

Knowledge Creation Perspective on IT outsourcing: A public sector private sector context case study

Information Systems Science

Master's thesis

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ABSTRACT

The phenomenon called IT outsourcing has been around for quite some time. These projects involve people participating over boundaries and confines of traditional organization. Therefore, it is quite natural to take an interorganizational knowledge management aspect on IT outsourcing.

This study explores knowledge creation phenomena in an IT outsourcing setting where a Finnish public sector organization is switching an IT provider. The project is subject to Finnish Act of Public Procurements, which means that a formal tender process is required.

This study answers to the question what knowledge is created in this type of setting. Additionally, the processes of knowledge creation are studied as well as the causes that influence knowledge creation.

The research framework was build based on existing literature in the fields of knowledge management studies and IT outsourcing studies. This empiricist study was conducted as a single case study. The data was collected during spring of 2009 using mainly semi-structured interviews and direct observation.

The key findings of this study suggest that although the contract intends to set the course for the project, and its composition takes place in the very beginning of the project, the participants seem to have different interpretation of the contract and its letter during different times of the project. The reason for this is lack of trust and consequent inflexibility.

The contract or its interpretation itself can be seen as a piece of knowledge, a type of joint understanding, created in the beginning, but reviewed many times during the project, perhaps unnecessarily. Other, minor knowledge creation events appear during the project as well. For example, composing and reading a vocabulary document, achieving common understanding about the modules and information system dependencies and communication.

Key words: Knowledge creation, IT outsourcing, public sector, case study, contract

TIIVISTELMÄ

Informaatioteknologian ulkoistamisesta on keskusteltu jo jonkin aikaa. Projekteihin, joiden päämääränä on informaatioteknologian ulkoistaminen, osallistuu ihmisiä yli perinteisten organisaatorajojen. Tästä syystä on luonnollista lähestyä ilmiötä organisaatorajat ylittävän tietämyksenhallinnan näkökulmasta.

Tämä pro gradu -tutkielma tarkastelee tietämyksen luontia asetelmassa, jossa suomalainen, julkisen sektorin organisaatio vaihtaa informaatioteknologiatoimittajaa. Projekti on alisteinen Suomen hankintalaille, mikä edellyttää muodollista kilpailuttamista.

Tutkimus vastaa kysymykseen siitä, millaista tietämystä luodaan tällaisessa asetelmassa. Tämän lisäksi tutkimuksessa tarkastellaan tietämyksen luonnin prosesseja sekä syitä, jotka vaikuttavat tietämyksen luomiseen.

Tutkimusviitekehys rakennettiin aiempaan tietämyksenhallinta- sekä informaatioteknologianulkoistamiskirjallisuuteen perustuen. Empiristinen tutkimus suoritettiin yksittäisenä tapaustutkimuksena. Aineisto kerättiin kevään 2009 aikana semi-strukturoiduilla haastatteluilla sekä suoralla havainnoinnilla.

Tämän tutkimuksen tärkeimmät havainnot antavat ymmärtää, että vaikka sopimus asettaa projektin suunnan ja myös sen laadinta toteutetaan alkumetreillä, osapuolilla vaikuttaa olevan erilainen tulkinta sopimuksesta ja sen kirjaimesta projektin eri vaiheissa. Syy tähän on luottamuksen puute ja sitä seuraava joustamattomuus.

Sopimus ja sen tulkinta voidaan itsessään nähdä tietämyksenä, tietynlaisena yhteisymmärryksenä, luotuna alussa, mutta uudelleenharkittuna monta kertaa projektin aikana, ehkäpä tarpeettomastikin. Projektin aikana esiintyy myös muita, pienempiä tapahtumia, joissa luodaan tietämystä. Esimerkkeinä näistä ovat sanastodokumentin laadinta ja lukeminen, moduuleihin sekä tietojärjestelmäriippuvuuksiin liittyvän yhteisymmärryksen saavuttaminen sekä viestintä.

Avainsanat: Tietämyksenluominen, informaatioteknologian ulkoistaminen, julkinen sektori, tapaustutkimus, sopimus

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CONTENTS

1	INTRODUCTION	1
1.1	Claiming centrality of the topic	1
1.2	Generalizing the topic	2
1.2.1	IT outsourcing	3
1.2.2	Knowledge creation	4
1.2.3	The Finnish Public Procurement Act	4
1.3	What has been researched previously	7
1.4	Indicating the existing gap	8
1.5	Present research	9
1.6	Primary findings	9
1.7	Structure	10
2	LITERATURE REVIEW	12
2.1	Performing literature review	12
2.2	Knowledge creation	14
2.2.1	About knowledge	14
2.2.2	About knowledge creation and knowledge transfer	18
2.2.3	Requisites for knowledge creation	20
2.3	IT outsourcing	21
2.4	Extended framework	25
3	METHODOLOGY	26
3.1	Case study	26
3.2	Research context	26
3.3	Case study research	26

3.4	Describing the data.....	28
3.4.1	The City.....	28
3.4.2	The Provider	28
3.4.3	The ex-Provider.....	29
3.5	Applying case study to this thesis.....	30
3.6	Data gathering methods	30
3.6.1	Interviews.....	31
3.6.2	Direct observation	32
3.6.3	Other methods	34
3.7	Analyzing the data	34
4	EMPIRICAL RESEARCH.....	37
4.1	Introducing the interviewees and their roles	37
4.2	Procurement Plan	38
4.3	Invitation for Tenders	39
4.4	Negotiations for Contract	43
4.5	Definition.....	47
4.6	Planning.....	50
4.7	Implementation.....	53
4.8	Rollout.....	55
4.9	Summarization of events	58
5	CONCLUSIONS	60
5.1	Restatement.....	60
5.2	Results.....	61
5.3	Discussion.....	65
5.3.1	Learnings on IT outsourcing	65

5.3.2	Learnings on knowledge creation.....	68
5.4	Implications	69
5.5	Limitations.....	70
5.6	Suggestions for further research.....	71
	LIST OF REFERENCES	73
	APPENDICES.....	77
	Appendix 1: The Interview Frame	77

LIST OF FIGURES

Figure 1: Four Forms of Knowledge (Cook & Brown 1999)	17
Figure 2: Knowledge and Knowing (Cook & Brown 1999)	18
Figure 3: Modes of knowledge creation (Nonaka 1994)	19
Figure 4: Lee and Choi's (2003) original research model (redrawn)	20
Figure 5: Stage model of IS outsourcing (Dibbern et al. 2004)	23
Figure 6: The course of events	58

LIST OF TABLES

Table 1: Threshold values and characteristics in public procurements	6
Table 2: Literature search in major journals	13
Table 3: Knowledge Taxonomies and Examples (Alavi & Leidner 2001)	15
Table 4: Types of Sourcing Arrangements (Dibbern et al. 2004)	22
Table 5: List of interviews.....	31
Table 6: List of meetings	33
Table 7: Knowledge Creation in Procurement Plan.....	38
Table 8: Knowledge Creation in Invitation for Tenders	43
Table 9: Knowledge Creation in Negotiations for Contract	47
Table 10: Knowledge Creation in Definition	49
Table 11: Knowledge Creation in Planning	52
Table 12: Knowledge Creation in Implementation.....	54
Table 13: Knowledge Creation in Rollout.....	57
Table 14: IT outsourcing previous and current findings compared	66
Table 15: Knowledge creation earlier and current findings compared	69

1 INTRODUCTION

1.1 Claiming centrality of the topic

The increasing interest in outsourcing (e.g. Oh, Gallivan & Kim 2006) has created a need to explore the phenomenon itself and its implications in different contexts more thoroughly. The concept of IT outsourcing can be defined as purchasing all or some IT services from an external provider instead of producing them in-house (e.g. Lee 2000).

IT outsourcing is a notable phenomenon. For example, Computer Economics' IT outsourcing statistics 2010/2011 report indicate that there is a continuing, rising trend in IT outsourcing spending among companies registered to United States and Canada. Organizations' median spending percentage on IT outsourcing of their total budget was in 2008 3.8% while in 2010 the percentage was 7.1.

In addition, according to Forrester Research (Ross 2008) estimations, worldwide IT related outsourcing business is now worth about \$120 billion annually. They also forecast that they will grow in the future. Finally, the report concludes that IT outsourcing is not a fad and businesses that take advantage of it sooner, will also gain bigger profits. Also, another Forrester Research study (Roehrig 2007) found that organizations can save up to 17% of value by outsourcing IT.

The main reasons for IT outsourcing have been seen, for example, as decrease in IT costs, user-centric designing of IT, and increased return of investments from IT (Palvia 1995). Also, Lacity & Wilcocks (2001, in Dibbern et al. 2004) mention two reasons for IT outsourcing. One is a shift in business strategy - diminishing risk and focusing on core competencies, while the other is senior executives' view of IT as an overhead cost that should be minimized.

The outsourcing is not limited to private businesses alone. The public sector organizations are outsourcing for the same reasons as business organizations. In Finland, for example, during past few years many a big city has made the decision to outsource their IT. (e.g. IT-viikko April 6th 2009 & IT-viikko June 22nd 2010).

1.2 Generalizing the topic

In practice, outsourcing is about agreeing on a contract between two or more parties. Fixed term contracts come always to an end and even permanent contracts can be annulled. Thus if one of the contracting parties or both want to end the contract or are not willing to re-enter into a fixed term contract, the client needs to decide whether a new deal with a new provider needs to be made or whether previously outsourced operations should be moved in-house.

The decision for not re-entering into a contract with the current provider may come, for example, from negative experiences interacting with the current provider or it may be forced by an external factor such as the legislation. The latter is especially common in case of public sector organizations.

After the customer organization has decided to replace the current IT service provider with the new one, a switching project has to be initiated. During the project, the new provider faces an inevitable challenge to learn the culture, practices, and all the necessary knowledge related to the client and its environment. This applies to the client too – it needs to understand how to operate with the new provider. The old provider also has a more or less active role during the process. It is possessing essential knowledge, hence knowledge transfer and creation occur between the project participants.

A case study forms a base for this thesis. The client of this case study is a public organization – a city located in Finland, while both the old and the new provider are big global players in IT service outsourcing business. Previously, the client has had the IT services in-house. The situation changed, however, early 2000, when the services were outsourced to an external provider. Now new contracting is moving the services to the new provider.

Every public sector organization in Finland deciding to outsource needs to follow the tender process subject to the Finnish Public Procurement Act. This applies to the case organization too and as usual the act needs to be followed whether or not, for example, the employees of different participants are willing to disband their personal working relations with the employees of the other organization.

To be more exact, the act dictates that when and if a public sector organization decides to outsource or purchase services worth 15,000 € or more, the procurement has to follow the principles of tender process described in the act. The tender process should be nationwide if the worth of the procurement is less than 137,234 €. More valuable cases are required to be carried out as EU-wide procurements (Finnish Public

Procurement Act 2007). The tender process needs to be carried out once in a five-year-long period if its conditions are met.

1.2.1 IT outsourcing

Outsourcing simply means using one or more external agents to perform some or all organizational activities. When it is related to information technology, it can be called IT outsourcing (Dibbern et al. 2004). However, the literature on IT outsourcing is extensive and different authors use the concept a bit differently. For example, Dibbern et al. (2004) found at least 10 different, although overlapping, definitions and categorizations for IT outsourcing, while building a synthesis for outsourcing concepts for their paper.

Additionally, Dibbern et al. (2004) found four characteristics that differentiated different IT outsourcing projects from each other. First one is degree of outsourcing, which can be either total or selective or even non-existent. (Dibbern et al. 2004) When the degree is non-existent, it is not an outsourcing at all, but rather insourcing (Hirschheim & Lacity 1998), backsourcing (Lacity & Hirschheim 1995 on Dibbern et. al 2004) or facilities sharing (Currie 1998).

The second characteristic is ownership. It is internal when the client has all the IT in-house or at least owns wholly the subsidiary where it has sourced its IT. It is partial when some ownership has been handed to an external service provider, for example, in form of a joint venture. It is external when the client has selected which IT operations, all i.e. "traditional outsourcing" (Earl 1996) or just some i.e. "selective outsourcing" (Lacity et al., 1996), are wholly bought from an external provider.

The third characteristic is outsourcing mode. It simply means that there might be either one or more clients as well as one or more providers. This yields altogether four different modes. (Dibbern et al. 2004).

The fourth characteristic is contractual length. Usually it can be classified simply as short-term, long-term, and mid-term. However, these concepts are relative and depend on the author who uses them. (Dibbern et al. 2004).

1.2.2 Knowledge creation

The word creation indicates that there is some kind of a creator creating the creation. However, in this research, it was many times so during this research that new knowledge came into existence accidentally, without intentional managing effort. Knowledge was more generated than created. Therefore, the phenomenon should be called knowledge generation instead of knowledge creation. However, knowledge creation is widely used in the literature, and therefore it is used also in this thesis.

For knowledge, the distinction from data and information presented by Alavi and Leidner (2001) is used in this thesis. In this hierarchy management of data and information is a relatively straightforward process, while managing knowledge is not. Knowledge can be created when people interact. This is the definition Nonaka (1994) used for knowledge creation. And this applies for tacit knowledge.

However, this process resembles analog copying of information. Every time tacit knowledge is transferred among individuals, the receiver does not have perfect copy of the piece of knowledge. That is the master and the apprentice (i.e. the sender and the receiver in this respect) do not possess the same piece of knowledge in their minds. Actually something new has been created in the mind of the apprentice, a new piece of knowledge. This new piece of knowledge used the old piece of knowledge as raw material, but this new piece of knowledge is not the same as the old piece of knowledge.

1.2.3 The Finnish Public Procurement Act

Institutional pressures, for example, regulations affect the organizational structures (e.g. DiMaggio & Powell 1983). Interestingly, none of the articles reviewed, introduced or proposed these forces or mechanisms as enablers or inhibitors of either knowledge creation or outsourcing success.

In the European Union member states, however, the procurement, performed by public organizations, are regulated by different national laws. There are many reasons for this. The vision for the economic activity in the European Union is based on, first of all, the ideology of economic liberalism, which sees business organizations as units maximizing their utility as well as being effective and efficient. However, the mercantilist ideals are traditionally dominated the public organizations' decision making, increasing national protectionism. Despite all this ideological reasoning, it is not yet widely recognized why procurements should be targeted to different areas

when there can be, for example, pressure to increase the local wealth in a short run (Kalima, Häll & Oksanen 2007).

The money spent on public procurements in Finland, for example, is annually some 15 billion¹ euros. Therefore, it is, even more important to use public funds expedient way and to strengthen the competition in Finland and elsewhere in European Union. Economically reasonable, effective, and efficient public procurement procedures are important because they make it possible to produce high quality and more cost-effective public services using the resources available that are usually very scarce. In addition, simultaneously, the openness of the market of public procurements and the equal treatment of providers increase the opportunities for different companies to expand their markets and boost their competitiveness (Pohjonen 2002).

In Finland, the procurement procedure is regulated by the Finnish Public Procurement Act, and the act is applied when the procurement in question can be categorized in a certain category and exceeds certain threshold values (Pohjonen 2002). Rounded threshold values are presented in Table 1.

¹ 1,000,000,000; one thousand million

Table 1: Threshold values and characteristics in public procurements (Kalima et al. 2007)

<p>I EU procurements</p> <p>EU building contracts and concessions > 5 278 000 €</p> <p>EU goods and services procurements > 137 000 € / government central administration authorities > 211 000 € / other procurement units</p> <p><i>About 1600 agreements annually</i></p>	<ol style="list-style-type: none"> 1. EU-announcement 2. Appeal to the Market Court 3. Applies also to special field procurements exceeding the threshold values 4. Hampered procedure 5. Lots of regulations 6. Obligatory comparison and scoring of offers 7. Written procurement decision 8. 21-day-long denial time before signing of the final procurement contract
<p>II National procurements</p> <p>100 000 € < Building contracts and concessions < 5 278 000 €</p> <p>50 000 € < Social and health services < 137 000 € / 211 000 €</p> <p>15 000 € < Goods and other services procurements < 137 000 € / 211 000 €</p> <p><i>About 40 000 agreements annually</i></p>	<ol style="list-style-type: none"> 1. National announcement 2. Appeal to the Market Court 3. Easier procedure 4. Written procurement decision 5. Scoring is voluntary, but desirable 6. Comparison of offers is obligatory 7. Less regulations 8. No 21-day-long denial time before signing of the final procurement contract
<p>III Small procurements</p> <p>Building contracts and concessions < 100 000€</p> <p>Social and health services < 50 000€</p> <p>Goods and other services procurements < 15 000€</p> <p><i>About 1 300 000 agreements annually</i></p>	<ol style="list-style-type: none"> 1. The Finnish Act of Public procurements is not applied, but the common principles of the society such as principle of non-discrimination is applied 2. Procurement guidelines for municipalities and government ordinance for procurements are applied 3. Written decision not necessary 4. Only claim for correction, municipal appeal, and administrative appeal (no appeal to the Marketing Court)

When “other procurement unit” agrees on an EU goods and services procurement bigger than 211 00 €, it can be consider as an EU procurement, as the Table 1 shows. The public organization of this case study is facing such a situation. It can also be seen from Table 1 that such procurement makes a public organization to face eight different

characteristics meaning many formalities, regulations, and liabilities needs to be taken into account.

Not all but most of the public organizations in Finland are subject to this act. The Finnish Act of Public Procurements, second paragraph lists all organizations subject to public procurement process. Since the case organization is a procurement unit meant by the law, the public procurement is used. Actually, the public procurement procedure is almost always followed when the procurement unit is a public organization. Exceptions include military projects, projects related to national security etc. (Pohjonen 2002).

From the point of view of this study, the understanding and comprehension of the Finnish Public Procurement Act is important, because it may affect the cooperation between the case organizations. Since private organizations do not need to follow the Finnish Public Procurement Act, the situation would most likely be somewhat different when two private organizations were agreeing on an outsourcing contract.

There can be, however, ways to circumvent the Finnish Public Procurement Act. It is beyond the scope to study the previous legal cases; splitting one big project into smaller parts, could help a public organization to avoid the obligatory tender process. This strategy could, however, bring some project management challenges, but the tradeoff could be sometimes worth it.

1.3 What has been researched previously

The concept of outsourcing has been the topic of numerous papers during the past decades. Some of these research papers concentrate on the costs and benefits as it has been traditionally in the study of economics and related sciences (e.g. Aubert, Rivard & Patry 2004), some take even a step further and discuss the advantages and pitfalls of these projects (e.g. Palvia 1995). Even a few of them examine the contracting and relationship (e.g. Goo, Huang & Hart 2008) and (Kishore, Rao, Nam, Rajagopalan & Chaudhury 2003). Lee, Huynh, Kwok, and Pi (2003) went even further and studied the meaning of outsourcing alliances as a source of competitive advantage.

The concept of switching the IT service provider has also been studied. For example, Whitten and Leidner (2006) studied motives behind switching and moving operations back in-house i.e. back-sourcing.

However, although the concept of outsourcing has been in the interest of both practitioners and academia, there is a lack of appropriate research about knowledge

management in outsourcing projects. For example, in their article, Bandyopadhyay and Pathak (2007) took a game theoretic, classical approach to the knowledge sharing and saw it a classical economic exchange between employees of the client and the provider. On the contrary, the concept of knowledge creation inside the confines of a single organization, a unit, or a team has been studied widely.

Nonaka (1994), for example, explains that the organizational knowledge is created through a continuous dialogue between tacit and explicit knowledge. He describes four different patterns of interaction involving tacit and explicit knowledge. Finally, he concludes that the individuals create the knowledge, but the organizations play a crucial role in amplifying and articulating it. The ultimate outcome of his article is a theoretical framework in which the patterns of interaction – *socialization*, *externalization*, *combination*, and *internalization* – and their relations are explained.

Nonakas's use of the concept "tacit knowledge" has been seen as misunderstanding of Polanyi's prior work by some (e.g. Cook & Brown 1999, Tsoukas 2002). However, the Nonaka's use of the concept has spread into literature widely. This has caused some confusion and debate.

However, many an academic author has extended Nonaka's model. For example, Lee and Choi (2003) studied the enablers that are requisites for knowledge creation. They classified the enablers into three different categories: culture, structure, and information technology and explained how the categories could effect on the patterns of interaction by Nonaka (1994). However, according to Lee and Choi's (2003) findings no significant correlation between people with T-shaped skills and knowledge creation exists. T-shaped skills were defined by Lee and Choi as being deep knowledge not only about discipline, but also about how this discipline interacts with other disciplines.

Since it would be difficult to interpret the correlation between the knowledge creation process and organizational performance directly, Lee & Choi ended up using organizational creativity as an intermediate outcome between the knowledge creation and success.

1.4 Indicating the existing gap

Knowledge management including knowledge creation has been under vast research for about 20 years. Much longer there have been outsourcing projects and research on them including cases where outsourcing partner is being switched.

However, as mentioned in the previous chapter, no research on knowledge creation in outsourcing projects has been conducted. This can be thought to be really the case despite the fact there could be many instances during these projects when people with asymmetric knowledge cooperate, collaborate, and work together.

1.5 Present research

In this thesis the research framework developed by Lee and Choi (2003) is extended to cover the time taking nature of outsourcing projects, and compared against empirical evidence to create a new, extended framework to give answers to the research questions:

- What knowledge is created during an IT outsourcing project?
- Through which knowledge creation processes is this knowledge created during the process of switching IT service provider?
- What influences knowledge creation when IT service provider is changed and how?

Finding answer to the first question “What knowledge is created during an IT outsourcing project?” is answered by presenting findings of different knowledge creation events. The results of these events can be either tacit, explicit or social knowledge.

The second question is simply about the Nonaka’s (1994) knowledge creation processes: socialization, externalization, combination, and internalization. It is also discussed which of these processes are present in different situations. Finally, answer to the third questions will reveal the knowledge creation enablers and inhibitors being present in interorganizational interaction.

1.6 Primary findings

The findings suggest that the phenomenon called knowledge creation is, indeed, present all the time during the project. Creating the contract and later returning to it is the most recurring type of knowledge creation event during the whole project. However, it is not the only event when knowledge is being created. The events are presented shortly here.

During Invitation for Tenders, knowledge in form of vocabulary documentation is created. After that, in Negotiations for Contract knowledge was created again. First, it was common understanding about the modules required by the City. Second, knowledge in form of common understanding was written into a contract.

When Definition began different people stepped in. Because of this, many things needed to be relearnt by the new people. New implicit, general knowledge was created, perhaps unnecessarily.

The contract was partially renegotiated during planning, because there were different views about what applications should be established. The knowledge in form of consensus was created.

In Implementation, there was no documentation about dependencies on information systems available. The employees of both the City and the Provider worked together creating knowledge in form of common understanding about these dependencies.

Finally, during Rollout, first, two people came from the Provider. These two persons helped to create knowledge in form of explicit understanding about general issues. Second, the contract needed to be clarified again because of the pricing issues. The result was knowledge in the form of joint explicit understanding about the contract.

1.7 Structure

This master's thesis contains five distinct chapters. The first one is *Introduction*, the second one is *Literature review*, the third one is *Methodology*, the fourth one is *Findings*, and the fifth and final chapter is *Conclusion*.

The second chapter follows this introductory part and is titled *Literature review*. It covers the prior topics relevant for this study and is divided into four subchapters. The first one is about performing the literature review, the second one covers some essential subjects relevant to the research, the third discusses some more issues relevant to the research, and in the fourth subchapter the chapter is wrapped up and the extended framework is developed to form the base for an analysis of the empirical data.

The methodology of the research is introduced on the third chapter. Also, the ways of usage, collection and analysis of the data are described. The chapter is divided into four subchapters. The first one introduces the research context. The case study as

research strategy and the methods of interviewing, observing etc. are explained in the second subchapter. Third and fourth subchapters discuss the data gathering and the methods of analysis in this respect.

The fourth chapter covers the findings of the study. The findings itself are presented and their meanings are discussed more thoroughly.

Finally, the fifth chapter draws conclusions of the research and the chapter is broken down into five subchapters. The first one wraps up the research. The second one presents the theoretical contribution and is followed by the practical contribution, which is the third subchapter. The fourth subchapter is about assessing the study. Finally, the fifth subchapter proposes some considerations for the future research.

2 LITERATURE REVIEW

In this chapter the literature review for the research is discussed. First, it is explained how the review was performed. Then, the concepts, perceived essential for the research in advance, are introduced. Finally, the extended framework that will be compared to the empirical data is presented.

2.1 Performing literature review

Numerous papers have been written on both knowledge management and outsourcing. However, the literature on interorganizational knowledge creation or transfer in outsourcing projects is very scarce – almost non-existent.

In order to find relevant research papers, a search on ten reputable IS journals' abstracts was performed. The journals chosen were:

- Communications of the ACM
- Decision Sciences
- Decision Support Systems
- the European Journal of Information Systems (EJIS)
- Harvard Business Review
- Information and Management
- Information Systems Research (ISR)
- the Journal of Management Information Systems (JMIS)
- Management Science
- MIS Quarterly (MISQ)

All papers that were electronically available in March of 2009 were included in the search. The relevant papers published in these journals were searched using the keywords: "knowledge creation". The ones related to outsourcing would be later examined more thoroughly. However, the outcomes of the searches are presented in the Table 2.

Table 2: Literature search in major journals

	From	To	Papers found by means of the keywords	Papers on outsourcing
ISR	March 1990	March 2009	195	8
JMIS	Winter 1992	Spring 2007	220	1
MISQ	December 1987	March 2009	260	60
Communications of the ACM	January 1958	March 2009	387	1
Information and Management	January 1996	March 2009	172	2
Management Science	January 1987	March 2009	461	22
Harvard Business Review	September 1971	March 2009	340	17
Decision Sciences	Winter 1988	November 2007	237	19
Decision Support Systems	January 1985	March 2009	112	1
EJIS	March 1999	March 2008	202	43
TOTAL			2586	174

As it can be seen from the Table 2 altogether 2586 abstracts were found. When these abstracts were read through, it was found out that 174 of them were related to outsourcing. The 174 abstracts were read through carefully. If an abstract was seen having potential to contribute for the study, the whole paper was examined more thoroughly.

2.2 Knowledge creation

This subchapter introduces studies of knowledge creation. In sections one and two, knowledge and knowledge creation are discussed from different points of view in this respect. The third section presents the requisites of knowledge creation.

2.2.1 About knowledge

The knowledge creation is related to the concept of knowledge. However, the definition of knowledge is abstract and ambiguous. Next some of the concepts presented by different authors are introduced.

For example, Alavi and Leidner (2001) suggest that in addition to knowledge there are also data and information. This hierarchical view defines data as numbers and letters etc. symbols, information as these symbols are put in a meaningful order, and knowledge as information processed in a mind of an individual. On the other hand, knowledge becomes information when it is presented in symbolic forms.

Nonaka (1994) made a distinction between tacit and explicit knowledge. The tacit knowledge is knowledge that cannot be documented easily and exist only in the minds of individuals. On the contrary, the explicit knowledge can be documented easily, for example, in written documents.

Alavi and Leidner (2001) supplemented the taxonomy with other types of knowledge. Their result is altogether 10 different types of categories including Nonaka's (1994) tacit and explicit knowledge (see Table 3).

Table 3: Knowledge Taxonomies and Examples (Alavi & Leidner 2001)

Knowledge types	Definitions	Examples
Tacit	Knowledge is rooted in actions, experience, and involvement in specific context	Best means of dealing with specific customer
Cognitive tacit:	Mental models	Individual's belief on cause-effect relationships
Technical tacit:	Know-how applicable to specific work	Surgery skills
Explicit	Articulated, generalized knowledge	Knowledge of major customers in a region
Individual	Created by and inherent in the individual	Insights gained from completed project
Social	Created by and inherent in collective actions of a group	Norms for inter-group communication
Declarative	Know-about	What drug is appropriate for an illness
Procedural	Know-how	How to administer a particular drug
Causal	Know-why	Understanding why the drug works
Conditional	Know-when	Understanding when to prescribe the drug
Relational	Know-with	Understanding how the drug interacts with other drugs
Pragmatic	Useful knowledge for an organization	Best practices, business frameworks, project experiences, engineering drawings, market reports

This study concentrates knowledge creation on social level. Therefore, from Table 3 only tacit, explicit and social knowledge are relevant for this study. Social knowledge is social by definition and according to Nonaka (1994) both tacit and explicit knowledge are created when at least two individuals interact.

When Nonaka and Takeuchi's book *The Knowledge-Creating Company* was published in 1995, the concept of "tacit knowledge" became very popular (Tsoukas 2002). However, the Nonaka's and subsequent use of the concept of "tacit knowledge" has been criticized (e.g. Tsoukas 2002). According to Tsoukas, it was Polanyi, who coined the concept of tacit knowledge for the first time in his book *Personal Knowledge* Tsoukas adds that after Polanyi the concept of tacit knowledge has been misused beginning from Nonaka.

Tsoukas claims that Polanyi actually described tacit knowledge as a type of knowledge a person possessing it is not even aware of it. One of the examples he mentions is a person hammering a nail. The person is aware of the nail and the hammer of course. But the awareness about hitting the nail is different from the awareness about his holding of the hammer. The first is called focal awareness while the latter is subsidiary awareness. And when or if the person becomes focally aware of holding the hammer, hitting the nail becomes clumsy.

Nonaka's description about tacit knowledge is something that is awaiting its conversion to explicit knowledge, while Polanyi, according to Tsoukas, had something very different in his mind: Tacit knowledge is something we cannot convert to explicit knowledge even if we wanted to. Tacit knowledge can be expressed only through our action and doing.

Tsoukas, however, is not the only author who has criticized the current, widespread understanding about tacit and explicit knowledge. In their paper Cook & Brown (1999), by referring to Polanyi, derive similar conclusions about the nature of tacit knowledge as Tsoukas did. They also make distinction between *knowledge* and *knowing*. The first one refers to something that is possessed while the latter is something an individual or a group possesses. They claim that the "epistemology of possession" is privileging explicit knowledge over tacit knowledge.

They claim that the current work on organizations is limited to this view and propose that organizations would be understood better if knowledge were treated as four distinct and also coequal forms of knowledge. See Figure 1.

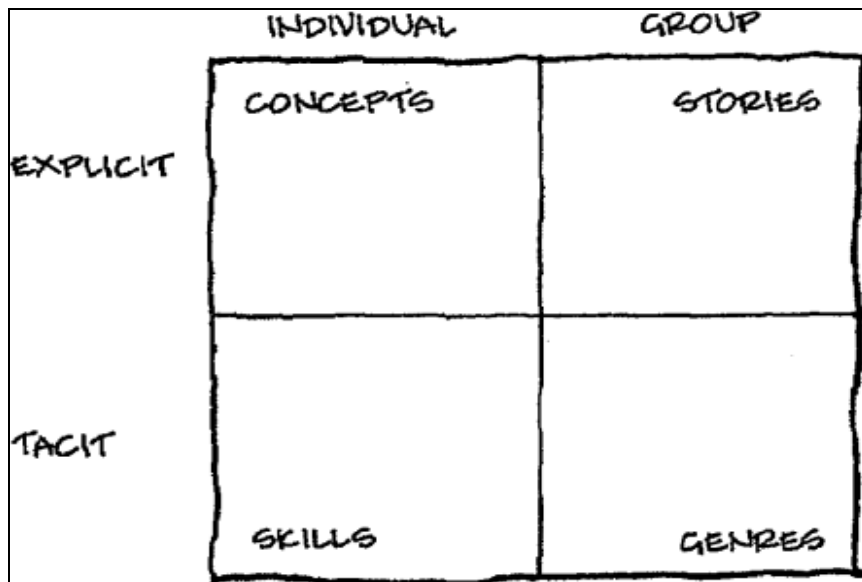


Figure 1: Four Forms of Knowledge (Cook & Brown 1999)

As shown in Figure 1, concepts, stories, skills, and genres are the four types of knowledge proposed by Cook and Brown (1999). Concepts, in the upper left, are something that an individual can know, learn, and even express explicitly. They are, for example, equations, rules, norms etc. Stories, in the upper right, can be expressed explicitly, used, and transferred in a group. Examples about this type of knowledge include stories about how work is done or famous successes and failures. In the lower left are skills. Skills are, for example, “feel” for keeping upright on a bike or for the proper use of a tool. Genres are presented in the lower right and defining it is the most difficult task. However, this type of knowledge is about classifying different types of, for example, messages to different categories by thinking of the media via them are delivered.

Finally, Cook and Brown (1999) conclude that knowledge is a tool of knowing. Knowing, for its part, is an aspect of our interaction with both physical and social worlds. The interplay of knowing and knowledge can, for their part, create new ways of knowing and new knowledge. This process, they describe as *generative dance*, is a powerful source for organizational innovation. They propose that understanding this generative dance is necessary to understand concepts such as learning, and effectiveness. These, they add, are the prime concerns for all “epistemology-oriented organizational theories”. The relationship between knowledge and knowing, according to Cook & Brown, is illustrated in Figure2.

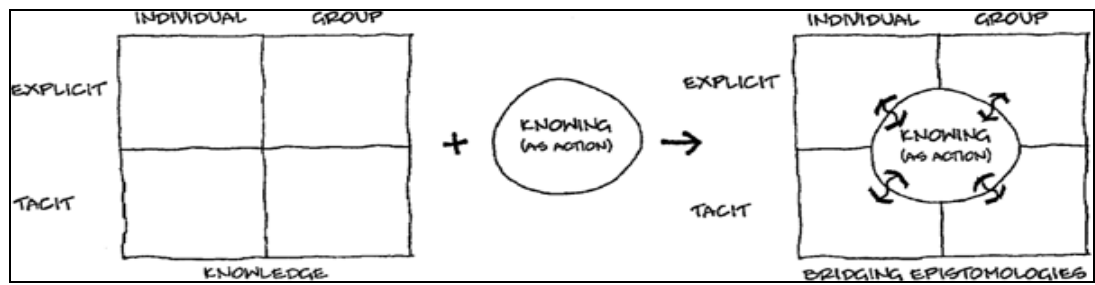


Figure 2: Knowledge and Knowing (Cook & Brown 1999)

As we can see from Figure 2, Cook & Brown (1999) do not present *knowledge* and *knowing* as competing, but as mutually enabling, complementary. According to Cook & Brown (1999), this is the way to bridge different epistemologies.

The process, Cook & Brown (1999) describe, is somewhat similar to Nonaka's presentation, although it seems that Nonaka has actually described only the conversion of explicit knowledge. Taking this into account, it can be perceived the tacit knowledge as Polanyi meant, might not be in the primary interest of this study

Hence, the usage of the concept "tacit knowledge" in different sources and what is actually meant by writing (or saying) it, is beyond the scope of this thesis and Nonaka's (incorrect) interpretation has spread widely and become popular, the Nonaka's meanings for tacit knowledge will be used in this thesis. It should be noted, however, that this thesis does not focus on the tacit knowledge as Polanyi first described it.

2.2.2 About knowledge creation and knowledge transfer

The concept of knowledge is not a straight-forward one and easy to define. Neither is the concept of knowledge creation. Knowledge creation as a concept has been mainly used in papers and books that Nonaka has authored (e.g. Nonaka, Toyama, and Konno 2000, Nonaka 1994). Nonaka concludes knowledge creation something that happens when at least two individuals interact.

As mentioned in the previous section, probably the most wide-spread knowledge creation and transfer framework is the one proposed by Nonaka (1994). It explains that knowledge is created through cognitive processes of an individual as well as the social processes of the society. Nonaka describes knowledge creation as a dialogue between tacit and explicit knowledge. The process itself is divided into four sub-processes: *socialization*, *externalization*, *combination*, and *externalization*. Figure 3 illustrates the process of knowledge creation according to Nonaka (1994).

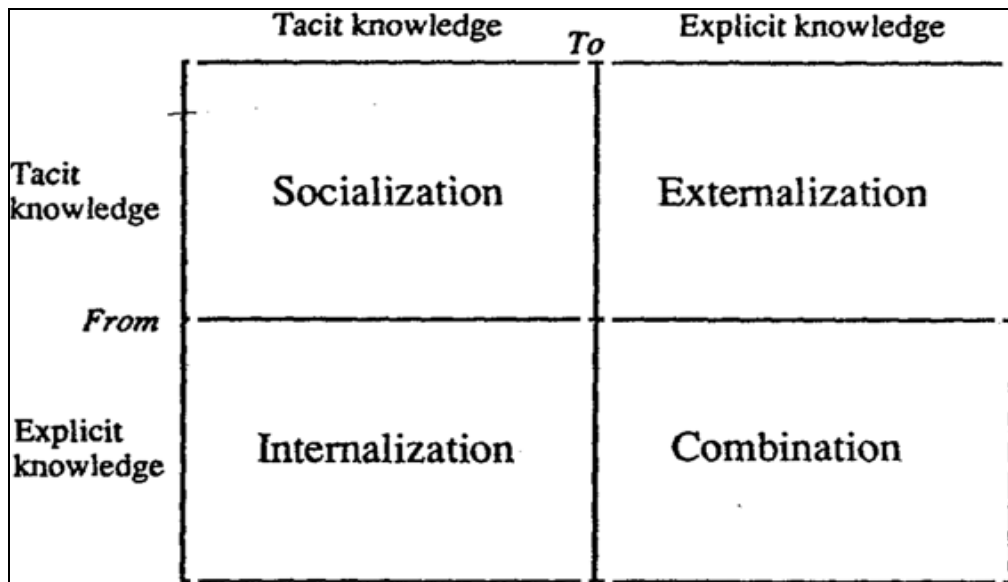


Figure 3: Modes of knowledge creation (Nonaka 1994)

As the Figure 3 shows, in socialization, new tacit knowledge is transferred from one person to another when they perform something together. Tacit knowledge becomes tacit knowledge during this phase. In externalization tacit knowledge is written out as documents and becomes explicit knowledge. Combination means that reports, for example, are combined from existing explicit knowledge available in the organization and therefore explicit knowledge is created based on existing explicit knowledge. Finally, explicit knowledge, for example, in form of written documents is codified into people's minds and internalization takes place.

However, the concept of knowledge transfer has been used much widely. For example, Argote and Ingram (2000) define knowledge transfer in organizational context as a process through which one unit is affected by the experience of another. These units can be groups, departments, or divisions, for example. They also add that this point of view is similar to the individual level analyses carried out in the literature previously.

Szulanski (1996) studied impediments to knowledge transfer (transfer of best practices in an organization in particular). His view of the knowledge can be implicitly interpreted as being something that is objective and is affected by some contextual factors.

Alavi and Leidner (2001) present knowledge creation as a part of larger knowledge transfer framework. According to them, the task of effective knowledge management is transfer created knowledge to locations where it is needed inside the organization.

If these three examples are thought, it can be concluded that knowledge transfer and knowledge creation are not entirely two distinct concepts. Nonaka (1994, 2000)

seem to propose that knowledge creation requires a type of raw materials that exist in the minds of individual or in written form. Then the interaction happens and the output is different type of knowledge, which was just *created*.

On the other hand, knowledge transfer theorists see the phenomenon that there is a source and target for the knowledge. The source or at least the knowledge stay constant, but the target is affected.

2.2.3 Requisites for knowledge creation

Lee and Choi (2003) presented a research model defining different enablers for knowledge creation processes. These enablers work as requisites for knowledge creation processes defined by Nonaka (1994) as Figure 4 shows.

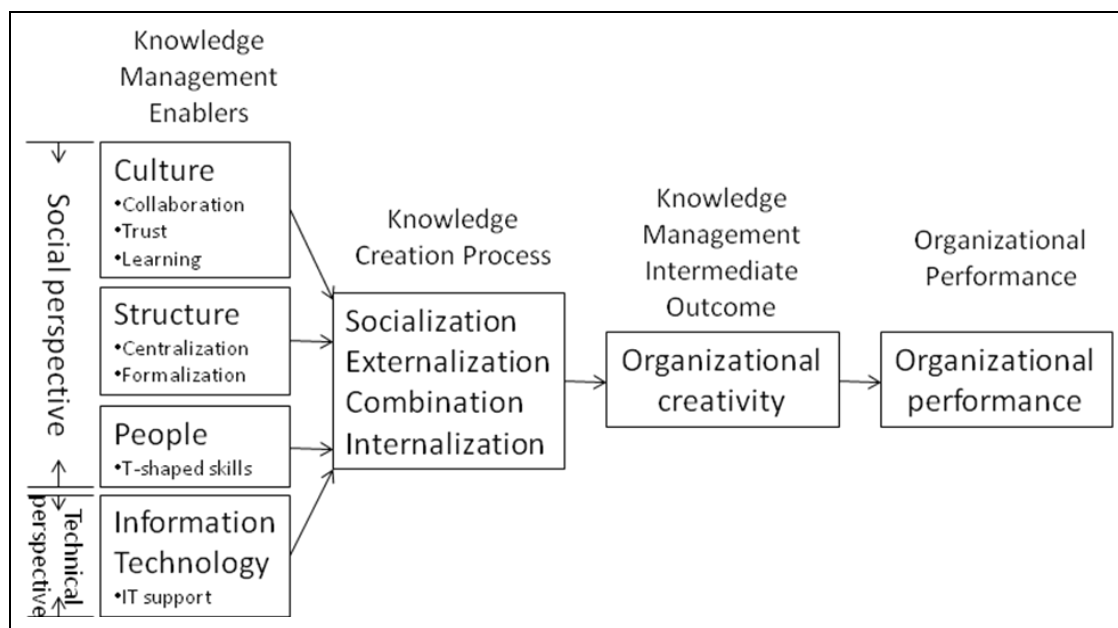


Figure 4: Lee and Choi's (2003) original research model (redrawn)

Figure 4 shows that knowledge management enablers work as requisites for socialization, externalization, combination, and internalization that in turn, can be measured using knowledge management intermediate outcome. Lee and Choi (2003) decided to use *organizational creativity* as an intermediate outcome, because the total amount of factors influencing the financial and non-financial organizational performance can be so high that it would be risky to attempt to trace the causality to any single factor such as knowledge creation processes.

It is interesting to find out that actually organizational creativity is something similar Cook and Brown (1999) described as the result of *generative dance*. While they emphasized Polanyi's original meanings, it is interesting to see that organizational creativity is the effect of Nonaka's knowledge creation processes.

What comes to the knowledge management enablers, Lee and Choi (2003) concluded only collaboration, trust, and learning of cultural enablers, centralization of structural enablers and IT support of information technological enablers had significant correlation with different sub-processes of knowledge creation.

2.3 IT outsourcing

The concept of IT outsourcing is somewhat ambiguous. Many (academic) authors define it a bit differently.

The term "outsourcing" has a meaning that an organization uses one or more external agents to perform some or all organizational activities instead of producing the in-house. When information technology is outsourced, it is called IT outsourcing (Dibbern et al. 2004).

Numerous papers on IT outsourcing have been written during past years. During these years the authors have used the concept differently, although their definitions do overlap (Dibbern et al. 2004).

For example, IT outsourcing can be defined as contracting various IT functions such as telecommunications, data center management, software maintenance etc. (Rao, Nam & Chaudhury 1996). Also, software and hardware and even human resources related to IT can be outsourced. This is called asset outsourcing (Lee & Kim 1999). In addition to functions and asset outsourcing IT management responsibility can be outsourced too (Hirscheim & Lacity 2000).

Dibbern et al. (2004) proposed four different but essential characteristics for IT outsourcing they found from previous literature on IT outsourcing. These characteristics are: 1) Degree of outsourcing, 2) Ownership, 3) Outsourcing mode, and 4) contractual length.

Degree of outsourcing means whether the client organization is outsourcing all (total), some (selective) or none of its IT operations to an external provider. On the other hand, ownership means whether these IT operations are kept in-house wholly

(i.e. internal ownership), to some extent (partial ownership) or not at all (external ownership). These two characteristics are summarized in Table 4.

Table 4: Types of Sourcing Arrangements (Dibbern et al. 2004)

Degree of outsourcing	Ownership		
	<i>Internal</i>	<i>Partial</i>	<i>External</i>
Total	Spin-offs (Wholly Owned Subsidiary)	Joint-Venture	Traditional Outsourcing
Selective			Selective Sourcing
None	Insourcing / Backsourcing	Facilities Sharing among multiple clients	N/A

As can be seen from Table 4, there are altogether six different arrangements. If ownership is internal and degree of outsourcing total or selective, the arrangement is spin-off (wholly owned subsidiary). This means that either all or selected functions have been spun off as separate units, but they are still owned by the client.

If ownership is partial and degree of outsourcing total or selective, the arrangement is joint-venture. In these cases, all or some IT operations are partially owned by the client and partially by some external party.

Finally, if ownership is external there are different arrangements for total and selective degrees of outsourcing. External and total arrangement is called “traditional outsourcing” (Earl 1996), while external and selective arrangement is called “selective sourcing” (Lacity et al. 1996). The former means that the whole IT is outsourced to an external party, while the latter means that only selected components are outsourced to an external party and some are kept in-house (Dibbern et. al 2004). The client has chosen selective outsourcing by keeping strategic IT management along with IT departments in-house.

If there is no outsourcing at all the degree of outsourcing is logically none. While these arrangements are closely related to outsourcing, they do not fit in the concept of outsourcing. For example, producing IT services in-house is called insourcing and moving services back in-house after outsourcing is called backsourcing. (Hirscheim & Lacity 2000). However, these closely related concepts are not relevant for this study.

The third characteristic is outsourcing mode. It simply means that there might be either one or more clients as well as one or more providers. This yields altogether four different modes. (Dibbern et al. 2004). In this study, there is just one client and just one provider from the perspective of the client.

The fourth characteristic is contractual length. Contractual length can be classified simply as short-term, mid-term, and long-term. However, these concepts are relativistic and depend on the author (Dibbern et al. 2004).

The IT services outsourcing happens over a period of time, therefore it is natural to divide the project into phases. According to Dibbern et al. (2004) the outsourcing can be divided into two phases as shown in Figure 5.

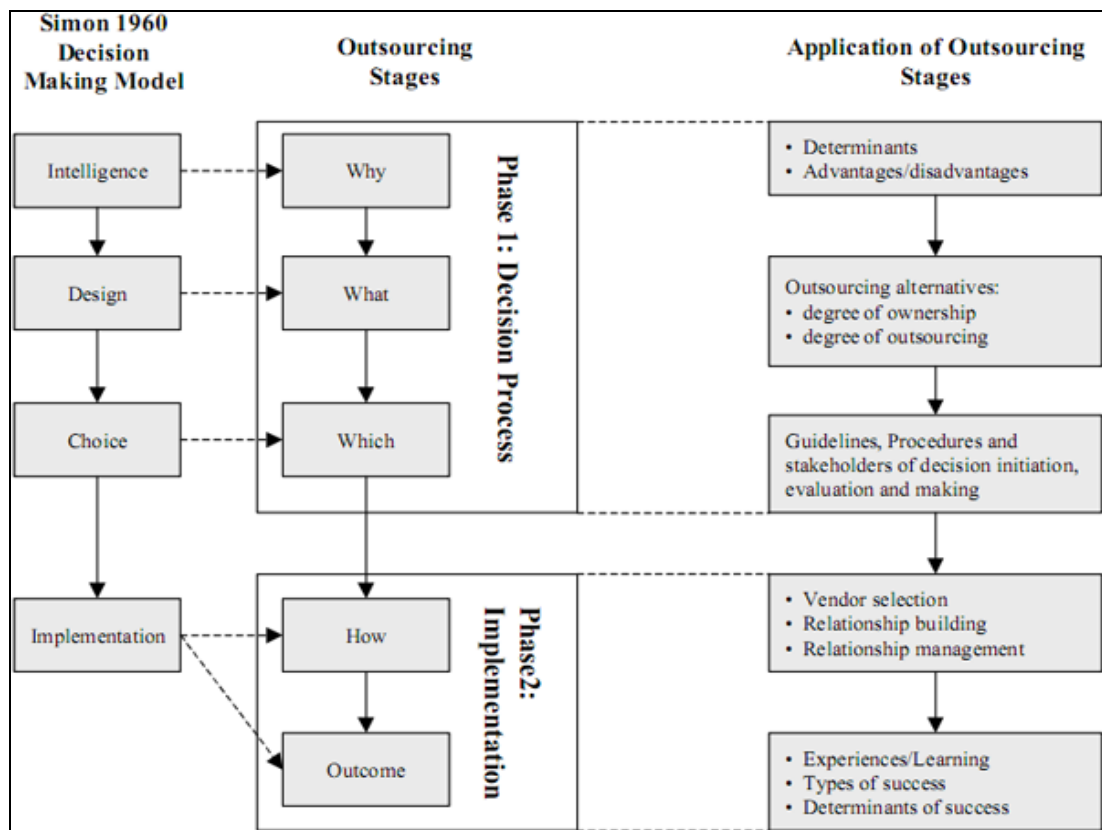


Figure 5: Stage model of IS outsourcing (Dibbern et al. 2004)

As it can be seen from the Figure 5, the first phase – Decision Process – contains three stages: *Why*, *What*, and *Which*. During the *Why*-stage it is clarified why to outsource. The benefits and risks related to the outsourcing are also assessed. The second stage that is *What*-stage is about charting what can be outsourced and the following *Which*-stage is for creating principles and methodologies guiding the outsourcing decision on which operations are actually outsourced.

The second phase – Implementation – contains two stages: *How* and *Outcome*. How the outsourcing is carried out is defined in *How*-stage. The fifth stage is *Outcome*, and it is about assessing how successful the whole project has been.

This main focus of this study is in Phase 2 – Implementation and especially *How*-stage in particular and the decision making process is influenced by the legislation which dictates procedures according to which the process has to be carried out.

In order not project management phases presented later to phases defined by Dibbern et al. (2004), from now on they will be called *subphases*. The subphases generally define the work that has to be done, schedule the deliverable generation and assessment, describe people involved in each phase, and describe the means to control and approve each phase.

Although the IT outsourcing has been studied widely, the related switching phenomenon has received much less attention. There are papers on switching, but they concentrate on the switching decision rather than the actual switching process.

For example, the decision to switch has been studied Whitten and Leidner (2006). They studied the motives behind the decision to both switch the provider and backsource. They found out that product quality and service quality were the two factors determining the client's desire to switch the vendor or backsource in particular.

Some authors have presented an transaction cost argument that high number of potential providers has a lowering impact on switching when the decision about terminating the contract is being made (Ang & Cummings 1997, Nam et al. 1996).

However, Dibbern et al. (2004) do mention relationship theories as one perspective to IT outsourcing phenomenon. The assumption behind these theories, according to Dibbern et al. (2004), is that:

“Organizational Parties in the relationship assume that the outcome of a relationship is greater than achieved by individual parties separately”

In addition, according to these authors, these theories concentrate on social economic exchanges as well as cooperation and interactions. However, there might be much more components in human interaction than just exchange. If this is so, then Dibbern et al. (2004) hold a lopsided view of social processes of outsourcing.

2.4 Extended framework

For later illustrating the findings of this study, no totally new framework was decided to be developed. Rather an existing framework would be used as such with the empirical data. If no appropriate framework would be found, an existing framework would be used to be in line with the aspects of this study.

In order to find an appropriate framework or research model about knowledge creation for the basis, all the papers found containing research models were read through even more carefully and the appropriateness for this study were considered model by model.

Since no appropriate framework was found for the basis of this research as such, an extended framework was needed and it was therefore developed. Based on previous research introduced earlier an extended framework can be proposed.

Knowledge can appear in different forms. In this thesis interest is on tacit, explicit and social knowledge because only these three types are related to social processes.

There are altogether four types of processes via which the knowledge can be created. The result can be either explicit knowledge or tacit knowledge. Either explicit or tacit knowledge can come in different forms. Social knowledge comes into existence when groups develop shared norms.

Knowledge creation is influenced by different kinds of enablers. These can be culture, structure or information technology (Lee & Choi 2003).

Finnish legislation is background variable when a public organization in Finland is outsourcing a certain type of project (see Table 1).

IT outsourcing can be divided into six distinct subphases. They follow each other in this order: *Invitation to Tenders*, *Negotiations for Contract*, *Planning*, *Definition*, *Implementation* and *Rollout*. Different tasks are carried out in each subphase.

In Negotiations for Contract Service Level Agreements (SLAs) are agreed on. Well-structured SLAs increase the probability of outsourcing success (Goo, Huang, and Hart 2008). SLA can be thought as a piece of explicit knowledge.

If the employees of both the provider and the client trust each other there is less antagonistic behavior towards each other and the participants are more collaborative (Bandyopadhyay and Pathak 2007). If the client trusts in the provider less formal control is needed (Rustagi, King, and Kirsch 2008).

3 METHODOLOGY

3.1 Case study

First, the research context is introduced. Second, the case study as a research strategy and related methodological choices are introduced and explained. Third, the case itself is introduced. Fourth, the fit between the choices and this particular case study are discussed. Fifth, the data collecting procedure is described, how the meetings and interviewees were chosen and how the observations and interviews were performed. Finally, the data analysis is explained.

3.2 Research context

This master's thesis was done as a part of a research project focusing on the formation of a business relationship between a public sector organization and an IT service provider. The research project was carried out in Enterprise Simulations Laboratory of Helsinki University of Technology. The observations and interviews for the thesis were performed during the time period from February to June 2009.

3.3 Case study research

This study uses a research strategy called case study. Galliers made an analysis on IT research (1991, in Dibbern et al. 2004), and made a distinction between the concepts of approaches and methods. The concept of approach is similar that Yin (2003) uses for strategy. Both research approach and research strategy mean a way to undertake the research, while research methods are more narrowly focused procedures and techniques for carrying out the actual research, according to both Galliers (1991, in Dibbern et al. 2004) and Yin (2003).

Dibbern et al. (2004) divided the previous literature on IT outsourcing research on two categories: empirical and non-empirical. The empirical research can be descriptive, interpretive and positivist, while the non-empirical research can be conceptual or mathematical. However, Dibbern et al. (2004) adopt a view in their paper that case study is just a method, a way to carry out empirical research.

According to Dibbern et al. (2004), approaches are either empirical or non-empirical. They also mention that there is indeed a difference between definitions of Galliers (1991) and themselves.

However, as mentioned above, Yin (2003) has a similar definition of the concept of research strategy (or approach) as well as the concept of research method. He defines the case study strategy being an empirical research studying current phenomena in its natural, real-life environment. This definition shows us that both Yin (2003) and Dibbern et al. (2004) share the view that case study is empirical research.

The case study concentrates on understanding the dynamics being present in single settings, and they can involve only one or they can include even multiple cases. In addition, they can concentrate on one or more levels of single or multiple cases. The case study can be considered a viable research strategy if the researcher can influence only a little or cannot influence at all over the course of events (Yin 2003).

The knowledge creation processes were not observed in a laboratory setting, but in a set where the project itself was carried out. This fulfils the requirement, proposed by Yin (2003) that events being observed take place in their real-life environment. Also, the knowledge creation processes were dynamic and were present in those particular forms in those single settings in this one particular case. Finally, the researchers were not able to influence the course of events in practice. A role of more or less passive observers was left for the observers.

To put it more general: the case study was chosen because according to Yin (2003), for example, it is a correct choice when complex social phenomena are on the interest of the study. In addition, according to Eisenhardt (1989) case study can be used to fulfill different kinds of research needs like creating and testing theories as well as describing events.

Knowledge creation in interorganizational context is a complex social phenomenon. The nature of this study is descriptive. In practice, this means that events taking place during the project are needed to be described.

It applies to most cases studies that the data usually come from many sources. These sources can be archives, interviews, questionnaires, and observation. Also, the nature of case study can be both quantitative and qualitative (Eisenhardt 1989). Generally, the boundaries of both the phenomenon and the environment are not usually very strict (Yin 2003).

For this qualitative case study, many sources of data were used. This includes interviewing, observation as well as archives. In addition, the no prior boundaries for the phenomenon were set.

However, the case study research strategy has received some criticism. According to Yin (2003), this is partially because there is a freedom of methodological choice in it. For example, the methodologies for the case study has not simply been seen very rigorous or established and the researches relying on this research strategy have been said to simply tolerate biased data or valid data to what can be given various meanings (Yin 2003).

Additionally, it has been claimed that a large scale, scientific generalization is not possible for this type of data. However, as a defense, it can be mentioned that the case study is about analytical generalization, but not about statistical generalization. (Yin 2003).

3.4 Describing the data

The case dates back to the turn of March and April of 2008, when the client – a Finnish city (the City) – started the switching project with the new provider (The Provider). The City had outsourced its IT services once before and now the ex-Provider was giving way to its successor.

The City's partnership with the ex-Provider started in early 2000's and was the City's first IT outsourcing experience. The initial decision to outsource, back then, was made because the City was, for example, facing a growing need for services, new models in producing services, more demanding customers, emergence of e-services, need for efficiency and effectiveness in both quality and cost control. The project and its preparation were partially dictated by the Finnish Public Procurement Act.

3.4.1 The City

The City is a city located in Finland. When the project began, the City had over 10 000 employees working in more than one unit. Not only one Chief Information Officer (CIO) was responsible for the whole IT of these distinct units.

The employees were physically distributed among numerous different locations. These locations included, for example, schools and hospitals.

This variety of functions had made the information system architecture, as well as, infrastructure highly fragmented and different external providers were producing different services. The data center, for example, which was located in the city hall, was maintained by a different provider than, say, data links.

However, the City was hoping that after the project the diversity of the providers could be a challenge of the past. One criterion for choosing the next provider would be an ability to diminish the challenge.

Other things the City was envisioning included an ability to measure the quality of services produced, more advanced pricing rules, documentation etc. These would be written in the contract.

3.4.2 *The Provider*

The Provider is one of the biggest IT service providers world-wide. It had had a minor knowledge about the City's environment beforehand because it had been responsible for the local resident network.

However, now the Provider had won the tender process clearly. This meant that the ex- Provider had to hand over its customership to its successor.

3.4.3 *The ex-Provider*

The ex-Provider is also one of the world's biggest IT service providers. It won the tender process in early 2000, but its offering was not scored high enough.

Since the ex-Provider had maintained a variety of the ICT services of the City, it had lots of information and knowledge about the City and its environment. Therefore, the outsourcing contract between the City and the ex-Provider stated that the ex-Provider is obliged to share all the relevant information related to the City and its environment. However, it might sometimes be challenging to supervise whether the ex-Provider is actually as cooperative as it could be when fulfilling this obligation.

On the contrary, next time the City is outsourcing the ex-Provider might be interested in winning the tender process. Therefore, it might also be beneficial to the ex-Provider to share all the relevant information (and even more) to build a good basis for the City's upcoming ICT outsourcing taking places between every five-year period.

However, there was at least one thing indicating the ex-Provider's dissatisfaction. The ex-Provider took the case to the Market Court in order to strike down the City's decision to choose the Provider. The ex-Provider later lost the case – their offering was fairly and objectively poorer.

The key person from the City and the Provider were interviewed. Additionally, all the observational data have been collected from the meetings between the participants mentioned above. The representatives taking part in the meetings were mainly from the City and the Provider, but also from the ex-Provider.

3.5 Applying case study to this thesis

A framework was created to introduce the main dimensions of the research (Miles & Huberman 1984). Basically, this means that an existing framework was selected. In this study it was the research model of Lee and Choi (2003) (see Figure 4). Second it was compared against the data during the research.

More commonly, this type of approach is widely used in case study research when researchers are comparing the theory and the data. In other words the original framework has lived an evolutionary process during the research. (Eisenhardt 1989)

3.6 Data gathering methods

Case study evidence i.e. data can come from many different sources. Yin (2003) introduces six different sources that can be useful for collecting the data: physical artifacts, archival records, documentation, interviews, direct observation, and participant-observation. According to Yin there are three important principles of data collection when carrying out high quality case studies: To use multiple not just single sources of data, creating a case study database, and maintaining a chain of evidence.

The first principle is addressed using mainly two data collection methods – direct observation and interviews. Additionally, all kinds of documentation, for example, contract material have been available and some participant-observation outside meetings has been carried out. The interviewing and direct observation as data collection methods will be discussed next in this respect.

3.6.1 Interviews

A series of semi-structured theme interviews were conducted. There were 19 interviews altogether (see Table 5).

Table 5: List of interviews

Who was interviewed?	Date
The City Project Manager of Service Management Subproject	April 3 rd
The City Vice Project Manager 1	April 21 st
The City project manager, who was managing the project during subphases 1 and 2.	April 16 th
The City project manager, who was managing the project during subphases 1 and 2.	June 10 th
The City project manager, who was managing the project during subphases 1 and 2.	June 17 th
The City Manager for the City Project Managers	June 18 th
The City Vice Project Manager 2	April 24 th
Representative of External Consultancy working for the City	June 12 th
The Provider Vice Project Manager	June 3 rd
The Provider Account Manager	June 3 rd
The Provider Project Executive Director	April 24 th
The Provider Project Manager	June 2 nd
Person worked for the ex-Provider, now working for the Provider	June 12 th
Representative of External Consultancy working for the Provider	April 23 rd
The City Chief Information Officer of Department X	June 4 th
The City project manager, who was managing the project during subphases 3, 4, 5, and 6.	June 4 th
The Provider Project Manager for Roll-ins	June 5 th
The Provider Person Responsible for Workstation Applications	June 17 th
The Provider one of the minor project managers	June 2 nd

As we can see from the Table 5, all the semi-structured interviews were conducted during the spring and summer of 2009. The semi-structured theme interview is a type of an interview, in which all the questions are predetermined and are the same for all the interviewees. The interviewees are also allowed to answer without leading or prompting and the subjective feelings as well as experiences the interviewees might have, are surveyed in assistance with prior knowledge (Hirsjärvi 2000).

The interviewer can change the order and even the form of the questions, if they decide so. Since the themes of an interview are defined beforehand, it is necessary that the researcher is familiar with the subject before they start to interview (Hirsjärvi 2000).

The main themes of the research were successes, challenges, and other things during the project. There were also some assisting themes. The main goal was, however, to structure the interview question around the research questions. The interview frame can be found from the appendices (see Appendix 1). It should be emphasized once more that the frame was just a starting point for a more open discussion.

There was more than one interviewer present during every interview session, but only one interviewee. One of the researchers was taking most of the notes, while one or more researchers were having more personal interaction with the interviewee. In addition, the interviews were also recorded using an audio recorder.

Multiple investigator strategy, used in this research, has two key advantages according to Eisenhardt (1989). First, different investigators have probably different insights into the phenomenon making the data richer. On the other hand different views will make the researchers to capitalize any novel insights lying in the data. The second advantage is that converged observations from multiple observers make the findings more confident (Eisenhardt 1989).

3.6.2 *Direct observation*

During the spring 2009 one or two research participated in altogether 13 different meetings. The meetings were between different parties of the case in question. The list of meetings between different parties is listed in Table 6.

Table 6: List of meetings

Meeting	Parties present
Communications meeting	the City, the Provider
General project meeting related to basic IT solutions	the City, the Provider
Service monitoring meeting	the City, the Provider
Rollout steering group meeting	the City, the Provider
Rollout monitoring group meeting	the City
Application provider consolidation group	the City, the Provider, and the Application provider
General project meeting	the City, the Provider
Internal weekly meeting	the City
Continuous service monitoring meeting	the City, the Provider
General project meeting	the City, the Provider, and the Consultancy subcontracted by the City
Project meeting	the City, the Provider, and two subcontractors of the Provider
Steering group meeting	the City, the Provider

The roles of the researchers were mainly passive observant. In practice this was typing and recording the whole meeting using a laptop computers and audio recorders. The participants were informed about the recording and their permissions were asked before every meeting

In order to increase the reliability of the observational evidence, there always should be more than one observer (Yin 2003). Since sometimes only one researcher was present, this multiple observer recommendation was not fulfilled when the data were gathered for this study. However, the audio tape was later transcriber to text. The resulted text can be seen as a non-subjective piece of data including every word the participants have said aloud during the meeting.

It should be noted that there is always a chance the participants acted differently than they would have done if researchers had not been present. That means the participants might have changed their behavior because they knew they are being observed. On the other hand, it is impossible or at least unethical to interview or observe people without their consent.

3.6.3 Other methods

Lots of contract material and other confidential material were available for the researchers after signing the non-disclosure agreements. This additional information has been used mainly to understand the context better. According to Yin (2003), the documentation is not necessarily objective description about the course of events and therefore it is good to use it with care and, for example, augmenting the evidence from other sources. Documentation is also good for understanding, for example, the formal structures of organizations (Yin 2003).

Participant-observations were performed spontaneously whenever there was an opportunity to do so. These instances happened usually before and after meetings. Basically, it was the researchers used to have a cup of coffee with the members of the City, because all the meetings were held in the premises of the City. Therefore, it is problematic, because according to Yin (2003) these situations may make the researchers the supporters of the ideas of the City personnel and losing their objective view of the situation. However, the participant-observation brought some insights into relief augmenting the direct observations and interviews as well as documents.

3.7 Analyzing the data

Eisenhardt (1989) describes the data analysis most difficult and the least codified part, but also the heart of case study. This holds true also with this case study: Not earlier than the data analysis it was possible to bring in the contribution of the empirical findings.

The data analysis of this study began by printing the interviews. Then the interviews were read through and every time a relevant section was found, it was marked. Later the comments from the interview material were classified under different subphases to create a chronological and meaningful order of data.

The interviews were verified using the data collected by observing the meetings and by reading the additional documents available. There were no actual conflicts between the topics interviewees spoke out and what was observed and studied elsewhere. Of course people did not express their views that directly and negligently during the meetings as they were during the interviews.

The knowledge creation processes were identified by tracking situations similar or analogous to the ones that were described by Nonaka (1994). Nonaka (1994) described socialization as follows:

“First, there is a mode of knowledge conversion that enables us to convert tacit knowledge through interaction between individuals. One important point to note here is that an individual can acquire tacit knowledge without language. Apprentices work with their mentors and learn craftsmanship not through language but by observation, imitation, and practice. In a business setting, on-the-job training (OJT) uses the same principle. The key to acquiring tacit knowledge is experience. Without some form of shared experience, it is extremely difficult for people to share each others’ thinking processes. The mere transfer of information will often make little sense if it is abstracted from embedded emotions and nuanced contexts that are associated with shared experiences. This process of creating tacit knowledge through shared experience will be called – ‘socialization.’”

Socialization was presumed to take place every time there were at least two people possessing different knowledge working together. Externalization was thought to happen every time at least two people had a conversation together about some task that was about to be performed. According to Nonaka (1994), the concept of externalization is not that well developed, while the other processes have analogs in organizational theory.

The third knowledge creation process is called combination. Nonaka (1994) defines it as follows:

“[The second mode of] knowledge conversion involves the use of social processes to combine different bodies of explicit knowledge held by individuals. Individuals exchange and combine knowledge through such exchange mechanisms as meetings and telephone conversations. The reconfiguring of existing information through the sorting, adding, recategorizing, and recontextualizing of explicit knowledge can lead to new knowledge. Modern computer systems provide a graphic example. This process of creating explicit knowledge from explicit knowledge is referred to as ‘combination.’”

Combination was presumed to happen when some reports based on existing information were composed etc. The final knowledge creation process is internalization. Nonaka (1994) gave it a following definition:

“...conversion of explicit knowledge into tacit knowledge, which bears some similarity to the traditional notion of “learning” and will be referred to here as ‘internalization.’ ... ‘action’ is deeply related to the internalization process.”

The internalization was presumed to happen whenever these reports or documentations were thought to be learned by some participant.

4 EMPIRICAL RESEARCH

This chapter presents the knowledge creation phenomena found in the empirical data. The subphases are presented in chronological order, and under every subchapter there is the corresponding subphase described with comments and finally the every subchapter is summarized in the form of a table. The last subchapter presents the extended framework with the empirical findings.

The comments are in their original form with the difference that names have been replaced with fake names and even the genders are mixed to some extent. Also, the original comments were initially spoken in Finnish, so they have been translated into English. These measures have been taken to protect the anonymity of the actual persons.

First, the persons interviewed are presented. Next, the whole project is next described from Procurement Plan to Rollout from empirical point of view. Finally, framework based on the empirical data is presented.

4.1 Introducing the interviewees and their roles

Altogether six employees from the City were interviewed. In this text their names have been replaced by pseudonyms inspired by the movie *Reservoir Dogs* (1992).

The interviewees were **Mr. White**, who was acting as the project manager managing during *Invitation for Tenders* and *Negotiations for Contract*. Beginning from the definition **Ms. Orange** took his place and was the City's project manager till the end of the project. The City had two vice project managers: **Mr. Pink** and **Ms. Blonde**. In addition **Mr. Brown** was the project manager for the Service Management subproject and **Ms. Blue** was the Chief Information officer of Department X.

Also six interviewees were chosen from the Provider's side. Their names have also been replaced with pseudonyms inspired by the movie *Top Gun* (1986). These were **Mr. Maverick**, who was the project executive director. **Ms. Goose** acted as the account manager. The project manager was **Mr. Cougar**, while **Ms. Merlin** were doing the job of the vice project manager. **Mr. Stinger** and **Ms. Iceman** was the project manager for roll-in's and the person responsible for workstation applications in this respect.

In addition to the Provider's employees, one external consultant from an external consultancy was interviewed. The consultancy was hired by the provider and the person interviewed shall be called **Ms. Max**.

4.2 Procurement Plan

The work around *Procurement Plan* meant just making initial plans for the upcoming tender process. It was obviously known by both the City and the Provider that this procedure, required by Finnish Public Procurement Act, would be coming after five years of the cooperation.

Procurement Plan started as early as 2004 and it involved only the employees of the City in the form of workshops to create common understanding. Therefore, it bears little or no relevancy to talk about interorganizational cooperation at this point.

The employees all over the City's organization were invited to the workshops. It should be noted that Ms. Orange, the City's project manager starting from Definition, was not present, but her predecessor was.

Mr. Brown, the project manager of the service management subproject comments:

People, involved composing the procurement plan, were: Ms. Blue, The Chief Information Officer (CIO) of Department X, Ms. Orange's predecessor; Mr. Pink, our vice project manager, myself, and of course CIO's from all of the different departments of the City.

As no known cooperation took place during this time, Procurement Plan is included in the project itself from the point of view of this research. It is described here only as background information.

Summary

Altogether only one knowledge creation instance can be spotted in *Procurement Plan* as shown in Table 7.

Table 7: Knowledge Creation in Procurement Plan

Participants	What happens?	What knowledge is (not) created?	Through which processes?	What influences it?
The City employees	Workshops inside the City. Common understanding about the upcoming project.	Explicit knowledge for the basis of common understanding.	Externalization and combination.	Might be the external force i.e. the law?

4.3 Invitation for Tenders

The actual project started with *Invitation for Tenders*. Inside the City, a document was drafted describing the internal environment and the internal requirements of the City. The document included all the current services, needs, and even the future vision of the ICT infrastructure of the City. The document was a product of cooperation inside the City as Mr. White, comments the drafting:

The core group consisted of CIOs and other people from different functions all the time.

It is noteworthy that during the years a dialect had developed among the City employees. Therefore, it was essential to document and list all the concepts and their explanations that were used inside the City. Mr. Brown, who participated in the process by himself, commented this by saying:

The City's vocabulary was documented and all the unclear expressions were taken to the vocabulary.

The purpose of documenting their language, and later handing the document to prospective providers, an effort was made to transfer knowledge about the culture to the prospective providers.

By doing this and later handing the document to the prospective providers, it was ensured that the providers would simply understand what the City employees were talking about.

The external consultant, Ms. Max, was looking the situation with the future Provider and admitted that the City did a lot of work to make sure that the participants were speaking the same language.

The invitation for tenders document itself was based on the forecasts, according to Mr. Brown. The document described the required services as modular entities. This was because of the non-existent documentation about the current state of the City's environment. The document was based on forecasts. This was not appreciated by, for example, Mr. Brown:

The invitation for tender document should be drafted based on the written documentation. Now, it was based on forecasts.

Also, the people mapping the environment were not always that convinced what they were mapping. For example, Mr. White, who was acting as the project manager during that time, mentioned that:

The mappings were seen unclear and included conflicts in some points.

This was not the only issue that made the employees feel sad. Some were thinking that the mapping took simply too long. For example, Ms. Orange, who would later be the project manager beginning from Definition, but now having different responsibilities commented:

Had to describe all the different services and think what services are actually needed.

After, the invitation for tenders document was composed, the consultant agency, used by the City, composed a *Request for Information* document, which had just the purpose to tell the City people how the prospective providers saw the outsourcing market and the environment of the City.

After the RFI was sent to the prospective providers, the City got altogether 13 responses. Nine of them were dropped for various reasons, and the remaining four were chosen for follow-up negotiations. After that the invitations for tenders were sent out to the four prospective providers. The four chosen prospective providers had about one month time to acquaint with the document.

Mr. White was in charge of writing the responses to for the requests of additional information. He comments that:

From the provider point of view, the sent documents were clear, but they were written in high detail.

Ms. Goose was acting as the Provider's account manager for the City at that time. She comments that:

The Invitation for Tenders was very clear. ... And lots of mappings and charts were requested.

During this time the City employees were having their summer holidays. When the City employees returned to work, they read through the requests for additional information sent back by the prospective providers.

Mr. Cougar was working as the project manager for the Provider. He saw the situation problematic and not even very self-evident. The process as a whole was carried out too quickly and a possibility to ask questions were limited to only two instances. About the document Mr. Cougar comments:

The document was very clear, but many issues were on the gray area.

The Provider was using an external consultant agency for its assistance. Ms. Max from the agency had the opinion that the City knew what it was looking for. She comments:

The City was having a conversation with many different providers and even the sanction policies were reasonable. They had a clear vision what they wanted to achieve.

What made it challenging for the Provider at this point, according to Ms. Max, was the fact that the Provider had to play unfair during Invitation to Tenders. In practice this meant, as Ms. Max put it:

There are lists, and if you answer "No" the client turns you down. You have to know how to say "Yes" even if it was not that simple in reality.

From her point of view the client required superior quality at low cost. Ms. Max added that in her opinion the City had incomplete picture about the service production:

The worst thing is the client doesn't understand the logics behind service production.

The last thing, Ms. Max pointed out, was that the situation would have been different if the customer had been a private company. The Finnish Act of Public Procurement was the cause for that. As Ms. Max simply put it:

The private companies may choose even the more expensive alternative, if they wish.

For the employees of the City, the writing process produced even a bit unexpected by-product: While the City employees had to write answer to external parties, they were forced think by themselves how things actually were inside their own organization and their environment. Mr. Brown, who was working as the project manager of service management subproject, perceived the writing process very enlightening for his people too. As he comments:

Things were clarified for ourselves too because of the clarifications requested by the prospective providers.

For *Invitation for Tenders*, the City made a decision to use an external consultant agency. However, Mr. White, who was the project manager during this time, found this decision and its effects confusing on the practical level. This was because of the

fact that she did not roles of different people. Mr. White comments on the situation as follows:

We missed the beginning, because I didn't know what the role of the consultant was and what my role was. Next time I would do this differently.

But this was not all that was irritating Mr. White. He simply did not get well along with the representative of the City's consultancy, according to him. Also, the agency itself was a network of smaller units making it sometimes difficult to cooperate with it.

However, the ultimate role of the agency was to provide the City with an expert opinion about the prospective providers and rank them. Of course, the City had its own ranking and ultimate responsibility. The idea behind the dual ranking system was to combine the rankings later, and make the offers, made by the providers, commensurable. After this procedure, according to Mr. White, it was a relatively easy task to choose the most suitable or best provider:

The provider we chose was clearly the best. One of the offers was clearly non-sense.

When time passed and when finally the City and its agency had worked together this far, their areas of responsibility became clearer to each other and the uncertainty diminished, according to Mr. White:

I took different role than six months earlier; I wasn't expecting anymore that they have total liability.

The cooperation with the external agency was a learning experience for the City. Mr. White stated that the basis for the next switching project should be taken into account when carrying out Invitation for Tenders next time:

The basis should be set up in during the current Invitation for Tenders.

Summary

Invitation for Tenders had knowledge creation in three forms. This time it involved interorganizational elements. The knowledge creation in this subphase is summarized in Table 8.

Table 8: Knowledge Creation in Invitation for Tenders

Participants	What happens?	What knowledge is (not) created?	Through which processes?	What influences it?
Source: CIOs and other employees all around the City	Need to communicate the needs of the City and also explain the City's internal vocabulary.	Explicit knowledge in the form of documentation.	Externalization and combination.	Hesitation about the duration. Based on forecasts not actual state.
Target: Prospective providers	The four prospective providers having dialogue with the City after the RFI	Possibly too little explicit and implicit knowledge about the situation.	Externalization and combination.	The Provider perceiving time insufficient and some issues being the grey area.
Mr. White and the City's external consultant	Mr. White does not understand who should do what.	Implicit knowledge about roles and liabilities.	Socialization.	These two people did not get well along.

4.4 Negotiations for Contract

After the *Invitation for Tenders* was carried out, it was time to move on and start *Negotiations for Contract*. The people who had been working on *Procurement Plan* and *Invitation for Tenders* were also present in *Negotiations for Contract*.

Both the City and the Provider shared a common goal – The expectations of both parties should be fulfilled. Therefore, it was important to ensure that both parties were speaking the same language. Mr. Brown commented the situation:

We checked every module with the Provider that what they actually mean. If we accepted what they were proposing, we knew what we were going to get.

The negotiations process itself had an exhaustive impact on the people involved, according to Ms. Max. One thing that caused pressure was the fact that the contract between the City and the then Provider was running out. In other words this meant that there was not that much time left. If the City had its IT services shut down, it would have reduced the City's performance to run its operations relying on its IT infrastructure.

On the other hand, the Provider had an interest to write a good contract for the basis of the project. The Provider's external consultancy and its representative Ms. Max were involved. Ms. Max comments on the Providers vision of a good contract:

It was very exhaustive to compose the contract. When you do a good contract in the first place, it is good.

This was not, however, a simply goal to achieve. This was because the City had somewhat different opinion about the form of the contract, according to Mr. White. Mr. White said following about the troublesome situation:

The provider wanted use their existing contract model to create services. We thought it was ok that they used their model, but we still wanted a customized contract from the scratch.

From the Provider's point of view the City's proposition about the contract model was not seen economically feasible, effective, and efficient. The City's plan of action was seen even illogical. Mr. Cougar, who was the project manager for the Provider at that time, pointed out that:

The starting point was to have standardized service and not customized service.

The Provider had an impression that The City had a large number of persons negotiating the contract on its side. Each person seemed to have a little bit different point of view about the contract. This caused that the negotiations mushroomed to pervasive every aspect of the upcoming project in detail. Ms. Max from the Provider's external consultancy had an alternative opinion about the possible course of action in her mind:

We could have tried out if one of our existing contract models would have fit here.

Ms. Max's view was shared by Ms. Iceman, who also felt that handling of some details took too long. However, she was also thinking, people should know the contract and where it is going as well as understand the providers and customers. It is

also essential to have knowledge about the field you are operating and what are the probable future changes having affecting on your environment.

However, the City did not see a problem when going into details. Ms. Blue, who was working for the Chief Information Officer of Department X, defended this course of action:

Of course we had to go deep into details... It was necessary to achieve shared understanding on points of view of both parties. ... The spirit of the contract did not spread all over the organizations after all.

Ms. Iceman was working for the Provider and was responsible for the Workstation Applications at that time. She had worked with the City earlier and had knowledge about the organization and its practices. That is why she thought she was used as an assistant during the negotiations. She comments the negotiations as:

Representatives of both parties were well prepared in meetings, although smaller details were fine-tuned too long. Response times and sanctions were well described in the contract.

Mr. White, the City's project manager, had the opinion that *Invitation for Tenders* formed a good basis for *Negotiations for Contract*:

The negotiations for contract were easier, because we could always refer to the invitation for tender. We could simply say that you should have taken this into account because we have mapped this for you already and there is no need to discuss any more.

However, on the side of the provider, people were living in the time after the negotiations, performing the actual project according to Ms. Merlin, the vice project manager of the Provider. This difference in ways of thinking was troublesome sometimes.

One other dispute was the issue that the City perceived it necessary to obtain all the knowledge related some particular process operated inside the Provider's organization. The vice project manager of the City, Mr. Pink, admits this by commenting:

The project manager denied sometimes our request to get information about their process. He said it's none of our business.

Mr. Blonde, however, understood that IT services providers usually do not want to accept vague terms, but the negotiations dug too deep into details. Also, according to

him, some issues (e.g. service level agreements) could have been dealt during the *Invitations for Tender*.

On the Provider's side, on the other hand, it was felt that issues should have been covered in more detail. At least Ms. Goose the account manager of the Provider felt so and mentioned that the City didn't have the cost data that the provider requested.

What should have been done according to Mr. Brown?

One thing the City did not do was asking the previous customer of the provider about how they have handled this and that if things have gone wrong. For example, Mr. Brown commented that:

I knew, for example, that we had been given the contact persons of one of the previous customers of the provider. We didn't, however, contact them although we should have done so.

What went well according to according to Mr. Pink?

Although the pace was fast, *Negotiations for Contract* went well because the chosen provider and the City had both the same goal – a good contract. Mr. Pink comments:

The dialog between us and the provider was excellent.

One thing that was also found helpful was the fact the Provider had managed local resident network earlier. The local resident network is simply the infrastructure essential to the local resident using electronic services of the City. This relationship meant that the future Provider had some knowledge about the City's organization, needs, and requirements beforehand.

Finally, the contract was signed. The pricing models stated in the contract were fixed prices and per-user-pricing, according to Mr. Cougar, the project manager for the Provider. This view was confusing, however, according to Ms. Iceman.

Summary

Negotiation for Contracts included three instances where knowledge was created. These instances are summarized in Table 9.

Table 9: Knowledge Creation in Negotiations for Contract

Participants	What happens?	What knowledge is (not) created?	Through which processes?	What influences it?
The City and the Provider	The City wanting to make sure if they and the Provider have common understanding about the modules.	Common understanding about the modules in the form of explicit and implicit knowledge.	Externalization and combination.	Very different understanding about different modules.
	The contract is being created.	Different aspects are said out loud and thus explicit knowledge is created.	Externalization and combination.	Conflicting understanding about the form and the contents of the contract.
	The City wanted to know the processes inside the Provider's organization, but the Provider did not tell them.	The understanding about the Provider's processes is not created inside the City.	This would have required combination.	The Provider denied this, because they considered them as trade secrets.

4.5 Definition

After the contract was negotiated, it was time to move on and start *Definition*. It is noteworthy to mention that some people who participated in *Invitation for Tenders* and *Negotiations for Contract* were appointed to a more managerial position when *Definition* began. For example, Mr. White and Ms. Blue became the chairperson and a member of the steering committee in this respect. This was seen troublesome by, for example, Ms. Merlin, the vice project manager of the Provider:

If we take a look that who was sitting in the negotiations, we can say that they are not actually DOING this project at all. Mr. Pink has sometimes mentioned that we have not agreed on this. When we are talking about the spirit of the contract, it is not in written form.

As mentioned earlier The Provider had one advantage. It had been operating one of the City network environments: the local resident network earlier. The Provider did not have to start without any prior knowledge. Especially Ms. Goose perceived this essential:

We have full knowledge on local resident network because we have had it earlier, but it is a challenging environment.

During *Definition*, it was felt by some of the City's employees people were idling rather than acting for the project. The City's employees were also having incorrect and even conflicting expectations about the Provider's role. Mr. Brown said:

The City was thinking that Definition should have been driven by the provider. I was expecting better grip from the Provider.

Mr. Pink, one of the two vice project managers working for the City had similar thoughts about the situation. He comments that:

I was strongly against the idea that Definition should be driven by the Provider. It made me felt that we were discharged from liability.

Even some bigger problems arose this time related to general performing. According to Mr. White, interpersonal challenges were one of these. Especially the cooperation between Ms. Orange and Mr. Cougar was generally perceived poor. Mr. White commented the situation by saying:

The biggest mistake was done here. ... We focused on the details instead of seeing the big picture. Additionally, we did not proceed as stated in the contract. The problem was also that the provider's project manager was focusing on the details instead of the big picture and did not get along with the City's people.

The problematic nature of the situation was seen some others as well. Mr. Pink says:

Both our project manager and the Provider's project manager did not get along together, but things had to be gotten accomplished.

Although the City employees were not pleased with the methods of the Provider's project manager, Mr. Cougar, he was, however, a certified and recognized project manager at least inside the Provider's organization. Mr. White comments these claims and how things were in reality:

They [the Provider] told us that this is their best project manager. He could not communicate at all, was performing without flexibility, did not understand the big picture, and could not change the direction.

Despite all the difficulties *Definition* was brought to an end. It happened a bit later than it was scheduled, but the end was reached after all. However, some were thinking that the results of *Definition* were not very convincing. For example, lack of written documentation made Ms. Merlin wonder:

Why was not appropriate definition documentation made [as a result of Definition]?

Summary

Definition had three different knowledge creation instances. Table 10 summarizes the findings.

Table 10: Knowledge Creation in Definition

Participants	What happens?	What knowledge is (not) created?	Through which processes?	What influences it?
The City and The Provider	Partially different people from the City took charge beginning from Definition	Some implicit knowledge needed to be created	Socialization	Loss of knowledge.
The Provider	Easier to do definition for local resident network	Updated implicit and explicit knowledge about the network.	Combination of the old and the new knowledge.	The Provider had already full knowledge about the local resident network.
The City and the Provider	The City people are expecting better steering from the Provider.	No implicit, shared knowledge.	Lack of socialization.	The project managers from the City and Provider do not get along well.

4.6 Planning

Definition was followed by *Planning*. Now it was essential for the project that the City would exchange information with the Provider and its subcontractor. There were some minor challenges and the Provider perceived it more difficult than the City did, but otherwise the exchange went well. The lack of documentation was also a one source of challenges during this point. Ms. Blonde commented the problem as follows:

We exchanged information with the Provider's subcontractor. The subcontractor's employees did not get their hands into the information at first for some reason.

Mr. Cougar specifies the problem:

There were some application related challenges. ... Simply, how one application interacts with other applications? ... It was challenging to get initial information. Information about applications was collected during the project. ...

It was essential for the Provider to get information from the ex-Provider. Mr. Cougar felt that sometimes the knowledge was kept hidden in purpose and sometimes it was intentional:

[The ex-Provider] had a person who had the knowledge and some people who did not want to tell us. ... Especially the application related information was hard to get. ... Then there was information that even the ex-Provider did not have. My personal opinion is that the customer should possess all the relevant information by themselves.

Mr. Stinger acted as the project manager for roll-ins for the Provider. He also saw the ex-Provider's reluctance to give out information easily. The City did not even have all the meta-knowledge it should have had. He comments:

Initially, the ex-Provider did not want to help and give us information. ... The City had outsourced earlier resulting that their knowledge [about the environment] was not on a high level. We were not able to define the entity one single application constitutes. ... The City was not able to name the applications we were supposed to transfer. This is something, I do not like.

The lack of meta-knowledge was also noticed by Ms. Iceman, who was responsible for the workstation applications. She admits that:

The City had so many undocumented applications.

What the City would have wanted to know was the Provider's process – especially them that were related to the City's processes. The Provider denied these requests every time. However, Ms. Merlin had some understanding for the City's desire to see these processes:

I think that since the City employees had done this one before, they would have wanted to see all the details this time too. Not all of the Provider's services can be revealed because they are trade secrets.

While negotiating a contract, the City and the Provider had agreed on concepts such as starting a service and transferring an application. Mr. Cougar commented this situation by saying:

They [the City] were thinking that something else was carried out too while starting a service. ... It was also decided that no big environmental change including update would be put in place, but just transfer the needed applications. When transferring applications, there are always risks. When things are carried out one at a time, it is easier to say, what the actual cause of a problem is. Their initial idea was probably to save when performing tasks simultaneously. They were, however, forgetting the fact that what it costs when the City employees were just sitting half a day. The saving can be virtual saving.

The Provider also perceived that the City wanted to implement things that were not described in the contract very exhaustively. The Provider's account manager, Ms. Goose commented:

[One service] was mentioned in the contract as an option, but how widely... It was agreed on later. It was also agreed on that this service would be established in both two networks the City has. ... We have full knowledge about the network for local residents, because we have been maintaining it previously, but the whole environment is challenging.

Mr. Merlin from the Provider also perceived the City's vice project manager incompetent, with no formal project management skills. And Ms. Merlin was not pleased with this, because:

I have not seen any documents from the City's vice project manager during the project.

The Provider and the City were both looking at different directions. The City was basing its right on the past while the Provider had a focus on time after that. As Ms. Merlin put it:

The City seemed to be looking back at the Invitation for Tenders while we were living in a time well after it. ... The services have not been something we have used to. These are the moments when the role of the communication is emphasized.

Summary

Planning had four different knowledge creation instances. In Table 11 these instances are summarized.

Table 11: Knowledge Creation in Planning

Participants	What happens?	What knowledge is (not) created?	Through which processes?	What influences it?
The City and the Provider's subcontractor	Information about City's applications to be handed to the Provider	Explicit knowledge about how applications interact with each other.	Combination.	It was unknown how one application interacts with another. The Provider perceived it more and less intentional that transfer process was difficult.
The Provider and the City	No knowledge created, because the Provider did not give the City a chance to see its processes.	Neither explicit nor implicit knowledge.	Neither combination nor internalization.	The Provider perceived these units of knowledge as their trade secrets.
The City and the Provider	Disagreement about some contractual issues.	Implicit consensus about contractual issues	Externalization and internalization.	Confusion how widely certain applications should be established and what things should be done simultaneously.
Vice Project Managers from the City and the Provider	The City's vice project manager did not compose any project documentation.	No explicit project documentation.	Neither externalization nor combination.	According to the Provider the person just lacked appropriate pm skills.

4.7 Implementation

Implementation was started after *Planning*. The start was a bit late, and again some challenges were present.

According to Mr. Brown, The main challenge was a tight schedule. Although more time would have been needed, no additional time was available. On the other hand there were too many interrelated things going on simultaneously. Mr. Brown commented the situation as follows:

No additional time available. For every system, we have a startup meeting. In these meetings it is discussed how the system is used, what for it is used, is it critical and so on. Too many things are going on, which brings us challenges. Systems are not independent and servers are interacting with each other. Firewalls need to be configured properly, and in addition, we have this separate ICT project carried out alongside. The current Provider did not probably reserve enough resources for the project. This is a fact that has been admitted by the provider at some point. We have a partnership agreement. Everything should have gone so that both parties benefit. However, every deviation from the contract costs money to the City. We can agree with the insufficient resources on some employees of the Provider, but they cannot admit it officially that adding resources will cost us money.

Mr. Brown adds that the consequences of tight schedule affected the employees and their working abilities:

I exceeded the statutory overtime hours in six months. It affects the quality, when you sleep five to six hours per night.

Ms. Goose from the Provider, however, perceived the situation a bit differently. She saw the source of problem being elsewhere:

[The contract should have been written] in more detail. Of course [the contract] supported Implementation all the time. Many things were, however, described in detail. There was no misunderstanding related to Implementation.

She also adds that there were some difficulties that could be originated to ambiguous responsibilities:

We had initially agreed on the responsibilities, but there were third parties having interacting systems that the City did not know about. It

mixed up things a bit. ... The City should have had documentation about interactions.

On the other hand, if the situation is looked at as a whole, Mr. Brown does not see the situation that bad:

Implementation has been achieved through challenges. And it has not been a success story. As long as this does not show to the public, everything is ok.

However, Mr. Maverick, the project executive director working for the Provider claims that some things have actually went quite well after all:

Some services have been started quite easily. We have faced some minor challenges with the email for example, but it has not caused any inconvenience for the users.

Summary

Two instances where knowledge was created could be identified in Implementation. Table 12 summarizes the findings.

Table 12: Knowledge Creation in Implementation

Participants	What happens?	What knowledge is (not) created?	Through which processes?	What influences it?
The City employees	The system turns out to be more complex than anticipated	No implicit co-learning.	Neither combination nor externalization.	Tight schedule caused overtime work, which caused worse quality. The Provider had not had assigned enough resources for this project.
The Provider	After all some understanding about third party systems.	Implicit and explicit consensus about services.	Socialization, but not without struggle. Prior documentation would have made combination possible.	Lack of prior information about system dependencies that the City should have documented.

4.8 Rollout

Finally, it was time to roll out the project. And the problems continued. Mr. Brown said that there were challenges on the practical level:

The communications and the practices how to operate did not go well.

Ms. Blonde agrees with Mr. Brown by saying:

There were not that many problems. Sometimes it was difficult to make sure that the City employees got all the information needed, although we had the intranet system in place. This was probably so, because people did not read the announcements. We were discussing these issues with information officers, but still some employees from different departments of the City were calling and asking why we did not show up to carry out our tasks.

Mr. White agrees with them:

The application documentation was not up to date. Different parties [inside the City] were not prepared well enough to the startup meetings and they did not have enough competence and knowledge about our environment.

At this point the project got two new persons from the Provider. First one was a very devoted person and the City's employees seemed to be pleased with this. Ms. Pink commented this by saying:

It is good that we got one person from the Provider. She is a logical thinker [and has] the end-user point of view. Very positive and devoted person.

The second newcomer was an ICT expert. Mr. Pink admits that this person was able to communicate things way better than it was done earlier:

The ICT expert said things using more understandable language. The other person was brave enough to take up issues when needed. We noticed indeed that the Provider's project manager was told not to talk about certain issues. It also raised my personal lack of trust. It was also good that I was able to speak openly with [Ms. Merlin].

In addition to operational communication, the pricing issues agreed on during *Negotiations for Contract* were under debate. Mr. Maverick, for example, saw the

situation unclear although he claims that he does not understand it, because he was not present when the contract was negotiated:

We have not always reached the consensus with the City on pricing issues. There are these additional pricing proposals that we have been dealing with. We have done this in different compositions. I was not participating in the Negotiations for Contract, so I do not have the knowledge about the spirit of the contract. [Ms. Goose] has been participating in these meetings, because she has been taking part in the Negotiations for Contract and therefore knows exactly what has been agreed on.

The project was delayed for many reasons. Some of the reasons were external while some of them were *internal*. The external reasons were easier for both the City and the Provider easier to accept. Mr. Maverick comments this by saying:

The financial situation of the City and all the cities in Finland has weakened during these times. This means the City has less freedom of action. The City has also other internal causes coming up. However, the external reasons coming more or less as a surprise are easier to accept for both us and the City. ... It is however important that every switchover gets accepted, so we can take this project to its end.

Mr. Cougar agrees this and alludes that non-cooperative character of the City project *manager* caused some problems:

Although the project has been carried out quite feasibly, the actual schedule had been lagging behind. ... The City's project manager [Ms. Orange] was carrying out things quite independently.

From the City's point of view, according to Ms. Blue, some of the external issues delaying *the* project were dictated by the law while some internal issues were purely organizational.

The printing service should be up and running when the school year ends. This is because the students have right to have their school reports on time. These have no impact on the initial tender process, but they set some constraints to the switching projects schedule. ... Our IT department was not committed and involved as well as it should have been. ... Processes should have been fine-tuned more. They work to some extent, but we need to go them through still. ... The Provider has given us

different kinds of paper systems for reporting. It is odd that they are not able to give us electronic reporting system.

Summary

Rollout had altogether six different instances where knowledge was created. These instances are summarized in Table 13.

Table 13: Knowledge Creation in Rollout

Participants	What happens?	What knowledge is (not) created?	Through which processes?	What influences it?
The City	Internal communication problems within the City	Lack of explicit knowledge about upcoming service breaks.	No combination.	The City employees did not read the announcements.
Two new people and at least Mr. Brown	Additional "troops" from the provider.	General issues made explicit	Socialization and internalization.	Various things communicated easier.
The City and the Provider	Secrecy in the meetings.	No explicit knowledge was created.	No externalization.	Mr. Cougar was not allowed to talk -> Lack of trust.
	Confusion in the meetings.	Join explicit understanding about the pricing.	Externalization.	Pricing issues were under debate.
	Friction between two project managers.	No co-learning or exchange of explicit knowledge.	No socialization.	Ms. Orange was doing things independently.
	Lack of communication.	No explicit knowledge.	No externalization and combination.	The Provider did not give the City electronic reporting system.

4.9 Summarization of events

The observed events are presented throughout the project. Brief summarization about the course of events is presented in Figure 6.

Interorganizational Knowledge Creation						
	Invitation for Tenders	Negotiations for Contract	Definition	Planning	Implementation	Rollout
Culture <ul style="list-style-type: none"> • Collaboration • Trust • Learning 	<p>Need to communicate the needs of the City and also explain the City's internal vocabulary.</p> <p>The four prospective providers having dialogue with the City after the RFI.</p>	<p>The City wanting to make sure if they and the Provider have common understanding about the modules.</p> <p>The contract is being created.</p> <p>The City wanted to know the processes inside the Provider's organization, but the Provider did not tell them.</p>	<p>Partially different people from the City took charge beginning from Definition</p> <p>Easier to do definition for local resident network</p> <p>The City people were expecting better steering from the Provider.</p>	<p>Information about City's applications to be handed to the Provider</p> <p>No knowledge created, because the Provider did not give the City a chance to see its processes.</p> <p>Disagreement about some contractual issues.</p> <p>The City's vice project manager did not compose any project documentation.</p>	<p>The system turns out to be more complex than anticipated.</p> <p>After all some understanding about third party systems.</p>	<p>Internal communication problems within the City.</p> <p>Additional "troops" from the provider.</p> <p>Secrecy in the meetings.</p> <p>Confusion in the meetings.</p> <p>Friction between two project managers.</p> <p>Lack of communication.</p>
Structure <ul style="list-style-type: none"> • Formalization 	<p>Mr. White did not understand who should do what.</p>		<p>Since the project managers of both sides were very different kinds of people, they did not have any kind of informal interaction.</p>			
Information Technology <ul style="list-style-type: none"> • IT support 			<p>Intranets did not work inside the City causing lack of communication.</p> <p>The City found it frustrating, there was no the Provider did not provide them with an electronic reporting system.</p>			
Legislation	<p>Dictates how things are carried out here</p>					

Figure 6: The course of events

As we can see from Figure 6, the legislation plays indeed a role in the project. It dictates how things are carried out. However, much more things happened during the first two subphases than just SLA creation and following impact on trust.

First, before the contracts or any SLA's were negotiated, a practical challenge emerged, because the Provider could not have the knowledge about the City's vocabulary. Second, the four prospective providers had to have dialogue with the City. Third, there was a structural problem because Mr. White could not understand what was his role related to the external consultant.

While the participants entered into Negotiations for Contract, The City wanted to make sure if both they and the Provider had common understanding about the modules. This as well as the fact that the contract was formally created corresponds the concept of SLA creation found in the literature. However, the Provider did not want to reveal their processes because they regarded them as their trade secrets.

After Negotiation for Contract had ended some trust might have had emerged as anticipated. However, partially different people from the City took charge. This must have cleared at least partially the trust that has been accumulated prior to this moment. Also, the City was expecting better steering from the provider which is a sign of a lack of common understanding. However, the point that was unique to this case was the fact the Provider had been maintaining the City's local resident network previously i.e. the Provider had some technical knowledge about the City.

When Planning began some information about the City's application was needed to be handed to the Provider. This information was possessed by the employees of the ex-Provider. The Provider saw that this was at partially intentional. Maybe the trust on the Provider was not high among the employees of the ex-Provider.

There was also other type of distrust present. The Provider did not accede to the City's request to see its processes. The Provider saw these processes as their trade secrets. Also, in Planning, disagreement about the contract emerged for the first time. Also, the Provider's trust on the City's vice project manager was also diminished, because he did not compose any project documentation.

Next the Implementation was to be started. The system turned out to be more complex, which caused some extra hours for the employees. However, the Implementation was carried out quite well after all.

Finally, the project needed to be rolled out. There were some internal communication problems within the City. After a while the Provider realized a need for additional resources and two people joined the project. These two individuals were able to communicate without bigger obstacles with Mr. Brown.

5 CONCLUSIONS

5.1 Restatement

The purpose of this study was to find out what tacit, explicit, and social knowledge is created when a public sector organization changes its external IT service provider. The study itself was motivated by recent growth in public organizations' interest in outsourcing their IT services. It is also interesting to see whether the European Union influenced legislation makes it stricter for public sector organization to carry out (IT service) outsourcing project than it would be with a private company.

In this study, an effort has been made to extend a framework. This was done in order to illustrate the inter-organizational knowledge creation. The research strategy used for fulfilling this effort has been the case study, and the methods collecting the research data have been a series of semi-structured theme interviews, observation, and some supplementation with additional documents. The data itself were collected during the spring and summer of 2009.

The research questions that the study set out to answer were threefold: The main research question of this study was: *"What knowledge is created during an IT outsourcing project?"* and the additional research questions were *"Through which knowledge creation processes is this knowledge created during the process of switching IT service provider?"* and *"What influences knowledge creation when IT service provider is changed and how?"*

The progression of the research was following. First, the existing framework created by Lee and Choi (2003) was studied. Second, existing literature was reviewed, and extended framework was created. Third, the transcribed interviews and meeting observations were printed out and skimmed through to find relevant expressions related to knowledge creation. When something relevant was found, it was marked. If concepts etc. could not be clarified just by reading the transcribed text, additional documents were used to obtain a better understanding.

The findings from the data analysis were compared against the extended framework in order to see what knowledge is created through which processes and what influences the knowledge creation. After this, conclusions were drawn.

5.2 Results

The results indicate that many times the knowledge created during the project was related to the non-existing documentation of existing applications and system or contractual issues. Next the whole project and its knowledge creation instances are analyzed.

Against the initial reasoning, culture and learning has role during Invitation for Tenders. The client needs to communicate its needs to the prospective providers going that far that even its internal vocabulary needs to be taught to the prospective providers. This means that explicit knowledge is created in the form of documentation. This happened through externalization and combination.

However, according to Alavi and Leidner (2001), the vocabulary is not knowledge but information because it was presented in a written form. However, the vocabulary actually became knowledge when the readers later processed it in their minds.

The SLA creation, which was actually hypothesized, is indeed happening during Invitation for Tenders. The Request for Information document and following discussion between the client and the prospective providers creates a base for the contract and service level agreements contained by it. This discussion involves externalization and combination, but the outcome might still be too little both implicit and explicit knowledge, because it was seen by some that some issues were on the grey area.

Again, the written documents here are not knowledge. However, they are results of processes where people interact. When documents are later read and people use them as reference they become source of knowledge. It might even be that social knowledge, presented by Alavi and Leidner (2001), was created when groups of people interacted.

The third knowledge creation event happened on a personal level and its relation particularly to Invitation to Tenders seems to be minimal. This is because when people work together, there might always be some confusion about the roles. More open communication and mind could be more useful in situations like these.

Here, cognitive tacit knowledge was created during the interaction of these two people. Cognitive tacit knowledge was created by working together.

There is no evidence whether the trust was actually increased in Negotiations for Contract as an effect of the SLA creation. The contract fine tuning continued here and the understanding about modules was very different between the client and the provider.

The knowledge created here was common understanding about the modules which was achieved when externalization and combination took place. Social knowledge was created.

It should be remembered that it was still possible for the client to revert their choice about the provider. This might have diminished the trust, because the interest of the participants might have been conflicting. At least, this was probably the case, when there was conflicting understanding about the form and the contents of the contract. However, the contract resulted when different aspect was said out loud and explicit knowledge was created (i.e. externalized and combined) in a form of a contract.

Again, the contract itself is not a piece of knowledge, but information. Social knowledge was once again created when common norms were formed.

The lack of trust of even suspicion to some extent was present when the provider denied the client's request to see its internal processes. This place would have created more knowledge, but the provider prevented it – They saw it simply harmful for their trade secrets. The cognitive tacit knowledge did not materialize.

In Definition some new people stepped in, and therefore things needed to be relearnt by these new people. This was a place for (unnecessary) recreation of cognitive tacit knowledge via socialization as well as social knowledge.

However, the provider had some prior knowledge about the City's local resident network. It probably made it easier for the provider to combine some old and some new knowledge into new explicit knowledge.

As there was no sign of increased trust in Negotiations for Contract, this non-existent piece of construct was not transferred to Definition. On the contrary, the City employees were just passively waiting for the provider being responsible for the steering. This caused lack of socialization and consequently no social knowledge was created.

When Planning began there was little or even no trust between the participants. This meant, as hypothesized, that there was indeed antagonistic behavior between the participants. The Provider perceived that it was more or less intentional that there was some friction, when they tried to get information about the City's applications. However, the Provider got the information after a while, and combined it with existing knowledge how applications interact with each other. Probably they also internalized the information into cognitive tacit knowledge.

During Planning the City wanted to see the processes inside the Provider's organization, but the Provider denied this, because they did not want to reveal their trade secrets. Neither combination nor internalization took place here, and no new knowledge was created. However, things might have turned out differently if there had been more trust between the participants.

The participants had also different views how widely certain applications should be established and what things should be carried out simultaneously. However, implicit and explicit that is social knowledge on contractual issues was achieved via externalization and internalization.

The last minor thing in Planning was that the Provider's vice project manager did not perceive the City's project manager competent, because the latter did not provide any project documentation. Neither externalization nor combination took place and no information in form of explicit project documentation was created. This kind of a perception of incompetence would probably have been possible any time during the project.

During Implementation the system turned out to be more complex than anticipated. The City employees perceived that the Provider had not had assigned enough resources for the project. The "emergency" situation also called for more resources from the City, which caused overtime work meaning worse quality. Neither combination nor externalization took place. This meant that no implicit co-learning creating social knowledge happened. Things might have been differently with increased trust.

The Provider lacked of prior information about dependencies of information systems, and they were thinking that the City should have documented these dependencies. The prior documentation would have made it easier to just combine the documentation. Now it was required that the City employees and the Provider employees started working together on the dependencies. However, through socialization social knowledge i.e. joint implicit and explicit understanding about services was achieved.

When Rollout began there were internal communication problem inside the City. The City employees just did not read the announcements. The employees were not therefore able to combine this new knowledge with their existing knowledge, so they were not aware of the upcoming service breaks. No knowledge that should have been created was created therefore.

Something positively surprising happened when the project received additional troops from the Provider. Many things were communicated better. This meant making general issues explicit via socialization and internalization.

However, there was still lack of trust. The City perceived that the Provider employees were not telling everything in the meetings. Therefore no new explicit knowledge was created, which would otherwise probably been created via externalization.

Other thing that was under debate was the pricing issues. These issues appeared as confusion in the meetings. However, things were discussed and new knowledge was created via externalization in the form of joint explicit understanding as well as social knowledge about the pricing.

The friction between the two project managers continued during Rollout. Again the Provider's project manager perceived that the City's project manager was performing independently without cooperation. Therefore no socialization took place, and there was actually no co-learning or exchange of explicit knowledge.

Although, the cause and effect relationships are difficult to prove, some components hypothesized initially were present simultaneously. There were signs of lack of trust throughout the later parts of the project. First, the City and the Provider still had secrecy in their meetings, which can be seen as a lack of trust. Second, the contract was formulated with hindering difficulties which later caused confusion about pricing issues. Third, there was friction between two project managers beginning from Planning.

In short, it can be concluded that this study answers to the question "What knowledge is created?" first, by offering explanation social knowledge in forms of social norms related to the contract. Additionally, other forms of shared understanding, social knowledge and tacit knowledge (such as vocabulary, its interpretation and different joint understandings) can be identified being created during the project.

The first additional question "Through which knowledge creation processes is this knowledge created during the process of switching IT service provider?" is manifold. This means that all knowledge creation processes proposed by Nonaka (1994) can be identified. The joint understanding on the contractual issues happened during externalization as well as internalization. It was conceptual work, which had to be done altogether three times during the project. Socialization and combination were also present, but during different knowledge creation events as described above.

The answer to the second additional question “What influences knowledge creation when IT service provider is changed and how?” is lack of trust and related inflexibility when talking about the need of reviewing the contract.

Lee and Choi (2003) found the IT support to be a significant enabler for organizational knowledge creation. The City employees were sometimes even a bit frustrated, because the Provider could not give them an electronic reporting system. This made the communication more difficult, decreasing externalization and combination and ultimately creating less explicit knowledge.

It is interesting to see that IT is an enabler that is useful in IT outsourcing project. The knowledge creation literature helped to recognize from the case.

5.3 Discussion

The findings are consistent with the findings of Dibbern et al. (2004). “Phase 2: Implementation” applies to this case, but taking into account that the order to go through the tender process again was dictated by Finnish Public Procurement Act (2007). The act does not seem to dictate how to carry out “Phase 1: Decision Process”. In Phase 2 there are two stages *How* and *Outcome*. *How* consists of vendor selection, relationship building, and relationship management. All these elements were present in this case. However, *Outcome* includes experiences/learning, types of success, and determinants of success. None of these were formally present, although some of the interviewees expressed their discomfort with some parts of the project.

What was learnt on IT outsourcing and switching the IT service provider is discussed next. It is followed by the learnings on knowledge creation and its impact on performance. The first is the actual phenomenon while the latter is the point of view through which the phenomenon is examined.

5.3.1 Learnings on IT outsourcing

As presented in the literature review altogether five papers explaining IT outsourcing were found. In Table 10 results from these previous studies are compared against the findings of this study.

Table 14: IT outsourcing previous and current findings compared

	Previous results	This study
Palvia (1995)	a. Selfishness may occur during IT outsourcing projects, individuals are protecting their own backs because for example there might be political winners and losers	a. This was not observed. However, the context did not contain uncertainty about possibility that one might lose their job.
Goo et al. (2008)	b. Well structured service-level agreements can cultivate favorable relationships, which in turn materialize as successful relational outcomes of IT outsourcing	b. SLA's were left sometimes too vague and ambiguous. Different interpretations caused conflicts between both sides.
Kishore et al. (2003)	c. Mutual understanding between clients and service providers seemed to be the most important factor affecting success of outsourcing.	c. The results suggest that mutual (explicit and implicit) understanding plays a crucial role.
Lee et al. (2003)	d. Eight success factors were concluded. <i>"Understand each other's business.</i> <i>Set short- and long-term goals.</i> <i>Define realistic expectations clearly.</i> <i>Share benefits and risks.</i> <i>Develop performance standards.</i> <i>Expect changes and revisions.</i> <i>Prepare for the unexpected.</i> <i>Nurture the relationship."</i>	d. The provider had understanding on the client's business, which was mentioned to help through the project. Also, project management methods (including goal setting) were used rigorously. Expectations were not expressed clearly, and this indeed caused some problems and additional burden. Risk and benefit sharing was mainly non-existent. Performance standards were used widely.
Bandyopadhyay et al. (2007)	e. Conclusion was made about the degree of complementarity of knowledge between the employees of both the client and the provider. If it is high enough and if the top management enforces cooperation between the employees, better payoffs can be achieved. The top management should do much more than negotiate the contract.	e. Only the contract was negotiated by the top management. In some instances, the employees did not get along well.
Whitten and Leidner (2006)	f. Although the service quality can be high, it does not ensure that the client has a high trust in the provider.	f. Is supported to some extent.

Palvia (1995) studied a case in which a bank was outsourcing its IT. Different benefits were proposed for the motivation of the IT outsourcing in question. In the end one of the interviewees was promoted while the other lost his job. However, Palvia's context does not correspond with the findings of this study that much. For example, service provider was switched and it was not motivated by anything particular but rather forced by an act. Since nobody was worried or at least did not mention about the possibility to lose their job, it is quite logical behavior of the employees was not selfish as Palvia described it.

Goo and Huang (2008) explored the impact of SLA's to the outsourcing success. Their sample contained IT and business top management, but not grass-root level workers. They concluded that service-level agreements, if well structured, can cultivate favorable relationships, which may in turn materialize as successful relational outcomes of IT outsourcing. Similar, but reversed, results can be derived from this study. The SLA's were left sometimes too vague and ambiguous. Different interpretations, for example, about price caused conflicts between both sides.

Kishore et al. (2003) concluded the most important factor affecting success of outsourcing is a mutual understanding between service providers and their clients. Firms included in their study achieved this by sharing information in regular meetings held between the top managements of both sides. According to the data of this study things went on more smoothly whenever this was achieved.

Lee et. al (2003) introduced an integrative view of IT outsourcing in their paper. It includes three perspectives social, economic, and strategic. Their approach is more related to question why to outsource. However, they concluded eight success factors customers and service providers should follow (see Table 10). In this study, the provider had understanding on the client's business or needs, which was mentioned given some help through the project. Also, project management methods, for example, goal setting were used rigorously. Expectations were not expressed clearly, and this indeed caused some problems and additional burden. Risk and benefit sharing was mainly non-existent. Performance standards were used widely. Although, guidelines proposed by Lee et al. (2003) are a bit ambiguous, but results from this study seem to follow their logic.

Bandyopadhyay and Pathak (2007) took a game theoretic approach in their article and perceived employees on both sides as rational actors maximizing their utility. However, they concluded that if the degree of complementarity of knowledge between the employees of the client and the provider is high enough and if the top management enforces cooperation between the employees of both sides, it is possible to achieve better payoffs. This means that the top management should do much more

than negotiate the contract, which was the situation in this study. Therefore, employees sometimes expressed antagonistic behavior towards each other.

Finally, Whitten and Leidner (2006) studied the factors behind the decision to backsource or to switch IT vendors. They found out that sometimes clients who had good experiences about product and service quality of their vendors had on the contrary low trust in the vendors. From this notion, it can be derived that trust is not simply as a product of good quality experiences, but a socio-emotional issue. This phenomenon was found in the data of this study as well, the quality issues were not related to trust issues.

5.3.2 Learnings on knowledge creation

While the phenomenon of this study is IT outsourcing situation, where the provider is being switched, the perspective to it is knowledge creation. The results from these previous studies are compared against the findings of this study and presented in Table 11.

In this study, it was found that learning had a relationship with externalization and combination. Therefore, the finding introduced by Lee and Choi (2003), learning is related to socialization, is not supported by the findings of this study. However, there is a background variable the Finnish Public Procurement Act (2007), which prevented socialization from happening during the Invitation to Tenders. Also, collaboration was found to be related with externalization and combination, and not with socialization as suggested by Lee and Choi (2003).

Lee and Choi did not find that Formalization would be a prerequisite for any of the knowledge creation processes. Some support from the results of this research can be found, because after the SLA creation some people felt that some issues were still on the grey area. Externalization and combination happened to some extent, but this piece of knowledge was never internalized.

It can be concluded that when no trust is created, there later will be lack of it, and as Lee and Choi found out, trust is related to the whole knowledge creation process. This finding is consistent with the findings of this thesis. There was confusion about roles, when antagonistic behavior took place. This was observed to cause lack of socialization. The same phenomena took place, when the Provider denied the City's access to its internal processes. Whether or not this is a sign of lack of trust, is a question of its own.

Lee and Choi found that collaboration and learning were associated with socialization. This was found consistent with the observation that when there was no prior documentation, employees from the Provider and the City had to work together. On the other hand there was lack of collaboration, when the project managers from both sides did not get along well and no socialization took place.

No T-shaped skills were identified, and this is consistent with Lee and Choi's findings. However, IT support was hungered by some, although Lee and Choi did not found any significant relationship between it and any knowledge creation process. Table 11 summarizes these findings.

Table 15: Knowledge creation earlier and current findings compared

Lee and Choi (2003)	Similar (+) / different (-)	This study
a. Learning correlates with socialization	-	a. Learning has a relationship with externalization and combination
b. Collaboration correlates with socialization	-	b. Collaboration has a relationship with externalization and combination
c. Formalization is not a prerequisite for anything	+	c. Supports the finding to some extent
d. Trust is a positive prerequisite for the whole knowledge creation process	+	d. Lack of trust prevented knowledge creation from happening
e. Both collaboration and learning are related to socialization.	+	e. Supports the finding.
f. T-shaped skills do not play a crucial role for knowledge creation process	+	f. Supports the finding

As we can see from the table 11, there are altogether two instances when different results were observed and four instances when similarities were recognized.

5.4 Implications

The results seem to indicate, in order to change IT provider successfully, the model constructed using an existing literature seems to offer a good red line the participants should follow or be at least aware of. However, the Finnish legislation, somewhat

consistent with the legislation in other European Union countries, has probably only a minor impact on the outsourcing project's initial setting.

The contract and service level agreements should be composed with care and their contents and implications should be communicated. This is simply important to avoid the confusions, debates, and discussion later about how to proceed and what does the contract say about this and that.

The second thing is that there should always be trust and openness in an organizational as well as individual level. These seem to form the basis for knowledge creation.

On surprising implication is that no negative effect of knowledge transfer was found. This implicates that it always important to communicate and use all the processes possible to transfer the knowledge. This means good communication whenever it is feasible. Of course, law, trade secrets, and individuals unwilling to share information may hinder this. This would require establishment of interorganizational knowledge management tools and methods.

On the other hand, the Provider claimed to follow ITIL while carrying out a project. Neither the positive not negative impact of ITIL for the project was recognized as a by-product of this study, but the working method seemed to be somewhat chaotic. It is even difficult to say about the cause-and-effect relationship of the problems and the chaotic working methods. These issues would require of course a separate study, but it should be kept in mind that the golden path proposed by this study would not necessarily be that easy to follow when things started to go not-as-planned.

5.5 Limitations

As it was mentioned in the literature review chapter, this study adopted the knowledge creation point of view proposed by Nonaka (1994). However, Nonaka's work has been criticized as a misunderstanding of the work of Polanyi (e.g. Tsoukas 2002; Cook & Brown 1999). If this study would have been based on a framework based on a work of Polanyi (or at least the interpretation of it by e.g. Tsoukas 2002; Cook & Brown 1999), different insight might have been achieved.

All the key participants from the City and the Provider were interviewed for this study. However, it should be noted that the ex-Provider's staff were not interviewed. This happened, because it was not taken into account that these people could be

active participants for the knowledge creation. However, they had a more active role during the project than assumed beforehand.

The boundaries of this case study was not set strictly beforehand. However, only one external force (The Finnish Public Procurement Act) was included into the study. Other external forces, beyond the scope of this study, most likely, control the organizations directly and indirectly during rest of the project.

Finally, only one case was included in this study. As mentioned in the methodology chapter this is not a problem. However, both transferability and generalizing into the theory are relevant concepts when thinking of qualitative validity (Erlandson et al. 1993).

In this context, transferability means how well these observations and conclusions derived from can be transferred or generalized to other outsourcing projects. The results will apply most appropriately to cases where there is a public organization as a client and one or more big multinational IT service providers carrying out the project. In the theoretical level variations will most likely occur, if one of the background variables (e.g. public / private, degree of experience) is changed.

5.6 Suggestions for further research

Knowledge creation in interorganizational contexts, such as outsourcing projects, offers a wide range of issues to be studied qualitatively, quantitatively or by using both of these approaches.

The client in this case was a fully national entity. So is the provider's branch, although belonging to an international group, is Finnish. Also, all the project participants were Finnish. In addition, the client was a public organization although private organizations are outsourcing too. Therefore, there are still research left that can be carried out in private and more international context.

Finally, Dibbern et al. (2004) mention eight different theoretical foundations and three different levels of analysis IT outsourcing research has been carried out. For example, innovation theories, which focuses on adaptation and diffusion, could bring something new views to the switching phenomenon. How new innovations are spread from the new provider to the client replacing or supplementing the old ones, could be one topic to be researched in the future using case study, for example.

The interorganizational knowledge creation is a subject that has not been studied that much. However, the concept of learning organization (e.g. Senge 1990) has been present in the literature for long. Future research in this area could concentrate on, for example, knowledge creation in value networks or other types of joint ventures.

This type of a study could benefit not just the academic world but also the business practitioners working in the more and more networking business world, where the operation of one organization is not kept necessarily as much inside the confines of the organization anymore. IT outsourcing might be just one embodiment of the phenomenon.

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APPENDICES

Appendix 1: The Interview Frame

This is the interview frame used as a basis for the interviews. The original frame was in Finnish, and here is an English translation of it.

1. What is your name, organization and what position you hold in this organization?
2. How long have you been holding this position?
3. At what point did you come along to this project?
4. What was successful during your time?
5. What was unsuccessful during your time?