technology, and non- structural vs. structural mechanisms.*

**Table 5. Classification of knowledge transfer mechanisms**

MECHANISMS	Internal	External	Tacit	Explicit	Human	Techno-logy	Struc-tural	Non-struc-tural
<b>Written documentations</b>								
• manuals	x	x		x	x	x	x	
• guides	x	x		x	x	x	x	
• model books	x	x		x	x	x	x	
• rules	x	x		x	x	x	x	
<b>Cycles of documents</b>	x	x		x	x	x	x	
<b>Official social activities</b>								
• meetings	x	x	x	x	x	x		x
• teams	x	x	x	x	x	x		x
• powwows	x	x	x	x	x	x		x
<b>Unofficial social activities</b>								
• seminars		x	x	x	x	x	x	
• conferences		x	x	x	x	x	x	
• visitings		x	x	x	x	x	x	
<b>Coaching</b>	x	x	x		x	x		x
<b>Mentoring</b>	x	x	x		x	x		x
<b>Benchmarking</b>	x	x	x		x	x		x
<b>Storytelling</b>	x	x	x		x			x
<b>Common problem solving</b>	x	x	x		x	x		x
<b>Informal social activites</b>								
• lunches	x	x	x		x	x		
• coffee breaks								
• leisure								
<b>Task cycle</b>	x		x	x	x		x	

Knowledge transfer mechanisms can also be divided into so-called macro (hybrid model) mechanisms. These include alliances, joint ventures, strategic partnerships, licensing agreements, acquisitions, mergers and teams (Bresman et. al., 1999; Oshri, van Fenema & Kotlarsky, 2008). This study focuses on only micro-level mechanisms because of research proposals introduced in introduction.

The theoretical part of this study ends now. The framework is presented and the objectives described via literature and now it is time to move to the methodology part. The following chapter 4 introduces methods and data collection for empiric research. After the methodology part chapter 5 presents the analysis of the study and finally discussion and conclusions are written in the end of this thesis.

## **4. RESEARCH METHODOLOGY**

This chapter explains the research methods applied in this study. The empiric part of the study was carried out qualitatively in four merged companies. The parent company participated in the InnoSpring Service – project. All the merged companies represent the same industry producing consultation-based accounting services and firmware for financial planning.

### **4.1 Background descriptions of the cases**

Knowledge transfer in acquisitions brings up a justified question: what types of knowledge are transferred and why in the acquisition context? The parent company wanted that all units implemented its concept at every level. All units under the name of case Alpha should function in the same way with customers and the quality of service should be the same. Even the parent company and merged units operated in same industry, the organizational cultures, practices and routines varied between them. Economical aspect, coherent image and operational management are the basis factors in unification of different units. It is done by transferring the knowledge the parent company considers necessary. In these cases the types of transferred knowledge could be divided into two categories: structural and cultural. The categorization depended on managerial approach and the nature of knowledge.

The transferred knowledge related to the parent entity, its organizational culture as a team based organization, IT systems, internal CRM models and sales orientations, various incentive systems and external HRM&HRD practices etc. which related to company's strategy and on the another hand the customer relationships like customer promises for strategic value.

Table 6 summarizes the types of knowledge being transferred, managerial aspect and the nature of knowledge.

**Table 6 Summary of the types of transfer knowledge**

<b>Managerial aspect</b>	<b>Types of transferred knowledge</b>	<b>Nature of knowledge</b>
Management/structural	Modes of organizing (team) Organizational culture HRM&HRD practices Incentive systems B2B service software ERP system Intranet Documents and reports (know-what)	Explicit
	IT-processes	Tacit
Leadership/cultural (customer relationships)	Organizational culture CRM model HRM&HRD practices Customer-related processes Coordination processes (know-whom)	Explicit

## 4.2 Qualitative research and case study

The research design based on the aim of the study and was a case study in which the interviewees were carried out within B2B service providers units. The scope of the study was four different units which were merged to parent company Alpha. The research questions and the theoretical framework of the study determined the methods which were chosen.

Qualitative research methods are applied in this study to provide a knowledge transfer mechanisms and related critical factors which can be identify in acquisition context. As Richie (2003) state qualitative research provides a unique tool for studying what lies behind, or underpins, a decision, attitude, behavior or other phenomena. Richie (2003) proposes that certain subjects are so difficult to capture or the concept is e.g. intangible, difficult to understand, that carefully planned qualitative research and especially research questions help participants understand

better the phenomena and research problems. The objective of the study was to collect as rich data as possible and find out new mechanisms and critical factors,; the qualitative research was the best method. The aim is to study the phenomenon from an unprejudiced and fresh, yet justifiable baseline (Alasuutari, 1999).

The case study was the best way to understand the phenomenon of knowledge transfer, process and mechanisms because the subject was abstract (Richie, 2003). Firm Alpha was strongly growth-oriented B2B service provider and suitable case because of its many acquisitions in the near future. The investment in IT, customer relationship management and team-based organizations offered unique case to research the acquisitions closer. Efficiency, willingness to develop the firm and family-like organizational atmosphere were the insignificant factors as well. Furthermore it could offer versatile units all over the country. Geographical aspect gave possibility to get not a site-specific data, which may be of interest. All merged companies were small firms operating within the same B2B service industry. The case group wasn't homogeneous and that was one reason to select the Alpha to case setting of the study.

As Yin (2003) has mentioned, case study can be seen as an investigation of a contemporary phenomenon within its real-life context. The case Alpha was practically an unique case showing how knowledge transfer process occurs in acquisitions. The research strategy involves a case study using detailed, intensive information about an individual case that focuses on contemporary events (Yin, 2003; Hirsjärvi et al., 2007). As Koskinen, Alasuutari & Peltonen (2005) has state a case study of one company enables focusing. When only one company is selected, it can be studied thoroughly. The embedded case study design is used in this study because more than one unit of analysis is involved (Yin, 2003). Even though the case study involved one company Alpha, the analysis includes four different units and their managers and employees.

All four cases were unique: in two cases the unit was combined of several different companies, in two cases the unit manager was “an old entrepreneur”, also the seller of combined company, in two cases the unit manager was an old employee, in one case the software and system changes didn't occur, in two cases all changes were occurred and in one case the unit didn't have to change the systems and software at all.

This study was conducted at service business acquisition level and the scope of the study was the four cases in the same industry, which gave the proper sight to the researched field. The type of the study was abductive. It means that firstly the theory was the first source of knowledge and the research proceeded from theory to empirical research (Eskola & Suoranta, 2003). This study was based on theoretical framework which determines partly what methods were chosen and which themes appeared in the theory. Secondly, after the interviews, the research literature gave an opportunity to recognize various themes which were the base for future classification. In other words this study is a combination of themes found in theory and themes found through interviews.

### **4.3 Data collection**

According to Ritchie (2003) the data can be collected in qualitative research e.g. via observation, in-depth interviewing, group discussions, narratives and the analysis of documentary evidence. Ritchie (2003) proposes that it depends on research questions what kind of method is suitable.

The purpose of this study was to find what kind of knowledge transfer mechanisms were used in service business acquisitions, what were the possible critical factors affected to process and what kind of impacts the selected mechanism caused. Eskola & Suoranta (2003) argue that the amount of data depends on subject. The collected data is enough when the saturation point begins to form.

In this study the data was collected through *focus group interviews and theme interviews*. Hirsjärvi, Remes & Sajavaara (2007) argue that interviews are a good method if the object of the study is less studied. Further, a theme interview mainly elicits interviewees' opinions and leaves the researcher's perspective in the background (Hirsjärvi et al., 2007). Open theme and narrative interviews are suitable to get as rich data as possible. Another the sub-question was formulated so that even the researcher knows the literature of the subject; she wants the answers to come up during the interview situation. If the interviews don't tell about the same factors that are mentioned in literature, it will be some kind of result, too.

Theme questions offer also a possibility to get new aspects and relations which could not be imagined purely based on theoretical framework (Alasuutari, 1999). The benefit of theme interviews is also the possibility to make follow-up questions. And when there is a trust between the researcher and interviewees and thus have opportunity to share unpleasant things (Alasuutari, 1999). In this study the theme interviews pointed out the role and types of knowledge and how it was transferred from the parent company. The interview sessions gave a possibility to tell openly and reflect the situations and experiences widely.

A focus group is not only a collection of individual interviews. Interaction between group participants forms the basis for data collection (Finch & Lewis, 2003). According to them the role of the researcher is to present the different themes which the group can go through. The interviewer is like a guide, who is like a monitor, and if necessary, probes the discussion. It is important to achieve interaction between participants and the aim is to receive a rich discussion flow. The focus group method is justified also if there are dense sets of observations readily available (Berg, 2004). In this study focus group interviews were used to concentrate the discussion on

the types of knowledge, purpose of knowledge transfer and critical factors related to transfer process.

The research design was based as follows: firstly, two background interviews in parent company; Chief Executive Officer (CEO) and Human Resource Manager. The aim of these two interviews was to get background information generally of acquisitions and firms methodology to take the new company as a part of parent company. The interviews also gave information and knowledge about several critical factors which are important and effective to the process of acquisition. The interview themes were the followings: the general framework consisted of all kinds of knowledge transfer mechanisms in acquisition context and critical factors related to knowledge transfer. The first question included the themes of definition of transferred knowledge and the analysis if some knowledge is more important or more urgent than another. The second theme related to models of transferring and the analysis of better or worse models. The third theme consisted of critical factors related to transfer process and the fourth theme related to the impact of used mechanisms. The used interview themes are presented in Appendix 1. These interviews were limited off the analysis itself, i.e. they acted only as background information through interviews.

In the second stage more interviews were carried out in four merged companies. The CEO and Human Resource Manager selected those four firms. The only precondition was that the acquisitions had occurred in the close past (under 2-3 years) so that employees can remember all issues and details related to the event. The selected four companies are located all over the country. Advance information was the year of purchase of acquired companies and the number of staff. In addition companies were selected on the basis of merging outcome; two of the selected firms got well immediately after the merger, two other units not so well. But it was unknown which of those companies were successful and which were a little more challenging.

The amount of interviewees in each focus group were around 3-6 persons together. The goal of the interviews was to probe deeply into the research phenomenon by describing, understanding and interpreting those knowledge transfer mechanisms which were the best and the most successful in service business acquisition context. To achieve the trust the units received in advance a *cover letter* which pointed out that the unit in question was not in itself the research goal but the goal was the phenomenon that occurred in the unit during the acquisition. Table 7 illustrates the information received through.

**Table 7. Information on made interviews**

<b>Interviewee</b>	<b>Type of interview</b>	<b>Number of interviewees</b>	<b>Amount of transcribed data</b>
CEO	Background interview (individual theme interview)	1	15
Human Resource Manager	Background interview (individual theme interview)	1	14
Unit Manager 1	Individual focus group interview	1	12
Unit group 1	Focus group interview	5	19
Unit Manager 2	Individual focus group	1	9
Unit group 2	Focus group interview	5	30
Unit Manager 3	Individual focus group interview	1	9
Unit group 3	Focus group interview	3	14
Unit Manager 4	Individual focus group interview	1	9
Unit group 4	Focus group interview	6	21
<b>Summary of interviews and data</b>		<b>25</b>	<b>152</b>

The primary interviews were conducted in May and June 2010. The research design proceeded in a way that the unit manager was interviewed first and then a staff group. Both were asked the same question themes. Interview time was approximately 1, 5 hours in formal

meeting rooms and was designed to power point presentation which was shown during the interviews. The interview themes are seen in Appendix 2. The interviews were tape recorded.

The interview themes were built in the following way: the first question was a background question. The interviewees told, based on their own experiences, what kind of knowledge the parent company started to transfer immediately after the acquisition. The first theme considered operational models (mechanisms) of knowledge transfer and their familiarity to employees. The second theme considered operational models in more details; whether the models were suitable and useful to interviewees and how they were applied to work. The third theme consisted critical factors related to the success of knowledge transfer. The fourth theme involved interviewee's estimates on what is easy or difficult in the performance of knowledge transfer. The fifth theme considered data systems and the model of customer relationship; developing of both. The last theme offered a possibility to give own ideas and development proposals related to possible new operational models and knowledge transfer on the whole.

Audio files were sent in a digital form to be transcribed. The transcriptions were text files which were used in coding and analyzing. The data will be saved in the Lappeenranta University of Technology and it is accessible to project members only. It was emphasized to each interviewee that it is a question of a research project of the university and research papers and master's thesis will be public papers. In this master's thesis the firm names and the names of the interviewees are not shown.

#### **4.4 Data analysis**

Data analysis is the difficult part of the study process. In every reading the data tells new approaches and shows various elements. Yin (2003)

proposes two different ways to analyzing: “pattern matching” – actual and expected patterns are compared, or “explanation building” – based on theoretical framework.

In this study both aspects by Yin (2003) were used. The aim of the analysis was to obtain a comprehensive understanding of the studied phenomena. This was done through detailed and multilateral examination (Hirsjärvi et al., 2007). Data analyses were divided in two phases: background interviews in parent company and then four cases; this data was used as the analysis material. In this study the content analysis was followed because it proceeds according to the research plan and is suitable for an abductive research approach. Firstly, the theory was the first source of knowledge and secondly, the research proceeded from theory to empiric research.

The content analysis process occurs as follow (Hirsjärvi et al., 2007):

- filing and theoretical identification of key concepts
- material for internal and theory of integration
- material and a rough classification of the central themes
- research task clarification and the clarification of concepts in relation to the research task
- material coding
- codes of aggregation, comparison and classification
- phenomena occurred, exceptions, the new classification
- conclusions and interpretation

In Eskola & Suoranta’s (2003) proposal the thematic analysis requires “discussion” between theoretical and empirical data. In that way it is possible either to receive confirmation from empire to theory or to show that the theory doesn’t support empiric findings which is a result as well.

Spencer, Ritchie & O’Connor (2003) have described the *iterative process* throughout analysis. In first level (data management) themes and

concepts generate and the purpose is to label or tag data. In second level (descriptive accounts) data will be classified and sorted in order to ascertain the meaning. The third level (explanatory accounts) answers to how and why questions and establishes the typologies. The purpose is to assign data to refined concepts and refine and distill more abstract concepts.

In this study the iterative process described previously was followed. Firstly themes and concepts were coded and identified. Secondly themes and issues were classified and sorted and thirdly head typologies were established. Finally research questions were answered on the basis of research data. Table 8 presents the example of arranged themes.

**Table 8. Example of arranged themes**

Example from the text	Code	Theme
<i>"The first contact with new unit and new employees is important. We visit in company, sit around the same table and begin to talk. We are telling to employees that now we are working in same company, in same field and we have same issues but of course the changes take place, too."</i>	Give the "faces" to new unit and new common organization, first practical arranges, the team which decided what types of knowledge is necessary to transfer	Acquisition management team as an initiator
<i>"We were uncertain and lonely; we had to deal with alone. We had to solve a lot of things alone. If here would have been someone who had been said that these issues are done so and so, he/she would have been by the way refuted all the time."</i>	Deal with alone, problem solving between employees, need to guidance	Unit manager as a translator
<i>"Initiation with the daily tools, managing the customer relationships, common work methods etc..."</i>	Initiation, learning new systems, understanding the new practices	Formal training

<p><i>"This has gotten to the situation that you have to understand everything yourself. There is no longer serving the people, helping to explain how the things are."</i></p>	<p>Self-learning, initiative, responsibility for own learning,</p>	<p>Self directed learning</p>
<p><i>"If we only had someone who would have sat here for two weeks and demonstrated how to operate in different situations."</i></p>	<p>Parent company's way to take care of individual learning by as rooming-in the learning situations</p>	<p>Rooming-in</p>
<p><i>"The IT trainer visited here...every unit use the same systems, it is purpose, and everything is integrated to each other. All new systems add more value when everybody can use them...benefits is increasing all the time."</i></p>	<p>New computer systems and soft ware's, benefits to learn use them</p>	<p>IT-systems implementation</p>
<p><i>"It is not just the sale but customer's problem solving. The word "sale" is bad."</i></p>	<p>Consultative touch, customer's problem solving</p>	<p>Customer relationship management</p>
<p><i>"Stressed self-responsibility to access Intra and learn what it includes; manual working, guides; all are presented according to the issue groups."</i></p>	<p>Intra, weekly and monthly information, working manuals, guides, e-archives</p>	<p>Codified database</p>
<p><i>"Email is the general way to transfer knowledge and information."</i></p>	<p>Daily tool, fast information to all or to selected croup</p>	<p>E-communication</p>

Even the study is written in English, the interviews were made in Finnish and the transcriptions were in Finnish, too. It should be noted that in later findings the quotations from data has translated from Finnish to English and they may not be exactly equivalent to the original text. The appendices were also translated from Finnish to English and there can be the same problem as well.

## 4.5 Reliability and validity

Reliability and validity are important aspects of research and without them researchers results would be useless. Reliability means the measurement repeatability namely the study's ability to generate non-random data (Ritchie & Lewis, 2003). In this study the illustration of research process provides the possibility to repeat the study similarly. Other researches can analyze and repeat the study anytime because the research framework and research questions have been presented in this study (Eskola & Suoranta, 2003).

According to Eskola & Suoranta (2003) internal validity means that there is a harmony between theoretical and conceptual definition. Theoretical starting points and the attributes of conceptual and methodological solutions must be in a logical relation with each other. External validity means interpretations, conclusions and documentation of the relationship between qualifications. Research observation is of external validity when it describes the objective as promptly as it is (Eskola & Suoranta, 2003).

One approach to sure of validity is to find another case through which the made hypothesis could be tested (Silverman, 2005). Also the previous literature review is a good way to show the similarities and differences between the literature and study case (Ritchie & Lewis, 2003). In this study the research framework was based on state-of-the-art literature review and the questions and themes of interviews on research framework. Finally the analyzing is mirrored against the theoretical framework and will be discussed together.

In this study the research methods have attempted to describe the way that the reader could understand the background of data collection and data analysis. Authentic quotes from the interviews will enrich the description and help to understand the conclusions. Described working process, the theory section, the used sources used and data collection

suggest that a similar result would have come to another researcher. Differences in weighting of conclusions, of course, vary depending on the author's own background

The aim of this study was to give an overview of various knowledge transfer mechanisms in service business acquisition context and find the critical factors related to mechanisms. The source material of the theory section as well interviews provide good support for research. Validity of the study was intended by highlighting interviewees the framework of interview.

## 5. FINDINGS

Understanding and recognizing various effective knowledge transfer mechanisms in acquisition performance help firms in the future, firstly understand the affect of their own knowledge strategy and the level of acquisitions; and secondly, choose right transfer mechanisms which guarantees the best results when two firms merge into one organization. The findings of this case can contribute to this phenomenon, but cannot though be generalized directly because the selection of transfer mechanisms depends partly on the industry, which in this case was a knowledge-intensive specialist firm operation in service business.

The study yielded classification of ***nine different knowledge transfer mechanisms*** that affected the transfer process: *acquisition management team as an initiator, unit manager as a translator, formal training, self-directed learning, rooming-in, information system implementation, customer relationship management, codified database and e-communication*. In addition the study confirmed certain critical factors related to transfer process. First there is a short description of how the *selected knowledge strategy* affected in the beginning of acquisitions. This chapter also presents the findings of empiric research that was carried out of the data with interviews.

### 5.1 Knowledge strategy identification

The parent company carried out its activities largely following the codified knowledge strategy. The company possibly didn't recognize the fact itself, but the results expressed this approach. Daily features and knowledge transfer happened mainly by intra, email and working manual and guides. Personal contacts and face-to-face meetings were seldom. Mainly the "head information" related to parent company was given face to face immediately during the next few days after the acquisition. The meetings

included instructions where all knowledge and information was possibility to find.

On the contrary, the purchased units applied, before the acquisitions, mainly personalization strategy e.g. face-to-face communications and common problem solving. In small organizations the mission statement reflected the importance of common knowledge sharing and transferring between its members. This is explained by the fact that the companies had quite a few 3-10 employees. Knowledge flowed around the unit verbally.

*“In the past we were more like a close community, almost like a family.”*

Codified strategy was also expressed to merged companies so that employees had to start saving more knowledge and information in an electric form, contacts to parent company were kept mostly by email, documentation existed only in hardcopy format and all needed knowledge was found in intra or working manual and guides. Contacts with customers changed from personal contacts to an electric form e.g. email was the principal way of communication.

*“We began to record electronic archive, in principle all financial records and we had not done so before.”*

*“E-mail use with the customers increased a lot and that’s why the visits of customers here in the office are reduced.”*

*“We have to make our tasks as electronically. We can’t take the copies of customers papers, close them to envelope and stamp. Now everything will be attached and send by email.”*

A different knowledge strategy became visible also in the methods of working. Parent company decided to bring into use so called ERP, Enterprise Resource Planning which helps among other things working

control and customer billing according to worked hours. Especially the control of working hours caused positive effects because the tracking was easier and more exact than before. The system showed for example the “slides”.

*“First we received knowledge to practical things like where the methods of work was made differently ... but the tools and practices were very different.”*

The purpose of the parent company was to store all knowledge and information in electrical archives. The idea was that every unit had a possibility to receive the knowledge regardless of time and space. When the all customers’ issues could be found in archives everyone was able to work with any customer. If there was a lack of employees in one unit, another unit was able to take tasks due to common database. Extranet enabled customers’ access to their own data as well. The paper versions sent to customers were abandoned and there was also one more factor in transition to codified strategy. The strategy was reflected in customers too.

## **5.2 Identified mechanisms**

The empirical research brought up nine knowledge transfer mechanisms in the illustrated context. In three mechanisms the nature of knowledge was explicit and the rest of them had a tacit nature which became in the fact that communication and rooming-in became more obvious and were more appreciated as well. The found mechanisms are presented in one by one.

### **5.2.1 Acquisition management team as an initiator**

In the parent company there was a so called acquisition management team whose role was to negotiate and take immediately care of the merged unit and its employees after the acquisition performance in the early stages of the process. The main tasks were transferring of manuals,

routines and IT systems. Also intranet guidance was relevant and new practices and modes of thinking and action taken with customers. At that moment the nature of knowledge was mainly explicit.

The situation after the pre-acquisition was sensitive but also impressionable because of high expectations. The biggest reasons for fears were possible changes and their impacts; how much do the routines and tasks change? The role of the team was to “go near” and assure the employees, to show that the new owner had the faces and they were ready to support in every moment and every tasks. Both formal related to information, processes and structures and informal e.g. social supports were available. The first contact after legal acquisition was important.

*“The first contact with new unit and new employees is important. We visit in company, sit around the same table and begin to talk. We are telling to employees that now we are working in same company, in same field and we have same issues but of course the changes take place, too.”*

Because people are different and some of them didn't hesitate to ask lots of questions, it was important to know and take care of those people. It usually helped if one of the team members talked confidentially face to face with them. The purpose was to build as trustful atmosphere as possible, because it was precondition for effective knowledge transfer using interactive discussion culture. In view of future common operating it was necessary to build this kind of culture.

Management team was composed of managing director, HR manager, group controller and experts in IT processes and training. Managing director and HR manager took responsibility for the first “difficult” topics. Managing director operated as “the face of a new company” or as “ice-breaker” whereas the HR manager's role appeared later when employees in acquired firms were ready to discuss and work intractability.

### 5.2.2 Unit manager as a translator

The unit manager's role was more than important for knowledge transfer mechanism. This was highlighted at every level; parent company, unit managers themselves and all employees in every subsidiary units. Unit manager was *the link between parent company and unit*. All knowledge and information flowed through her/him. Unit manager usually received the knowledge first and her task was to transfer and share it. Employees seemed to trust in her/his capability and willingness to transfer knowledge and generally in the fact that unit manager had all the necessary knowledge or means to access it.

The parent company's purpose was that the unit manager is either the seller of the unit or someone from the merged organization who has capability to carry out the task. In two cases the unit manager represented the companies which were sold e.g. old owners. In two cases the unit manager was an employee whose capability was enough to take the responsibility for managing. In one unit there was a situation for a while that there was no at first the unit manager at all. Even though every employee was skilled with her/his own work they still expected that a the representative of the parent company should have taught the employees "the way of house". In this case there was a feeling as if they were left on their own.

*"We were uncertain and lonely; we had to deal with alone. We had to solve a lot of things alone. If here would have been someone who had been said that these issues are done so and so, he/she would have been by the way refuted all the time."*

Unit managers' managerial competence was established through a training program, so called JET –qualification (Management Specialist Examination) and all unit managers had also regular training days. The issues discussed during training days referred specifically to managerial

duties such as customer management, uniform practices and ways of working. The purpose was to educate the unit managers to trainee who can after their education train the employees a customer-oriented approach.

The unit manager had own codified guides to their own tasks and in addition the manager's handbook. A new managerial operation was a so called *development debate* with the employee which took place at regular intervals. Also the budgeting was in a certain way a new topic to managers.

*"We are now a deal with big house and that's why the challenges and the working pace are quite difference and the competence as well...and unit managers are in the same position and they are required a lot. That's why all approaches and practices have to make understood to employees and it's unit managers task."*

One manager told that she had "*the godmother*", unit manager with whom she was able to share all the feelings; problems at work and with employees, own experiences, she was able to ask for advice and solve together similar problems and also develop own work. Other unit managers told that regular meetings were the place to share experiences and discuss various topics. Meetings were considered as a peer group.

One unit manager presented an interesting approach related to her work, role and position in the unit. She emphasized that it was important to her to understand that after the acquisition she represented the parent company inside the unit and that is why she couldn't any more behave so friendly with other employees.

### 5.2.3 Formal training

Acquisition performance was generally a big change to the organization. Even though it was a question about special industry and even employees had the necessary substance know-how and skills, still individuals wanted to have as much as possible training from the new owner. Employees experienced training as a good and provident way to transfer especially explicit knowledge. "House ways" e.g. practices used in the parent company, data sources, methods in various situations, tools, customer serving etc. were experienced as good and necessary educational topics. Also training related to substance competence seemed to be important for example the changing legislation.

The training was seen as an ensuring factor for new owner and it added the sense of security between employees. Training was mainly an initiation to manual work and statement to use the intra. Short training was also related to main work with customer's issues.

ERP was a totally new soft ware to all units and demanded fundamental education as well. ERP education was experienced good and necessary because it affected all the time every employees' daily work. In addition to monitoring the working hour's customer's invoices were based on ERP and the work time which was codified to system per customer. All interviewees experienced that the ERP's education was managed quite well and enough.

Individual training was desirable and was encouraged in order to maintain own professional skills. The parent company appreciated the individual education and arranged also own professional education courses. Training took place during the work time; other individual education during the employee's leisure time.

*"Yes, education is here quite well taken into account."*

*“Nowadays it depends on oneself and one's desire how much would like to educate.”*

However every interviewee told that in general they had not got generally the training and education enough. And the question concerned especially training from parent company. There was criticism towards the training which was arranged and organized from “inside”; another employee for example from the parent company, who was educated with her own work. Interviewees felt that in that case the competence was not enough. There were hopes that main training comes from outside, from experts who have competence to the current topic.

The most useful training was guidance on how to exploit the new tools. Two hours wasn't enough but the focus on the training should have been which tools and programs were necessary instead of showing how to use the computer and various programs. The flow of knowledge and formal information was enormous, too, and many interviewees thought, that the best way to learn was to handle the knowledge as a small pieces but not a one big “cake” or at least there should have been more time resources to split the “cake” in to smaller pieces.

Training was seen as a rooming-in; their competency was taken into account and stability was ensured. In the training sessions there was always someone who to ask more questions. One interviewee summarized the hope so that first there should be training of topic and then the same topic could be codified. The path should lead to intranet where everybody could find it. Many told to remember topics better when there was *first face-to-face meeting and then electric version in intranet.*

### 5.2.4 Self directed learning

In this case employees experienced the education as a significant knowledge transfer mechanism and they wanted more of it than received. On the contrary, depending on the parent company's knowledge strategy, employees had to study and learned as much as possible in that way. It can be called "*self directed learning*". The staffs were shown and told topics once as well as the tools, but after that it was expected that *every individual take responsibility of their own learning and education*. This mechanism was individual-centered; the knowledge located in parent company's stocks and reservoirs. Employee's responsibility was to find and learn the needed knowledge. Dissemination, use of knowledge and interpretation were individual. The nature of mechanism was like an internal messenger who moved between the parent company's knowledge stocks and the individuals' mind.

It can be assumed that the parent company trusted the staffs' capability to acquire the necessary knowledge and use it. And staff assumed that the parent company will educate and guide as much as possible.

*"...however they trusted that we can do everything here on the spot...and it's okay, we can do everything..."*

*" If we are talking about the knowledge transfer, well, I think in acquisition situation it should be quite good, but I have such a feeling that we had to think many things here just together."*

*"Computer training is a very superficial. The employee herself will fall quite a lot. I mean to study all the systems and educate her and deepening all affairs. Here in our unit we are often so that if someone manages one issue better than others, then he will advise other. But it requires a lot of employees' own self-reliance that she has the intelligence to ask."*

Several interviewees mentioned that even self direct learning was the only way to learn and absorb many topics it would have been “okay” and interesting but there were always *the lack of time*. Many told that they had not been visited intra for several weeks because there was no time enough. In one unit all interviewees said that they try to learn by themselves all the time but during the work time it is always so busy and no time and in leisure time there isn’t always enthusiasm and willingness to do it even if there is a demand to do one’s own job.

### **5.2.5 Rooming-in**

Many interviewees saw that a good and instructive way to transfer knowledge is rooming-in. The right time should have been right after the acquisition and especially in the situation when the computer systems and software were changed to a new one.

*“ if we only had someone who would have sat here for two weeks and demonstrated how to operate in different situations.”*

Also the unit manager can be considered as a rooming-in person in addition to the role of transferring knowledge. The role of rooming-in was seen mainly to be related to IT topics because almost all in the mentioned field experienced quite difficult and demanded issues.

*“Advice and rooming-in includes to my role...and advising. I kind have to be the one who understands these issues and then advise employees.”*

Unit manager as rooming-in person clarified many topics on weekly work meetings and then difficult issues were discussed together. Also in team meetings the manager mentored employees actively about current topics and methods to work, seek information and knowledge and solve problems.

*“The team is advanced tutorial, in small groups, issues can be dealt with in greater depth and to go quite a practical level”.*

*“If our unit receives the new soft ware or a new approach, then we study it concretely in small groups...in weekly meetings it is not possible, it just shows in wall and go trough in general level”.*

On the whole the interviewees’ opinion was that the rooming-in person should be “a representative of parent company” who will stay for a while in new company, e.g. few weeks and takes care of the new unit and its individuals. It was desired that someone should have sat behind and guided all the time especially in case of data systems and new soft ware.

*“...even for a short time to be with us.”*

*“...a person who had been here a while as a security, that we would have found a basic routine in daily tasks.”*

## **5.2.6 Information systems implementation**

The parent company’s computer systems and especially the used software were quite different from the ones in the unit. But there was diversity in exchange. Two units forced to change the software, in one unit it did not happen until in spring 2010 and one unit has been able to keep its own and well-known software.

In those units where the software was changed a lot of anger was caused because employees felt that the new software was old-fashioned and not-well fitted to this day. One interviewee said that the change was like driving Lada instead of Mercedes Benz. Employees felt they didn’t get enough training or it was unclear. The situation arouses a lot of questions and also bewilderment. The main questions were: why were some units able to keep their own systems and why did some units have to change their systems from good to bad? The interviewees though that they never received answers to their questions.

In special industry where the computer systems were tools to work, interviewees felt that knowledge transfer related those systems was the lifeblood because it was a question about their customer service, customer's issues and the success of them all. That is the reason why the IT-systems were experienced as mechanisms of transferred codified knowledge. The systems included the knowledge which was forwarded to customer relationships; the employee was only a middleman but the systems transferred the needed knowledge and enabled the performance of duties. The interaction between the employee and the customer took place via IT-systems which transferred the same knowledge both to the employee and finally to the customer.

One interviewed said that he is worried because all the knowledge was in the same systems, in the same stocks. This seemed vulnerable. This fear based on an experience that paralyzed all activity for a week. On the other hand, common and centralized updates were always at one time.

Employees were satisfied with ERP because it helped so much daily duties. Billing was easier and everybody could see where the time runs. Knowledge flowed regardless of the time and place.

*“ERP is good, for example if we consider billing, it is very convenient. Previously we made all by hand.”*

The implementation was experienced as a controversial matter. There was a consensus concerning the importance of customer service, but quite a fierce critic was directed to the ways of changing the systems and training because the changes affected directly the time to do customer work and many interviewees felt that this affected quality and reputation as well.

The relationship between IT-systems, ERP, codified database and e-communication formed a solid toolkit where the major aim was to store, share and transfer knowledge on the axis between parent company,

employees and customers. Even the background included the basic idea of human-to-human interaction in service business industry, the mentioned toolkit of mechanisms enabled an economical and effective approach to serve customers better.

### **5.2.7 Customer relationship management (CRM)**

The role of customer relationship management as a knowledge transfer mechanism followed the idea of a holistic model where the employee and the customer formed a fixed relationship and the employee was a moderator of the knowledge received partly from the parent company's knowledge stocks and partly through the employee's own activity. CRM included both a human and a technological dimension. The employee was seen as a consultant who used IT-systems as mechanisms and mixed them and customers assignments together. The end result was a mechanism which was possible for the customer to exploit.

Before the acquisitions the employees' contacts with their customers took place only when customers visited the office or by email. The visits didn't deal with any selling but were just discussions concerning customers' situations. Acquisition changed this performance radically. Employees were expected to care for the customers through *consultative touch*. A share of work was partly familiar but a part of employees experienced the practices a little bit strange. Many thought that they were neither marketing nor selling people.

On the other hand many interviewees liked to take care of their customers comprehensively but expected to get more education in how to meet the customer. For example according to a new approach every worker had to arrange an annual development debate with each of their customer.

Customers were classified in a given scale. The scale was 1) value customer, 2) growth customer and 3) basic customer. To make a potential mapping related to customers business was one purpose of scaling.

The model of customer care aimed to keep customers faithful to the unit and it was also the way to stand out from competitors. The best way seemed to be a continuous dialogue with customer: “how are you today, how can we help you, what can we do better” and so on. That was perceived as a key point, because competition was hard and the unit had to follow the consolidated billing which was higher than some competitors billing.

The before mentioned consultative touch caused confusion especially when the interviewees were asked to start the so-called “*additional services sales*”. Solution to this problem was the introduced new term “potential mapping” e.g. they had to think how they can make customers works easier and also how to facilitate customers various issues. A different approach helped to understand and accept the “additional services sales” better.

*“...it is not just the sale but customer’s problem solving. The word “sale” is bad.”*

### **5.2.8 Codified database**

Codified database was the *main knowledge transfer mechanism* in this case. The whole function of the firm was described in intra where all necessary knowledge and information was stored. There you can find codified manual working, guides, approaches, WSOY Pro books (needed in professional work) and in general daily needed instructions to various situations. Also ERP included a lot of knowledge related both to individuals own work and customers knowledge, and it can be seen as the place of codified database as well.

Company's internal knowledge stock was intra. It is generally a good common place to share and transfer a lot of knowledge and is very much used in many companies. In this case all interviewees said that intra contained too much old knowledge and information. Upgrading was a rare occurrence, and old obsolescent information was still there. In view of all this it was difficult to find the right paths and knowledge quickly. It required a lot of time to find the right paths. If the employee had an urgent topic, he had to use another ways to find the knowledge, especially if the performance was related to customer's issues.

*"And the table of content is quite opaque and that's why it is difficult to search successful. Even if you write a clear entry, intra doesn't find the right knowledge."*

A general finding was that intra included a lot of valuable knowledge and information and it was available to all regardless of time and place. But the paths were often difficult to find. That is why all interviewees wished that someone should organize and develop the intra so that it could be more users friendly and easier to use as a tool.

*"But the fact is that the more you use it, the more you can find. However there is the threshold...and time is the critical factor...busy growing all the time and then it is supposed to be an emergency...there is no restraint to surf as long as find something."*

Interest group databases were also considered stocks of knowledge. Such stocks had taxman, various law bases as Finlex and also competitor's good websites. One unit manager told that he had found a lot of good and necessary information at a competitor's website.

### **5.2.9 E-communication**

E-communication means an electric way to transfer knowledge. In this case the main way was email. Email was an important *daily knowledge*

*transfer mechanism and the preferred contact instrument.* Unit managers received all knowledge via email and they could select which knowledge had to be shared onwards and to whom. Email was an important instrument among the unit managers, too. The employees received also knowledge mainly from their manager but directly from the parent company and other units as well.

Various departments such as financial management and HR could an employee directly if the case did not require the unit manager. Phones could be used, of course, but use of e-mail was highly recommended.

Many interviewees mentioned that in the early days after the acquisition the email flow was enormous, downright nonsense. That's why they felt that there was time only to scabble the mail and then quickly to move to another mail:

*"I understand that it was normal practice in parent company, and it is the approach which is transferred to our unit as well, but the parent unit is a big one, and our unit is so small. We didn't even have any ERP, just the squared paper."*

*"Knowledge flow was enormous via email."*

On the other hand email was experienced as a good documentation tool, like an archive which guarantees the employees work.

*"...and it will be a documentary, I have sent, that means I have told to customer."*

*"I think it's customer's guidance. If later comes up some checks, so customer can't say that he didn't know."*

One unit raised the problem that the first emails contained so much such knowledge which didn't concern all. But the distribution was to all units and employees. The result was that many got bored and reacted no longer.

*"I just read only the first sentence and noticed that it doesn't concern me."*

This anomaly disappeared at a later date and there stood a note on the top of email "this email concerns certain people". The messages were deleted from others.

Finally all interviewees told that email is absolutely a good and easy way to send messages, send and receive the knowledge but it requires a lot from message senders. The sender has to think carefully to whom to send the message; not certainty to all. In that way the flow will be less and the receivers really take seriously their emails.

Table 9 illustrates the findings divided to hard and soft mechanisms. The division is based on factors of tacit or explicit knowledge, the way how knowledge transfers in each mechanism.

**Table 9. The breakdown of hard and explicit vs. soft and tacit mechanisms**

<b>HARD MECHANISMS, explicit</b>	<b>SOFT MECHANISMS, tacit</b>
Information systems implementation, codified database, e-communication	Acquisition management team as an initiator, unit manager as a translator, formal training, self-directed learning, rooming-in, customer relationship management

Interviews revealed a number of critical factors which influence the knowledge transfer process. The next subchapter presents the findings of critical factors related to this case.

### **5.3 Critical factors related knowledge transfer**

There were several critical factors which affected to knowledge transfer. Part of them was *individual-level* like absorption, motivation, trust and

interpretation. *Organizational level* consisted of organizational learning and social interaction. These all factors emerged in every unit but a few differences in emphasis can be found. The raised critical factors appeared as follows:

### **Absorption**

Immediately after the acquisition all employees were ready to receive knowledge which related to the parent company, its practices, the ways to work, what kind of changes was to be expected and future scenarios. A lot of mentioned issues were told in first meetings with the representatives of the parent company and merged unit's employees. It became a problem quite soon that the flow of knowledge became so rapid that the employees couldn't absorb it in phase.

*"...the knowledge flow was so enormous at first, that the purpose and goal remained elusive and fragmented, and it was the reason to feelings of uncertainty, I mean the uncertainty to what we had time to do what needs and what is important."*

*"The knowledge should have been sending maybe in smaller chunks, and then we would have had time to absorb issues properly. But now all knowledge came in one rumble and the effect was that not taken any proper, a piece from there, one here."*

The enormous flow led to it, that each began to dodge the knowledge and collect only just the knowledge which could perhaps join itself. Absorption fell far also because many felt that all things came in a hurry and all new issues had to be remembered immediately and fast. The lack of time and new operational models burdened the absorption and decreased the level of adoption.

The knowledge related to professional work was easy to absorb because the base of knowledge was well-known. The new knowledge

supplemented or confirmed earlier knowledge. Also the context had own meaning. Face-to-face meetings and education performances were seen as the best position to absorb.

### **Motivation**

All interviewees were expecting a lot from the future after the acquisition. Transition from a small company to a nationally large company seemed to be the way to something “big and beautiful”. Based on the interviews it seemed that the reality life after a few weeks decreased the motivation and initial enthusiasm. One reason was the software problems; that unit which had to change the software to another, old fashioned as they illustrated the situation, experienced the lack of motivation.

*“It was surprise to us that new software wasn’t the same level as our own...we were lagging long time but then we got such a hard email that we have to make the change immediately because our own system costs quite a lot. It did not have any incentive notice. We have such a feeling that the parent company does not appreciate us even we make here quite a good and profitable business.”*

In one unit the motivation continued well because the employees were satisfied that with the situation unit manager was their old employer who they have known for long time and was very popular. The employees felt that they can trust in him and get always all the support they need in all work divisions. In two cases the employees felt that they maybe didn’t receive enough knowledge and support from their unit managers. Problem solving occurred often between employees and the securing of right solutions was linked to motivation.

Motivation to service the customers were on the top of every case. All interviewees kept as a question of honor that they give their customers as good service as possible. And they were ready to haggle other “less

important” issues. For example self direct learning had to step aside to wait the better times.

### **Organizational learning**

Organizational learning appeared to be related to self direct learning. Employees had to learn many new issues both alone and together with others in unit. The largest single learning issue was data systems and software. It was experienced good and facilitations that there were always some people in the unit who knew better the systems and can also help others. Many interviewers appreciated that a lot. And those “nerds” were ready to help others.

*“and we cut the print screens and send them one to another or give copies.”*

In two units the interviewees described that they always try to remember to take care of each other in common problem solving. For example if someone has wrestled with one issue and has been able to solve it then it was fair to tell the solution others.

Also the team work helped to promote organizational learning. The action was based largely on “journeyman apprentice” –thinking. Especially the team leader was a person who took care that every team member learned the demanded issues and topics.

One interviewee told that she always ensures that a new employer surely can do the jobs. She has been sitting behind another employee and followed that everything went well. It was a good practice for her as well. The performance was a good problem solving situation where ideas were sometimes born.

## **Social interaction**

Social interaction appeared in relationship between employees, their mutual interaction and sharing of experiences. In every unit it was possible to sense the fellowship. It showed that the atmosphere in every unit was good and open. Experiences and opinions were changed willingly.

But the interaction had the drawbacks, too. Working closely in quite small units caused the fact that many knowledge sources could be regarded as foregone conclusions and it was clear that someone else would have required the same knowledge. But this phenomenon was unintentional.

Social interaction took place also between other units, not only internally in one unit. The best practices were changed with units a little but the company's. Working Manual dictated however the practices.

*"it could be sometimes so, that we know here together with our common sense which way would be better, but Working Manual says that the thing will do in this way..."*

*"If someone get the idea how to work a special issue, so she usually shares the knowledge to all. It doesn't have to use but the opportunity is always. For example if someone has made a blank then she will share it via email, or formulas etc."*

In all the life after the acquisition had summarized the work community and helped it to find solutions to daily routines.

## **Trust**

The direction of the flow of trust was more from the parent company to merged units. The parent company thought that people in merged units had skills and competences enough. And the trust wasn't targeted only to individuals but the whole unit's as well. But the unit's didn't see it in same

way. They had a great expectations after the acquisition, they didn't understand that the trust to them was so strongly related to their competences. In the same time the units received a lot of knowledge, new data systems, new soft ware, new operational models, a lot of new topics and the education wasn't maybe enough. The employees had to learn much themselves, as self directed learning and that made the employees feel that they didn't receive enough response from the parent company. In other words the units maybe didn't recognize the trust that was directed to them and in turn couldn't trust enough because of problems with data systems and flow of knowledge.

*"The resistance of change to some special authorities was hard."*

The trust developed with time when the employees grew accustomed with new ways to work. Especially the Human Resource Manager was praised for her work. The employees had talked to her about their fears and distresses. The point was that employees were experienced that before the acquisition the work community was like a family but after the acquisition the family disappeared and was replaced by the "hard world" and a new counterparty – employer. The trust was put to the test.

*"After that when employees was multiplied their fears and distresses to Human Resource Manager, who told to export the greetings forward, the situation calmed down. And after that the knowledge transfer was easier, all were more receptive."*

### **Interpretation**

Many interviewees raised the problem of interpretation. Knowledge flowed a lot from intra and emails but many interviewees saw problems in interpretation firstly because of abundance of information and secondly due to the difficult of understanding.

*"Knowledge comes so much. There are always problems to embrace and find the knowledge. Intra includes everything...and of course there is always the*

*interpretation problem. Information is written in a completely different thing than how it then be applied in practice or in general to understand and interpret the knowledge is challenged...*

Via codified communication and knowledge transfer it seemed to be important from the knowledge sender's point of view that the text formatting and content corresponded to original idea and knowledge. The purpose was that the recipient understood and interpreted the knowledge and idea in the same way. Thus, the counterparty had no risks of misunderstanding.

The most difficult knowledge interpretation was experienced when it had come from IT department, especially if the knowledge was given as the soft ware language. The phenomenon appeared initially because the particular department supposed that employees can more and controlled computers and understood the specific language.

*"Nowadays assumes that everyone has the expert of own computer."*

In this respect development has gone towards a positive direction. Instructions and guidance are good nowadays. For example good screens helped to guide the various activities.

### **Time resource**

The lack of time rose to a very broadly out in many levels. It was felt that it was urgent to change all practices as soon as possible to meet the parent company's practices. Many interviewees experienced that the change took resources from actual work and the absorption time was very short.

*"It had to go so awfully quickly to new practices. I felt the work was forgotten and there was a stress because it wasn't time to make professional works."*

Several interviewees mentioned the time dimension e.g. time shortage which influenced especially just when it was necessary to learn something new. Such situations had been e.g. when learning new computer systems, ERP, intra, soft ware and customer service. Many said that first it was important to make the priority work such as customers' issues and after that if there was time to study the systems and all new issues.

The time dimension effected in many levels; individuals had no time to learn new and apply it to practice and in organizational level the uncertainty of exact deadlines related to special orders to do various tasks. Sometimes it took quite a long time between the orders to do something and get prepared.

Self directed learning and various mechanisms concerned particularly time. If there wasn't time to learn new issues during work time, many employees used their leisure time to do it. Then there was opportunity to perceive the whole. Access to the intra took time, as well, and it was considered important to know what the intra includes in the whole and which paths were useful to use. The help to the collaborators was valuable, because it seemed to save time if someone taught the topics which she had learned herself.

The findings of this study are presented now and it is time to move on to the next chapters to examine the relationship between the literature and the results if there is something new or different, answer to the research questions and make general conclusions and propose the future research topics.

## 6. DISCUSSION: EXTERNAL KNOWLEDGE TRANSFER MECHANISMS IN SERVICE BUSINESS ACQUISITION

This chapter sums up and reflects the findings from the empirical study to the reviewed literature. The object of this study was to identify knowledge transfer mechanisms and the critical factors related to them in service business acquisitions both in individual and organizational level.

The answer to the main research question of “*what kind of knowledge transfer mechanisms are needed in service business acquisition*” will be given. To receive a better understanding of use of knowledge transfer mechanisms and critical factors related to them the two sub- research questions need to be answered as well. However, the answer to first sub research question has already been given in the form of state-of-the-art literature review in chapter two and three (the theoretical part of this study).

The study brought up three main results issues which are earned to be discussed closely and reflected upon in the light of literature in the following sections. The issues are:

1) diversity of transfer mechanisms compares to early researches
2) interpretation and time resources as new critical factors related to transfer process besides the previously fined
3) comprehensive existence and role of knowledge management strategy

## **6.1. Applied knowledge transfer mechanisms in post-acquisition**

Chapter three including the state-of-the-art literature review presented a relative narrow typology of awareness mechanisms in micro level; however, the research has been surprisingly low and having regard to context has lacked in full. The classification of the mentioned table based on collection of various researches and interpretation of possible nature of each mechanism. The perspective to the phenomenon has been method orientated; the purpose has been like a situation explained without paying attention to special context. This study attended to one special one, B2B service business acquisition, and it showed one direction to how various mechanisms are available to find and research; this could be the start to in-depth research of important issue and the understanding of influence to recognize and realize available mechanisms in various contexts. In all, knowledge transfer mechanisms are not a homogenous part of knowledge transfer processes but a comprehensive lateral thinking, which support both individuals and organizations capability and expertise to understand and exploit the knowledge.

A little researched topic gave a new knowledge of the phenomenon and it is, in the future, available to develop methods, models and recommendations related to topic applicable to practice. As Jasimuddin (2007) has argued there is a research gap in knowledge transfer mechanisms and the wide research has made only related to the organizations between multinational corporations. Already the literature review showed the mechanisms are quite traditional and in a certain way simplified and some fragmented researches describe just those traditional ones.

This cause of course the problem that results cannot be too compared to previous but just tries to explain and interpret assumptions of results. Especially in knowledge based industry time runs so fast because of the

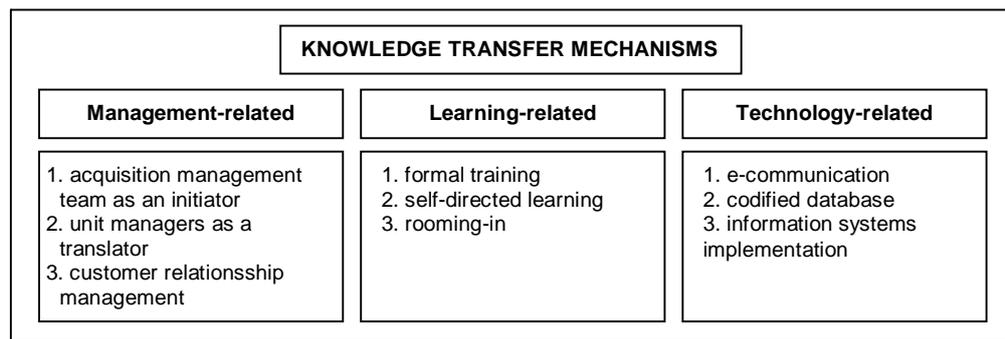
rapid development of technology and many new aspects to recognize various mechanisms is necessary not forgetting the role of context (Easterby-Smith, Lyles & Tsang, 2008). For this reason mechanisms as concept are defined in this study more broadly and are interpreted in a new way. Based on the results the mechanism can be defined as “machines”, knowledge brokers, internal influences of systems, policies, models or institutions.

The empiric research of this study brought nine used transfer mechanisms in service business context and the results are illustrated in table 10.

**Table 10. Main research question and key results**

<p><b>Main research question:</b> What kind of knowledge transfer mechanisms are needed in service business acquisition?</p>	<ol style="list-style-type: none"> <li><b>1. acquisition management team as an initiator:</b> the role of “bridge building” and the faces of new company, the main task to build a good dialogue connection between parent company and merged one</li> <li><b>2. unit manager as a translator:</b> trusted person from every direction, recipient, interpreter and intermediary of knowledge, linkage between the parent and merged units, creating safer conditions for change</li> <li><b>3. formal training,</b> training to new practices and tools, seeking the source of information and knowledge, keeping one’s professional skills up-to-date, skilled experts role to educate others</li> <li><b>4. self-directed learning,</b> responsibility for their own learning and expertise, supporting out of “comfort zone”</li> <li><b>5. rooming-in,</b> informal dimension of organizational learning, ensuring the adaption of new systems and related practices, proactive support, personal care-taking, introductions and guidance to “way of house”</li> <li><b>6. information system implementation,</b> the aim to receive the uniform system, economical aspect and efficiency, customer benefit e.g. satisfaction</li> <li><b>7. customer relationship management,</b> good customer knowing and possibility to use “consultative touch”, value adding to customer</li> <li><b>8. codified database,</b> human-to-technology interactions, basic tools e.g. intranet and ERP system, manuals, guides, instructions</li> <li><b>9. e-communication,</b> human-to-human interaction and communication by technology, contacting people and documenting knowledge, the most appropriate channels</li> </ol>
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The identified mechanisms can be still classified into three categories: management-related, learning-related and technology related. The classification is described in figure 11. below.



**Figure 11. Classification of identified mechanisms**

To understand the role of mechanisms better one must consider the characteristics of knowledge in reported findings. The study showed clearly the differences of tacit and explicit knowledge related to use mechanisms and contributes the previous research. As Argote & Ingram (2000) have argued, knowledge is embedded in documents, repositories and also in organizational routines, processes, practices and norms. Those all include both tacit and explicit knowledge. Definition goes through the idea of knowledge management strategy as well. Because tacit knowledge is embedded in organization's routines and practices, the study showed, that the personalization strategy, which was the main strategy in merged units before the acquisition, rules strongly in backstage. On the other hand documents, repositories and rules were included in explicit knowledge and were linked to codification strategy.

Literature divided micro level mechanisms described above. The basic idea in every classification is division to hard and soft mechanisms: tacit vs. explicit, human vs. technology and structural vs. non-structural. Technological breakthrough has enabled various mechanisms which break down the old traditions (Goh, 2002). Speed and ease are given the new significance to old written documents and other explicit instructions and manuals. Epple et al. (1991), Darr et al. (1996) and Ingram & Baum (1997) point however the role of interaction with people because they see the success as a critical factor in common meetings where people can talk to each other, ask the questions and listen another people learning in those ways. The results were parallel, but the approach of which

mechanism is suitable in each situation ranged in different units and depended on unit managers' skills to convey and care of employees. The units were surprisingly fixedly intertwined and the used mechanisms were felt most in one's own way.

Govindarajan & Gupta (2000) recommend as rich ways as possible to knowledge transfer; successful knowledge transfer is based on the richness of communication channels as well as consistent mechanisms in collaboration, teamwork and we-ness. However there is often reason to resolve what mechanisms are necessary in each situation. Von Krogh et al. (2001) suggest that various mechanisms could be used selectively because not everybody needs to know everything at all times. The study proved that to avoid the enormous knowledge flow it is important to choose the channels carefully and think beforehand who needs and what knowledge. Organizations members should use more self-criticism and avoid the futile knowledge transmission as a precaution. The findings support the literature but the main point is how to coordinate the used mechanisms. One way is to categorize the results as follows in table 11.

**Table 11. Categorizing of soft and hard mechanisms**

<p><b>MIXED MECHANISMS BASKET</b></p> <ul style="list-style-type: none"> <li>• focus in formal and informal learning</li> <li>• nature of knowledge: tacit, explicit</li> <li>• knowledge strategy; mixed</li> </ul>	<p><b>SOFT MECHANISMS BASKET</b></p> <ul style="list-style-type: none"> <li>• focus in human-to-human exchange</li> <li>• nature of knowledge mostly tacit</li> <li>• knowledge strategy: personalization</li> </ul>
<p><b>HARD MECHANISMS BASKET</b></p> <ul style="list-style-type: none"> <li>• focus in multiple distribution</li> <li>• nature of knowledge mostly explicit</li> <li>• knowledge strategy: codification</li> </ul>	<p><b>MIXED MECHANISM BASKET</b></p> <ul style="list-style-type: none"> <li>• focus in systems implementations</li> <li>• nature of knowledge mostly explicit</li> <li>• knowledge strategy; codification</li> </ul>

The literature based on mechanisms has classified them in four categories (see table 5, pp. 56). The breakdown between tacit vs. explicit and human vs. technology deserves a more precise definition which appears in study as well. At first glance the breakdown seems to same but, however, the technology can be interpreted as a channel to both tacit and explicit knowledge. If the knowledge is stored somewhere and is available in all

the time, it is explicit knowledge transfer mechanism. But if the man just reads the knowledge and deletes it immediately, the knowledge changes into tacit format in the man's mind. That is the difference between the two mentioned classifications. Classification of mechanisms differs therefore from previously presented. This kind of thinking can be exploited to notice widely organizations both internal and external functions and activities in different shades. It should open quite a new perspective to all actors and create more divergent thinking.

## 6.2. Identified and new critical factors

Table 12 presents comprehensively the results of the third research question of "what kind of critical factors are there in knowledge transfer process?" The results have been divided to individual and organizational level which helps to perceive the possible impacts of factors and the context as well.

**Table 12. Critical factors in knowledge transfer**

<p><b>Sub research question:</b></p> <p>What kind of critical factors there are in knowledge transfer process?</p>	<p style="text-align: center;"><b>INDIVIDUAL LEVEL</b></p> <p><b>1. absorbing:</b> knowledge related to professional work easy to absorb, problems caused by the enormous flow of information, lack of time</p> <p><b>2. motivation:</b> focal for individual learning, unit manager's role to motivate (safe atmosphere, unit's culture and traditions), resistance of change because of new IT systems and models of operation</p> <p><b>3. trust:</b> from parent company to merged companies -&gt; expectations of good competence and skills, being able to manage everything. from the units to parent company -&gt; high expectations, positive image and professional reputation, being part of a "larger whole", role of middle management</p> <p><b>4. interpretation:</b> supported by rooming-in types of knowledge transfer mechanisms, new ways to do things, understanding sources of knowledge, "finding the needle in the haystack"</p> <p style="text-align: center;"><b>ORGANIZATIONAL-LEVEL</b></p> <p><b>1. organizational learning:</b> requires spaces for social interaction, more than sum of individual learning, common problem solving</p> <p><b>2. social interaction:</b> open and positive atmosphere, willingness and opportunity to exchange experiences and opinions sharing ideas and good practices even when contradicting manuals, "I don't have to share this because I guess everybody knows already."</p> <p><b>3. time resource:</b> particularly when knowledge strategy needs to be reformulated, time to learn new strategy and become accustomed to new practices, time for self-directed learning</p>
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Literature supported well all traditional and known critical factors as motivation, organizational learning, absorption, social interaction and trust, but it was interesting to find in research action a totally new factor as well. For example the time dimension was a new one and it rose up strongly in the whole research process and at every level. The lack of time was complicit to fluctuations in motivation and absorption because there were maybe the feelings of inadequate. The discussion of time resources fits well to the time we are living, because for example technological development is fast, systems become old fashioned rapidly, people should need more time to learn all the systems and economic efficiency requires more productivity in shorter time. The mentioned elements were shown in the empiric part too and intertwined to other factors as well.

Interpretation is an important but not a very well recognized factor because of its obscurity and many misunderstood topics have due to organizational function without thinking of fundamental reasons to phenomenon.

### **The new critical factors: Interpretation and time resource**

The found new critical factors represent a “new economy” where “time is money” and effectiveness of work is at the top. These factors are not mentioned in previous studies and this shows, too, that the question is linked strongly to the modern organizational thinking and economical societies. One explaining factor is the exponentially growing IT technology which has sometimes caused quite an enormous pressure for changes in companies and organizations.

Even if the employee receives the knowledge in an explicit, codification format, its validity can be suspected. The study pointed out, that employees were uncertain own their own interpretation in as simple case as email message. According to Argote & Ingram’s (2000) definition of knowledge transfer the more knowledge is tacit or complexity or the more

knowledge is included in the causes and consequences of ambiguity, the harder transfer process (Szulanski, 1996). Ambiguity also increases both the sender (Foss & Pedersen, 2002) and the recipient's (Gupta & Govindarajan, 2000; Tsai, 2001) cognitive skills. It may be inferred that nowadays technological possibility to change the knowledge requires more skills to understand counterparty messages which have often been designed in a hurry, vaguely and without thinking of recipients' skills and level to understand and interpret the message. It can even be noted, that both the recipient and the receiver of knowledge transfer need capabilities and experiences.

The situation of interpretation can be difficult if the knowledge has been sent as issue slang, special language, which is well known only those who are the experts in the mentioned field and can translate it. For example IT language can be enormous difficult to understand. For this reason companies should pay attention to the logical level in their internal language so that everybody should have an opportunity to speak and handle written text and messages without using translators all the time.

The lack of time surrounds us every moment; its tentacles extend to work and private life. Acquisition context is very sensitive and requires time to be succeeded. Economical laws and demands of efficiency force the companies to compress the output as fast as possible. Employees should learn new issues and adopt them faster and faster before the competitors. Technological penetration has happened in a very short time and continues faster and faster. Many employees have difficulties in keeping up. If the companies want to benefit in long-term from current technology, they should pay attention to employees time to learn the new topics and systems because well learned employee can work and service the customers efficiently. After all it is question about customers' satisfaction.

### 6.3 Significant role of knowledge management strategy

There is reason to explain and pave the way for the phenomenon, which was manifested during the research, is in the background of the researched phenomenon and explains partly the findings, namely *knowledge management strategy*. The empirical set-up produced soon the notice, that there were different view of knowledge sources, sharing and transfers between parent and merged companies. The only explanation was divergent knowledge management strategies. Hansen´s et al. (1999) research in two consulting firms had showed the existence of the phenomenon. However there is still too little research after the Hansen et al. related to effects of knowledge management strategy and the identification of it in various knowledge based organizations even the “term” is included into the basic knowledge management theoretical framework. The phenomenon is an area to which *the companies have not drawn attention at all even its effect is often unexpected*. The theme was revealed well just in this study and drew the attention to its significance.

The big challenge in acquisition is to merge knowledge embedding so that the business has an opportunity to continue painlessly. Notification is the link to the above mentioned knowledge management strategy; how do the organizations manage the knowledge? To recognize and choose the right strategy is the key to a successful and less problematic merge. It is essential to understand according to Hansen et al. (1999) that a firm has to choose its strategy: codification or personalization. They propose that the best ratio is 80/20 split but not the completely mixed strategy without clear topic sharing. The study showed how difficult it is to combine two different strategies. According to Hansen et al. (1999) company which tries to excel both strategies “pleasantly confused” will meet problems.

Difficulties to identify knowledge management strategy could be the explanatory factor to many problems in knowledge based industry and the problems will be explained generally and willingly by referring to different

kind of organizational culture without thinking the reasons deeply. Knowledge management strategy undoubtedly affects organizational culture but is not the main reason to it.

Jasimuddin (2008) has broken the concept into two parts: hard and soft approaches which illustrates well the phenomenon and was shown in study as well. Hard approach has explicit nature and is technology focused and the role of interactive communication is little. This characterizing fits to the parent company in the study. The soft approach is of tacit nature, the role of technology is insignificant, people are in focus and personal interaction is important. Four units were applied the soft approach before the acquisition. This description demonstrates that acquisition can be challenged. It would have been important for the parent company to think in advance what kind of mechanisms should be used first.

What would have been the softest possible way to take care of new units without problems and resistance to change in future? Now the performances were developed in a black/white set-up even it could have been avoided. But it is understandable that if the firms do not know and understand the existence of knowledge strategy management, it is naturally impossible to work and exploit it.

The technological development has to be taken into account. This changes the routines and models increasing the role of knowledge repositories. For this reason Scheepers et al. (2004) criticize rightly the thinking model of knowledge strategy. According to them it does not have to be a perfect and fundamentally taken strategy but a combination; the "journey", as Scepers et al (2004) calls the suitable strategy, will give opportunities to strengthen the best one.

In this study the probable efficient strategy will be a mixed one, but to be suitable, it has to develop and refine and let especially the merged

employees to accept and get accustomed to it. In chapter 7.1 will be presented “the knowledge based takeover strategy model”, which gives methods and tools for evaluating the knowledge strategy.

Codification strategy is partly defensible when there is a requirement of similar knowledge or explicit knowledge related to similar categories and formats. The research raised the new critical factor – interpretation, and it is interesting to mirror it to the mentioned definition. Research showed that also the written knowledge can be read and understand in different ways. Garavelli et al. (2002) pointed that user of knowledge seeks the knowledge for example in databases and processes the knowledge using his cognitive skills. The result depends on his needs of use knowledge and context as well. Knowledge management strategy is also the explanatory background factor to use various knowledge transfer mechanisms.

The choice of knowledge management strategy may affect for example the product of organization, organizational culture, the quality of knowledge, competitive strategy and costs of selected strategy. There can be also many critical factors which are reason to take into account. Codification strategy save the time, knowledge is embedded in organization and its knowledge stocks, the use of it is effective, available regardless of time and place. On the other hand codification strategy needs investments in IT-systems and software which in turn may cause interpretations problems. One big problem is the threat that the critical knowledge flows to competitors.

Personalization strategy’s strengths are the possibility to solve the complex problems through which it is challenge to achieve big profits and there is no need to large IT-systems. On the other hand personal contact s take always time and are expensive. To receive the innovations are better and quite a large networks creates significant synergistic. But it has to remember all the time that the knowledge “walks always out” with people.

The situation is danger if there is only personalization strategy in companies.

On the basis of previous the idea of knowledge management strategy is not simple. To reach the top company should first ask itself what kind of strengths and weakness, opportunities and threats there are selecting the right strategy.

### **Knowledge based "takeover" -strategy model**

The study aroused willingness to try to create some kind of model to manage and dominate the "soft faces" of acquisitions because it is always also question about the people. On the other hand in knowledge based industries the abstract and intangible topics are difficult to realize and understand. A fortiori the approach should point to performing people and care of them.

I have named the outlined model as "knowledge based "takeover" strategy model". It includes methods and tools for evaluating the right possible strategy. If the parent and merged companies strategy is identical, there should be no problems and misunderstandings between issues, models and methods. The source of knowledge is common and the skills to use, share, transfer and store it is coherent.

When strategies differ, it is necessary to formulate the new dominating strategy. *How to choose then the right one?* The performance depends on the purpose and motivation of acquisition. If the aim is to increase business and receive more customer relationships, usually the parent company's strategy can be prevailing. But if the aim is to receive more skills, expertise and know-how, it would be better to observe the merged company's strategy to avoid the valuable knowledge desertion.

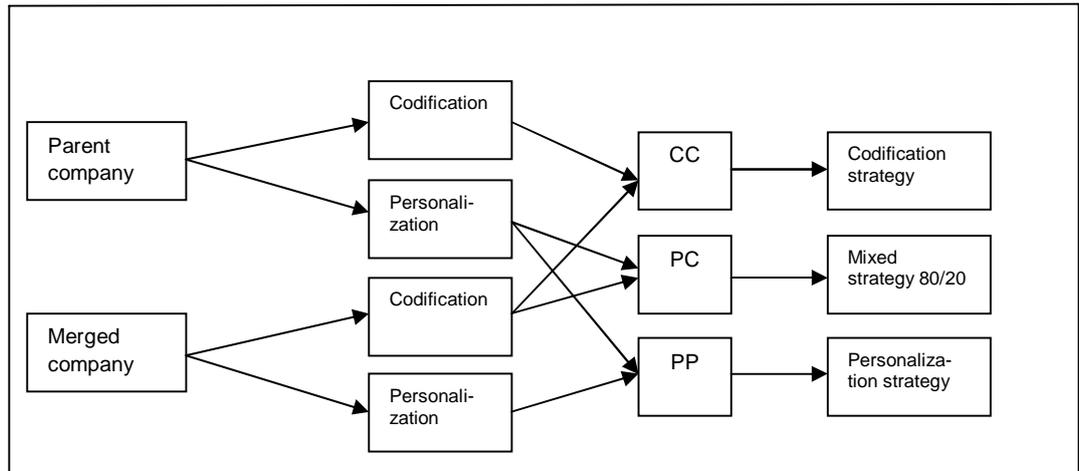
The argument can also be presented in a different way. The benefits of codification strategy are to add value to customer: fast, efficient, reliable, profitable and high quality consulting. The strategy is based on economics of reuse. It means that the reuse of knowledge involves low cost which in turn increases the efficiency of the company. It saves the work, reduces communicating cost and gives the opportunity to carry out simultaneous projects. (Hansen, et al., 1999.)

Personalization strategy's benefits in turn based on expert economics. A high degree of customization and expertise provide higher profits. The competitive advantage of company is possibility to offer consulting based on deep tacit knowledge. (Hansen et al., 1999.) It has to remember, that this strategy requires time, is expensive and is tedious to implement as compared codification strategy.

If the decision is as mixed strategy, it is reason to remember the 80/20 ratio (Hansen et al., 1999). There is the major strategy and another strategy supports it. Personalization strategy can be enhanced by codification: for example by creating a personal or background information database. Codification strategy in turn can be enhanced by increasing individual communication via electric forums or by e-mail (Hansen et al., 1999).

After the decision making of justified strategy the next step is to select the suitable knowledge transfer mechanisms. The affecting factors are 1) the types of knowledge and 2) the available resources. The third step is to allow time to absorb and internalize new practices into the organization which has to change its strategy.

Figure 12 illustrates the process of selecting the dominating strategy in acquisition performance.



**Figure12. Knowledge based takeover strategy model**

The development of this model is still infancy and needs more research and empiric tests. The first step should be to research more knowledge based acquisitions and try to find support factors.

The study was wide and many discussion topics were worth of mention but now the focus was set on a few subject areas which had scholarly weight and gave a good starting point for the future research. This study closes with the following conclusion chapter which includes theoretical and managerial contributions and finally proposals to future research topics.

## 7. CONCLUSIONS

The objective of this study was to provide insight into the knowledge transfer mechanisms and related critical factors in service business acquisition and classify them. The understanding of what kinds of mechanisms are available was received from a qualitative empirical case study of one B2B service firm. The research situation was challenging because there wasn't any earlier research to compare results and also the literature was quite rough and general. In other words there was a research gap related to knowledge transfer mechanisms.

As a result, the study provided a typology of nine knowledge transfer mechanisms: acquisition management team as an initiator, unit management as a translator, formal training, self directed learning, rooming-in, information systems implementation, customer relationships management, codified database and e-communication. The further classification of findings can be divided into management-, learning-, and technology-related mechanisms.

The previous literature includes five critical factors related to knowledge transfer: absorption, motivation, organizational learning, social interaction and trust. The study generated also two new critical factors which role in this study was quite significant, namely interpretation and time resource. This is understandable because increased codified databases, e-communication and urgency add the possibilities to various interpretations and especially if the company complies with codified knowledge management strategy, then face-to-face meetings are seldom which in turn would be the situations to ask clarifications. The study contributed also by building like the contextual theory on the nature of knowledge in transfer processes and knowledge based view of the firm by increasing understanding various critical factors related to it.

The limitation of this study is that there was only one company and four different acquisition cases in one industry. On this basis a direct generalization can not be done. The topic should need more empirical study in other types of service industries and cultural contexts. So it would be able to find possible generalizations and comparability.

## **7.1 Main theoretical and managerial contribution**

*The main theoretical contribution* is the typology of knowledge transfer mechanisms and two new findings to critical factors. Comparing to literature the study generated many new mechanisms which are not noticed before and it is evidence that there really is the research cap related to knowledge transfer mechanisms. Another important contribution is the empirical evidence about the role and use of such a knowledge transfer mechanisms in acquisition context and especially in the field of knowledge-intensive service firm.

*The main managerial contribution* of this study highlights the role of knowledge management strategy. It has been pointed out in this study many times, that the company which operates in knowledge based industry should recognize and understand its strategy. Knowledge is always created, shared, transferred and stored in some way. Is it a codified method as in manuals, intranet etc. or is it a personalization method including meetings, discussion and etc. Anyway every knowledge-intensive company has its own strategy which should recognize and considered in daily activities. The recognizing should help the tailoring of knowledge transfer mechanisms to match the knowledge being transferred.

Major managerial point of view is the significant role of unit manager as knowledge transfer mechanisms. The role is more important the more asymmetries there are between two firms or organizations.

## 7.2 Future research topics

According to Alasuutari (1999) and Ritchie & Lewis (2003) generalization of the results is not the main point of the study. In this study the main purpose was to identify new knowledge transfer mechanisms and related critical factors in acquisition context and make them better known via classification. Generalization could be difficult because the study included only one company and four acquisitions in special service industry which has its own specialties. However as the Yin (2003) points, findings are possibility to generalize to theory. Technological research increases accelerating pace and IT systems as knowledge transfer mechanisms are coming more understandable, so the theoretical knowledge will increase.

The study was fruitful and inspirational and woke enthusiasm to research more the topic. A little researched but important issue absolutely needs a more interesting and empiric approach to support the firms' managerial capabilities and pursuit to reach the competitive advantages in business fields. For that reason the future research is justified.

The findings aroused a few thoughts which would be appropriate research topics. Firstly, the role of acquisition management team as an initiator is to build the trust and we-ness and those are the significant value propositions. The purpose is to receive common social identification between two foreign organizations. The building process should need the own research, because easily the critical stage in acquisition interface is over and there should rapidly occur resistance to change.

As this study showed, the role of unit manager is more than important end should earn the own research. In this study there were four different kinds of unit managers. It would be fruitful to research the capabilities and skills of each manager. Are there may be such differences which explains the success of unit in economical or organizational level.

Table 13. summarizes the identified mechanisms of the study and points the approaches, value propositions and available risks related to them which should earn more research in the future.

**Table 13. Approaches related found mechanisms, value propositions and risks**

Mechanisms	Approach	Value propositions	Risks
<b>Acquisition management team as an initiator</b>	Giving the faces to changing, the first contact with employees, social identification	<ul style="list-style-type: none"> <li>building the trust</li> <li>we-ness</li> </ul>	<ul style="list-style-type: none"> <li>the lack of trust</li> <li>time resources</li> </ul>
<b>Unit manager as translator</b>	Trust to idea that someone keeps care of employees and transfer all necessary knowledge to them	<ul style="list-style-type: none"> <li>appreciation of organizational culture</li> <li>we-ness</li> </ul>	<ul style="list-style-type: none"> <li>employees understanding of managers role as a representative of parent company</li> </ul>
<b>Formal training</b>	Appreciation to belong together with parent company	<ul style="list-style-type: none"> <li>individual learning</li> <li>we-ness</li> </ul>	<ul style="list-style-type: none"> <li>interpretation</li> <li>if not enough -&gt; the lack of motivation</li> </ul>
<b>Self directed learning</b>	Taking responsibility for own work	<ul style="list-style-type: none"> <li>learning at your own pace</li> </ul>	<ul style="list-style-type: none"> <li>renunciation of common play rolls</li> <li>time resource</li> </ul>
<b>Rooming-in</b>	Confirmation that things were made exactly from the beginning	<ul style="list-style-type: none"> <li>security that the learning is right and enough</li> </ul>	<ul style="list-style-type: none"> <li>does not fit to all as the way of learning, the view of mentor is stressed</li> <li>time resource</li> </ul>
<b>Information systems implementation</b>	The change to worse systems affected to motivation and caused the resistance to change	<ul style="list-style-type: none"> <li>efficiency</li> <li>customer benefit e.g. satisfaction</li> <li>motivation and absorption are good</li> </ul>	<ul style="list-style-type: none"> <li>resistance to change will continue</li> <li>the lack of motivation</li> </ul>
<b>Customer relationship management</b>	Appreciation of customers	<ul style="list-style-type: none"> <li>good customer knowing,</li> <li>consultative work motivation</li> <li>a genuine desire to help the customer to develop the business</li> </ul>	<ul style="list-style-type: none"> <li>lack of skills if the education is not enough or right</li> <li>lack of understanding of customers business</li> </ul>
<b>Codified database</b>	Complementary and provide the knowledge	<ul style="list-style-type: none"> <li>security because everything has codified</li> </ul>	<ul style="list-style-type: none"> <li>interpretation</li> <li>to find the right knowledge from the right place</li> </ul>
<b>E-communication</b>	Easy, simply and fluent way to send and receive the knowledge	<ul style="list-style-type: none"> <li>security because everything has codified</li> <li>facility</li> </ul>	<ul style="list-style-type: none"> <li>interpretation</li> <li>then flow of information</li> <li>important vs. less important</li> </ul>

It would be profitable to research various knowledge based industries and especially such performances where a company has recognized and identified the knowledge management strategy phenomenon. The research question could be: is the strategy an explanatory factor when problems occur? Or is it a conducive factor when the success takes place?

The pilot company research could give many answers to service business acquisition set-up; identification of knowledge management strategy, testing of experimentation of “knowledge based “takeover” management – model” and taking into account the stumbling and successes of

researched cases. The results would be a guideline for a future theoretical discussion and an opportunity to develop the consultative tools.

A minor detail in this study was an explicit knowledge transfer mechanism which is worth of studying as such own study – intranet. It is familiar to everybody and it arouses strong feelings for and against. The role of it is in its numerous possibilities to store knowledge. Surprisingly little weight has been shown to develop and improve it for this purpose. Evaluation and maintenance of it needs special people to do the work, but seldom companies understand the value of it as a tool of knowledge sharing and transfer. It is often considered as a necessary evil which lives a life of its own.

In summary, knowledge transfer applied in firm's daily activities earns diverse research associated in explaining the various phenomenon; knowledge intensive economy generates continually new information and challenging practices which should link to theoretical research. That is the one way to make the business better.

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## **Appendix 1. Background interview CEO and Human Resource Manager (the parent company)**

### **KNOWLEDGE TRANSFER MECHANISMS, THE IMPACT OF MECHANISMS AND RELATED CRITICAL FACTORS**

#### BACKGROUND:

It was necessary to interview first the representatives of the case company in order to get the information about the acquisitions; time, employees, who continued as the unit manager and what were the practical arrangements which were needed when the acquisition occurred. The purpose of the interviews was to form an overall impression.

#### SHORT INTRODUCTION OF INTERVIEWEE

- the role in company
- own education and work history

#### 1. THE ROLE OF KNOWLEDGE

- what kind of knowledge started to be transferred as soon as the acquisition occurred?
- whether the particular kind of knowledge transfer more important or urgent than another?

#### 2. KNOWLEDGE TRANSFER MECHANISMS

We would like to hear what kind of operations models or similar do you have at your disposal when you begin to start transfer knowledge to purchased company's personnel?

- whether some operations models better than others?
- if so why they are better than others?
- whether there are any operations models which are not suitable for transferring the knowledge?
- if so why they don't are suitable?

#### 3. CRITICAL FACTORS

- what kind of critical factors there are related the knowledge transfer?
- could you please tell some examples?

#### 4. THE IMPACT OF VARIOUS MECHANISMS RELATED TO KNOWLEDGE TRANSFER

How the personnel related to purchased company has taken the selected knowledge transfer mechanisms?

- whether the personnel has presented its own aspirations related to the knowledge transfer mechanisms?
- if so what kind of aspirations?
- is there any matter of personnel's size which operations models has been the most efficient?
- what kind of scenarios do you possibly have?
- are you going to use new kind of operation models?
- if so what kind of?

## Appendix 2. Focus Group interviews, four case units

### KNOWLEDGE TRANSFER OPERATION MODELS – SERVICE BUSINESS CAPABILITY AND THE TRANSFERRING MECHANISMS OF COMPETENCE

#### BACKGROUND:

The research is part of the research project InnoSpring Services carried out at Technology Business Research Center (TBRC), Lappeenranta University of Technology. The project is founded by TEKES (National Technology Agency in Finland).

One research aim is to understand such a service business where the knowledge is crucial related to the success of the company. Another aim is to survey various operational models of knowledge transfer. The research is important for the following reasons:

- the operational models of knowledge transfer (knowledge transfer mechanisms) are not known well enough -> the “soft face” of acquisitions
- what kind of operational models (transfer mechanisms) are proven related to various knowledge transfer?
- what kind of challenges related to knowledge transfer?

In this research the knowledge is defined as follows:

- written text (for example intranet or guides situated in electronic formal) or unwritten, together working through discussion or examples guiding
- operational models of knowledge transfer are all kinds of way of action as guides, intranet, mentoring, meetings , team working etc.

#### THE PRINCIPLE OF FOCUS GROUP DISCUSSIONS

- “tell you own story, it is unique”
- group discussion from themes which has given in advance
- there is no “right or wrong” answers. The purpose of discussion is to change the experiences and opinions. All approaches are valuable.
- the aim is to receive the commonplace coffee break discussion
- the researcher don´t take part in a debate

- discussions will be taped for further analysis: contents and analysis are absolutely confidential and participants identity and background are secret.
- the data is recovered only in the part of research. Researchers are sworn to secrecy.
- the leader of focus group presents the themes, take care of schedules, ensure that discussions stick to the topic and if necessary ask supplementary questions
- The purpose is to inspire and encourage the discussants to tell the own approaches, experiences and opinions
- in best case the debate arises tacit and empirical knowledge

#### BACKGROUND QUESTION

Could you please tell based on your own experiences **what kind of knowledge** the parent company X started to transfer to this unit after the acquisition?

- think a moment and make the list to the paper
- group discussion after this

#### 1. THE OPERATIONAL MODELS OF KNOWLEDGE TRANSFER

We would like to know what kind of **operational models** parent company X used when it started to transfer knowledge to this unit? Did you know them? Could you please tell some examples?

- think a moment and make the list to the paper
- group discussion after this

What do you think were the mentioned operational models appropriate and useful to you? How they were compatible with your work? Could you please tell the examples?

- think a moment and make the list to the paper
- group discussion after this

## 2. IMPORTANT FACTORS RELATED TO SUCCESSFUL KNOWLEDGE TRANSFER

We would like to know what kind of **critical factors** there were related to parent company X knowledge transfer? Could you please tell some examples?

- think a moment and make the list to the paper
- group discussion after this

## 3. EASE VS. DIFFICULTY RELATED TO KNOWLEDGE AND ITS TRANSFERRING

If you think the knowledge transfer, what is **easy** and what is **difficult** related to that phenomenon? Could you please tell some examples?

Is it difficult to transfer some special knowledge compare to any other? Could you please tell some examples?

- think a moment and make the list to the paper
- group discussion after this

## 4. DATA SYSTEMS AND CUSTOMER RELATIONSHIP

We would like to know your experiences

- a) operational models related to development and consolidation of data systems
- b) operational models related to development of customer relationship

- think a moment and list to paper operational models related to knowledge transfer. Make a list on both (data systems and customer relationship)
- group discussion after this

## 5. HOW THE KNOWLEDGE TRANSFER COULD DEVELOP?

Could you please tell us how the knowledge transfer could **develop**? What other operational models could be used?

- write your ideas to paper
- group discussion after this

THANK YOU! If you want to tell us something more of this topic later after this discussion, please don't hesitate to contact us!