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Impact of outsourcing on IT professionals:
A case study of role change in The City of Oslo (Norway)

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ABSTRACT

Outsourcing of IT functions in the organization has been prevailing in today's business environment, and is used as a strategic incentive for the organization to reach organizational goals. However, researchers have found that IS outsourcing has impact on IT personnel's role change. There exists little study of IS outsourcings impact on IT personnel's role and responsibility changes. Therefore, the objective of this dissertation is to study the role change for IT personnel and the impact it has on the organization. We relate IT personnel's role change with knowledge, and investigated the impact it has on the organization after IS outsourcing.

The dissertation is based on a case study of The City of Oslo. Interviews with 8 organizations in the City of Oslo were conducted. Four key terms were investigated; roles and responsibility change, job training and knowledge, personnel movement and knowledge, and the relationship with the service provider. Findings imply that outsourcing of IT functions can have severe impact on IT personnel's role change. Incentive for the organization to hinder role ambiguity for IT personnel is explained. The study found support for the need of more job training for IT personnel. Although, existing literature emphasizes the need for service-oriented knowledge, our findings also imply the demand for theoretical technical knowledge.

The study found support for knowledge leakages from the organization from key IT personnel in case of IS outsourcing. We argue in our findings that the most critical loss for the organization is the loss of key business knowledge which is not easily rebuilt.

The case study found support for a new role for IT personnel with the service providers. Several factors contribute to the challenge IT personnel face with the service provider. For the case study, we purpose improvement points in order to make IT personnel perform their new role better.

For researchers, the findings can give valuable contribution to the study of organizational change and role change for IT personnel. For practitioners, our findings can contribute to better understanding of the challenges an organization faces giving IT personnel a better adaptation and understanding to their new role. Organizational manager can make better decisions to retain key IT staff when they know the dimension of IT personnel's role change. Hence, hinder knowledge-leakages in the organization.

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I certify that the work presented in the dissertation is my own unless referenced

Signature.....

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CHAPTER 1: INTRODUCTION

1.1 Background

IS outsourcing as the process of turning over part or all of an organization's IS functions to an external service provider, is used as a strategic means to obtain comparative advantages in today's business environment (Loh and Venkatranam, 1992).

The benefits of successful outsourcing are; cost reduction, improvement of system quality, access to expertise, organizational flexibility and the ability to focus on core competence. However, there are risks associated with outsourcing such as vendors over optimism, loss of control, increased governance costs, and technological inflexibility (Beasley et al, 2004). Outsourcing has in many cases increased the cost and introduced complexity to the organization.

However, outsourcing of IT is different from other organizational resources that have been successful outsourced. A number of factors contribute to this statement: it evolves rapidly, it underlies economic change rapidly, the switching cost of underlying technologies and IT suppliers is high, customers tend to be inexperienced with IT outsourcing, and it is IT management practises rather than economies of scale that lead to economic efficiency (Lacite and Hischheim, 1995). According to IDC Norway (2009) the outsourcing market will grow with an average of five per cent annually from 2008 to 2013.

Much of the academic literature has focused on IT/IS outsourcing from the perspective of the management, the organization or the service provider SP. Little focus has been from the perspective of IT personnel (Gonzales et al, 2006). This paper's focus is on the issue of IT personnel's role change after IS outsourcing. Findings could contribute to better understanding of IT personnel's role change in larger organizations. According to Ronald Coase (1937) it is in the organization's interest to adapt the new role of IT personnel to reduce the transactional cost by IS outsourcing.

According to Martinsons and Cheung (2001) outsourcing of IT functions has an impact on IT professional's role change and responsibility in the organization. Outsourcing of IT functions changes IT professional traditional work role. The impact of outsourcing of IT functions will alter the demand for a particular type of IS expertise in an organization.

Hence, outsourcing can have impact on IT professional's career ambition in the organization. Due to the great impact outsourcing poses on IT personnel, finding effective ways to manage organizational change is a key outsourcing success factor. And in addition, help organizational managers make better decisions to retain key IT staff in outsourcing situations.

1.2 Project aims and objectives

The aim of the dissertation is to study IT personnel's role and responsibility change due to IS outsourcing. A research framework based on four key terms is presented at the end of chapter 2 under literature review.

With emerging practices like outsourcing of IT functions, many organizations loose IT key staff (Martinsons, 1993) and in some cases the process leads to reorganization of the whole IT department (King, 1996). According to Beasley et al (2004), some of the negative aspect of outsourcing can lead to loss of control over cost and IT innovation, and a higher degree of monitoring of SP's work. Others address the role change from a technical responsibility to a more service oriented responsibility for IT professional.

The aim of the research gives a guideline over further work. Hence, the objectives of this paper are:

- Conduct a literature review over existing research in this area
- Create a research framework based on literature findings. The research framework forms the basis for further research in this field (Appendix B).
- Investigate a real life case and conduct interviews with IT professional at The City of Oslo.
- Present a discussion and a conclusion of the finding, and finally suggest a framework to positively contribute to practitioners and researcher.

1.3 Dissertation outline

The rest of the dissertation proceeds as follow:

Chapter 2: In the literature review we present the research in this field of study. The paper starts with general literature on outsourcing and the reason for outsourcing. Then we narrow the scope to IT personnel's role change due to outsourcing.

Chapter 3: In the research methodology the case approach is explained, together with why a semi-structured interview (quantitative analysis) is used in this dissertation.

Chapter 4: In this chapter we introduce the case of The City of Oslo. Information about outsourcing background and results are presented.

Chapter 5: The research findings are presented in this chapter. The respondent's answers from our interviews are presented here.

Chapter 6: The discussion part compares literature findings with data found from the case study in a critical approach.

Chapter 7: An evaluation of the process and appropriate use of research methodology is presented here.

Chapter 8: A conclusion and summary is drawn based on discussion from earlier chapters. Recommendation for researchers and practitioners are presented in line with the view of this dissertation's limitations.

CHAPTER 2: LITERATURE REVIEW

2.1 Definition of outsourcing

The outsourcing theory was originally developed by Williamson in 1975 and explains the reasons why firms outsource. This is explained in a transactional cost perspective.

According to Ronald Coase (1937) there are a number of transactional costs to using the marked. From his perspective, there are additional costs than only the price of the goods or services. Hence, in case of IS outsourcing the price is not only the cost by SLA contract but also the cost for searching for information, administration of SLA and keeping the right knowledge in the IT department. Hence, organizational change and the new roles for IT personnel should be adapted to saving certain marketing cost.

IS outsourcing is a term that encompasses a variety of approaches for IT services. The IS outsourcing has an impact on change in management process of the IT organization. Loh and Venkatranam (1992) define IS outsourcing as the process of turning over part or all of an organization's IS functions to external service provider. Others define outsourcing as a company that contracts another company to provide services that might otherwise be performed in-house by the employees.

Willcocks and Fitzgerald (1994) define outsourcing where 80% or more of the budget is spent on outsourcing, while selective outsourcing is defined to less than 80% of money spent on outsourcing. Some claim that the selective outsourcing is more successful than total outsourcing.

The outsourcing topics that are widely studied can be classified into (Gonzales et al, 2006):

- Outsourcing from the perspective of the client
- Outsourcing from the perspective of the service provider
- Outsourcing from the perspective of the relationship
- Outsourcing from the perspective of the economy
- Others (also from the perspective of IT professionals such as role change)

2.2 The drivers for IS outsourcing

Gartner (2006) has estimated that IS outsourcing is a global industry with an annual value

of approximately $233 billion and has an annual growth rate at 8%. The trend today is that outsourcing includes larger companies, a greater range of service, service providers who are accepting management responsibilities and risks, and the changing nature of relationship with the service provider (Yang and Huang, 2000).

According to Antoucci et al. (1998), outsourcing of IT functions provides the organization the ability to focus on core competency, access state-of-the-art technology, increase flexibility for the organization and cost saving aspects.

One reason for outsourcing that actually is unrelated to cost aspects is outsourcing cause of political reasons. An organization may outsource purely with the aim of reducing the IT department (Lacity and Hirschheim, 1993). Hence, the organizations in-house capability will be reduced. Organizations are outsourcing troublesome IT functions that are difficult to assets (Lacity and Willcocks, 2000).

IT is known to have a short life cycle. For average IT technology the life cycle is around 2 years or less. It is difficult for an average IT user to keep up with the changes in technology. Hence, it is important that the IT department can have the necessary up-to-date IT technical knowledge available. The argument that IT has a short life cycle can be an incentive for contracting out because of the difficulty for smaller IT departments to retain enough IT knowledge in the organization.

2.3 Negative aspects of outsourcing

Some researchers even found in their study that nearly 70% of all outsourcing deals fail to meet at least some of their targets, while nearly 20% completely miss their objectives (Krishnamurthy et al, 2009). Although it is difficult to generalize the successfulness of the outsourcing tasks in exact percentage numbers, the findings of Krishnamurthy et al (2009) gives us an indication that outsourcing projects are complex and can have high failure rates.

Negative outcomes of outsourcing are: increased cost, the introduction of complexity cause of vendor underperformance, loss of control, intellectual property loss and knowledge loss. While, international outsourcing (offshoring) can encounter problems like cultural, political and legal differences (geopolitical uncertainties), and could be perceived as more risky (Geishecker, 2008). Earl (1996) found that IT outsourcing brings risk like lack of competence of IT staff, loss of control, lack of organizational learning, loss of

innovative capability, and the lack of divisibility of IT.

Some argue that outsourcing organizations have to compromise operational flexibility and innovation. Innovation is the factor that SP fails to deliver to the organization (Fawthorp, 2004). Lack of innovative capability can hinder business organizations to change to market demands.

One major risk of IS outsourcing is the loss of vital know-how with respect to core competence in the organization. It is of the organization's interest to retain the company's competitive core competence in order to have the ability to compete in the fast moving and unpredictable market. Reve (1990) argues that not only core competences but also special skills should be kept in house and not vanish because of outsourcing.

Khalfan (2004) identifies several factors that are risk issues in IS outsourcing:

- Security Issue (data confidentiality)
- Hidden cost (Unspecified in contract)
- Loss of flexibility and control
- Lack of prior outsourcing experience
- Ability to operate or manage new systems

Table 2.1 explains advantages and risks with IS outsourcing according to Harris et al (1998). These are the factors that can have impact on IT personnel's new role.

Advantages	**Risks**
Cost reduction	Long-term contract inflexibility
Access to leading technology	Being tied to updated technologies
Reduction of headcounter/employees	Reduction in in-house IS expertise
Reduction in IS department's power	Lack of supplier responsiveness
Firm focuses on the key skills it does best	Loss of control over IS decisions
	Poorly managed outsourcing contracts

Table 2.1: Overview over advantages and risks with outsourcing (Harris et al, 1998).

2.4 Organizational change and outsourcing

More than ever there is a need for organization to be responsive and change in order to remain competitive (Covaleski et al, 2003). Outsourcing can change the way IT departments work. For organization with stakeholders depending on IT functions, the

changes in IT personnel's role can have an impact on end-users and other employees in the organization. Hence, the issues that this paper addresses can also be considered as a study in organizational change.

In the case of outsourcing of IT functions, IT departments change from being suppliers of their own services to assuming the function of controlling and administration of the SP. The importance of key IT professional's involvement in outsourcing decisions has been stressed by Guphta and Guphta (1992). IT personnel in general are more prompt to follow their IT managers than the CEO of the firm (Kiely, 1992).

2.5 IT professional and role change

Outsourcing of IT functions in an organization can have impacts on IT professionals working roles and create new responsibility, and hence affect the way IT professionals work (Martinsons and Cheung, 2001 and Menard-Watt, 1993). However, other researchers claim that IT professionals are unenthusiastic about new technology and hence have a resistance to changes in this field. A study by (Rose, 1995) supported this findings for IS managers in IS development groups. Hence, IT managers like to stick to the old way of doing things.

Gupta et al (1992) found that IT professionals that support end-users often experience role conflict and role ambiguity after outsourcing. While Martinsons (1993) claims that outsourcing changes the role of IT professional from performing IS activity to monitoring subcontracted work, and senior IT professionals spending more time negotiating contractual issues rather than managing their projects and personnel.

Geishecker (2008) found a correlation between outsourcing and individual's risk of leaving the organization (leaving employment) due to role change. Outsourcing can pose a potential threat to IT professional's jobs (Martinsons, 2001). Hence, IS represents a major technological shift that leads to the devaluation of IT professional capital in an organization.

2.6 IT professional and knowledge change

IT capability means an organizations capability to modernize and deploy IT resources in combination with other complementary resources. It's the organizations capability to combine IT resources with business knowledge and competence to realize business value for the organization. Melville et al (2004) claim that in a resource based view RBV a firm's

IT capability knowledge is not easily copied by rivals. Others argue that IT capability is a source of competitive advantages for the organization, if handled wisely.

In order to create sustainable innovation in the organization, an organization must be able to incorporate IT knowledge with the firm's business knowledge. Hence, according to Agarwal and Sambamurthy (2002), the most important objective for the IT department is to construct a partnership with business users in the organization. It is important for the organization that there is a connection of knowledge sharing between IT professionals and business users.

Willcocks et al (2004) address the negative impact IS outsourcing has on an organization's know-how. Therefore organizational managers should emphasize on keeping key know-how in the organization after outsourcing. While Jae-nam (2001) opposes this view by claiming that IS outsourcing can be a mechanism to integrate IS vendor's knowledge to the organization.

2.7 IT personnel and SLA

Goo and Huang (2008) define SLA as a formal written agreement, often developed jointly by service recipient SR and service provider SP that specifies products or services to be provided at a certain level in an outsourcing agreement. The quality of the SLA contract can have an impact on the success to IS outsourcing (Mingay and Govekar, 2002). The study from Goo and Huang (2008) finds that the characteristics of the SLA are significantly related to trust between SR and SP. However, there is a risk that organizations can be too dependent on the service provider (Alexander and Young, 1996).

There are two forms for inter organizational governance, the formal and the relational control. Organizations use SLA as a formal control between service provider SP and service recipient SR. Researchers observed an increasing range of outsourcing activities that are organized through complex contracts (Goo and Huang, 2008).

Willcoks et al (1995) address the importance of accurately measuring the vendor's performance before and after the SLA contract is signed. Outsourcing creates new roles for IT personnel and makes them responsible for monitoring the SP's work. This demands knowledge on contractual issues in SLA, and increases cooperation with external service partners.

2.8 IT personnel's attitude and effectiveness

Employees experiencing a positive attitude and collaborative effort can increase the organization's effectiveness (Ostroff, 1992). From an organizational effectiveness point of view, Organ (1977) claims that employees that feel grateful to the organization, will have job satisfaction and hence increase effectiveness. Others like Harter et al (2002) studied the relationship between employee satisfaction and turnover. Hence, it is natural to assume that IT personnel's job satisfaction after the IS outsourcing could have positive correlation with their effectiveness.

2.9 Summary of the literature review

The focus of this paper is to study the role change for IT professional in an outsourcing context. Firms use IT outsourcing as a strategic incentive to reach organizational objectives. The gain of successful IT outsourcing can be reduced IT staff and hence cost reduction for the organization. However, studies have indicated a high failure rate in outsourcing. The indicators used to monitor these aspects are reduced IT knowledge, loss of control over IT functions and too much dependence on the SP. One important role change in IT is related to the monitoring and administration of the SP work. Others relate the role change with dismissing IT knowledge in the organization. Hence, based on the literature review four key terms are presented for further research (Table 2.2).

Findings	**References**
Roles and responsibilities	Martinsons and Cheung (2001)
Job training & knowledge	Willcocks et al (2004)
Personnel movement & knowledge	Couger and Zawacki (1980). (Martinsons, 1993)
Relationship with service provider SP	Kern and Willcocks (2000)

Table 2.2: Key terms for further research

CHAPTER 3: RESEARCH METHODOLOGY

3.1 Introduction

The City of Oslo was chosen as a case example for this study of IT personnel's role change due to outsourcing of IS functions. One reason for this choice is the size and impact factor of the case. The City of Oslo is a large public organization with over 43 000 employees among these 500 IT personnel. Hence, IS outsourcing can have a severe impact for a large group of IT personnel in The City of Oslo. Another factor for studying this case is that the result of the IS outsourcing was perceived as a failure with high cost overrun, lack of risk analysis, problems with SLA and the introduction of more complexity and inertia in the organization outsourced. In addition, the possibility of large research samples will ease the data collection process.

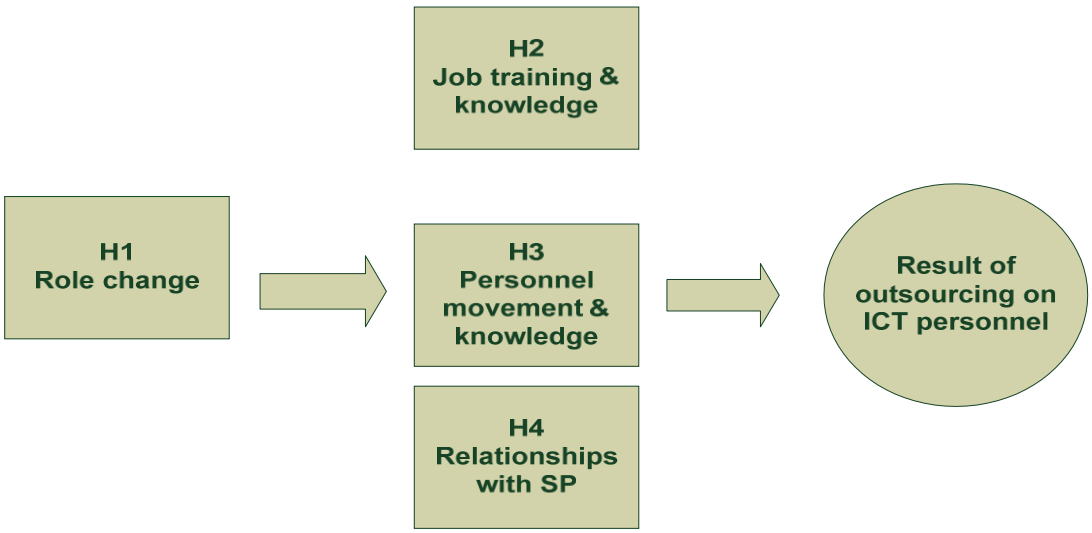

Figure 3.1: The theoretical framework.

Based on our literature review we propose 4 key terms (appendix B) for further research as shown in figure 3.1. Our aim is that the case study of The City of Oslo will provide us with research data to further understand this research area. The first key term to investigate is the role change for IT personnel. According to Martinsons and Cheung (2004), outsourcing has an impact on IT personnel's role and responsibility change. Hence, we want to find out the new roles and responsibilities of IT personnel (H1).

The second key term (H2) is job training and knowledge. The aim is to find out if job training is provided for IT personnel and IT personnel's perception on knowledge issues.

The third key term is personnel movement and knowledge. According to Geishecker (2008) there is a positive correlation between outsourcing of IT functions and IT personnel leaving the organization, others like Willcocks et al (2004) address the loss of vital knowledge because of IS outsourcing. Hence, we want to investigate the IT personnel's job movement after outsourcing and loss of vital know-how in the organization.

The fourth key term addresses the new relationship IT personnel have to the SP. According to Martinsons (1993) IT personnel spend more time on monitoring and administrating the SP work after IT outsourcing. Hence, we want to find out more about the new relationship IT personnel have with the SP.

3.2 Research methodology

The dissertation's approach is based on an explorative inductive process (Backman, 1998). From research literature a framework of four key terms was investigated. Based on the limited literature that exists in this field, our aim in investigating the role change for IT personnel is based on answering question like *how*. Also we want to find more knowledge in an area which we perceive to be of little academic research.

The research is based on a qualitative approach (case interview) because this can give us understanding of the respondent's opinion about the role change issue. Although a quantitative approach is most common in IS research (Orlikowski and Baroudi, 1991), a qualitative approach can give us in-depth understanding of the respondents motivation in their natural environment over the issue.

The dissertation is based on a case study approach which allows an increase in the qualitative and quantitative of data obtained (Gummersson, 1991). In addition, a case study will allow us to analyze relationships and social processes that are not possible via a quantitative approach alone (Miles and Huberman, 1994).

A case study analyses the topic in its natural environment, and data is obtained by direct observation, interviews, document analysis etc. The case approach refers to an in-depth study of a contemporary topic using multiple sources of evidence within the real life context (Yin, 1994). The main idea in this research lies in theory development, and a case study is viable for adding deeps and knowledge to our understanding of the RQ and key terms (Appendix B).

However, there are some limitations with case study approach. These can be lack of control over individual variables, location causality, and generalization based on a case study (Yin, 1981).

Reasons for using case data can be elaborated in (Yin, 1981):

- Limited prior knowledge in these field (Gonzales et al, 2006 and Martinsons, 2001)
- Inadequate extant theory
- Complex explored phenomena

Hence, we chose case study approach because we could focus on the topic, and accommodate several data gathering techniques. According to Guba (1981) and Yin (2004) this approach, together with other data gatherings methods like questionnaires, interviews and documentary analysis, can give us higher data validity. Hence, a triangulation process by using multiple data sources can be more convincing and accurate (Yin, 1994).

3.3 Data Collection

The collection of research data is from key informants, and is based on a set of IT employees from The City of Oslo to provide us with information on the case study (Ventkatraman, 1989). Main data was collected through in-depth face-to-face interviews and unstructured phone interviews of 8 organizations in The City of Oslo. The unstructured phone interviews were performed to add more information to the research. In addition second hand data was collected through documentation and web sites.

Face-to-face interviews were taped in the beginning of the process. However, as we saw that this hindered the respondents to express their view freely, the method was abandoned.

Data was collected through interviews with IT personnel from different parts of The City of Oslo. However, we limited the interviews with units in The City of Oslo where they had outsourced their IS functions to external SP. Appendix F explains which organizations in The City of Oslo have participated in the research.

Data collection can be divided into two phases; phase one consisting of the interview, and phase two consisting of following up with a protocol which was written after every

interviews.

3.4 Interviews

The research method is based on semi-structured interviews of IT personnel in The City of Oslo's organizations. Semi-structure interviews require that the respondents have some concepts and themes over role-change issues in The City of Oslo. The unstructured interviews were used limited here as we want the respondent to relate to the key terms we found from the literature research.

The qualitative analysis was based on in-deep interviews and unstructured phone Interviews with 8 organizations from The City of Oslo (Appendix F). And the in-deep interview lasted for 1-2 hour for each organization which consisted of 1-2 IT personnel (IT manager and IT staff).

An interview questionnaire based on literature findings was designed and served as interview guide (Appendix B). To increase the quality of data gathered, a protocol was written after each interview and forwarded by e-mail to the respondent for rectifications and comments.

Although interview is a common data collection technique, it has limitations. We have to assure that the respondents fully understand the research topic, and that the interview order and place may not represent a bias to the result.

3.5 Data analysis

The analysis of case data is based on literature review and key terms stated in chapter 2. Although generalization based on a case study has limitations in scientific generalization, Yin (1994) opposes this view by stating that it has value for researcher whose aim is to expand and generalize theories.

The data are gathered in the data matrix (Appendix C) and findings are drawn out of this data matrix for further discussions. The findings and results from the interview process were presented in chapter 5.

We could have determined how strong the responses were if the answers had been

quantified. However, since the dissertations aim is to have an in-depht understanding of the theory based on a qualitative approach, we will not quantify the answers. However, in order to retain a high quality of data gathered, only answers that represent 2 or more organizations (at least two interviews) will be presented.

To increase the validity and reliability, the paper will follow the same procedure across all cases, including preparation of interview and semi-structured questionnaires, data collection and analysis (Yin, 1984).

3.6 Ethical considerations

The objective of this paper is also to ensure that the research is conducted ethically. This paper will follow best practises to ensure good ethical conducts, hence avoid unethical behaviour. Unethical behaviour can be understood by consciously doing something one knows, or society says should not be done like deception, lying, falsification, distortion and withholding information.

This study involved research participants from The City of Oslo. And the paper followed these procedures to ensure good ethical conduct:

- Voluntary participants: The informants are chosen on a voluntary basis consisting of IT personnel from The City of Oslo.
- Informants consent: The objectives of the research are explained to the participants, their role and the risk involved are clearly informed in advance. The information is given both written and in oral at the interview site.
- Avoidance of harm: There should be no risk of physical or psychological harm for research participants. An evaluation of potential ethical risks for the respondent are conducted in advance of the research.
- Confidentiality and anonymity: This research will take action to provide participants with necessary confidentiality and anonymity.
- Institutional review board (Ethical committee at Brunel University). The institutional ethical committee is going to approve the research method in advance.

CHAPTER 4: THE CASE

4.1 The City of Oslo

Picture 4.1: The City Hall Square

The City of Oslo has a parliamentary model of government. It has an annual budget of round 40 billion NOK. The City of Oslo has responsibility for public services for over 500 000 inhabitants. The main responsibilities for The City of Oslo are: health and social welfare, education and cultural affairs, urban development, transport and environmental affairs, and finance.

4.2 The outsourcing history

The City of Oslo started to outsource its IT functions in different organizational units from 2004. The IT-reform which was the official name of the outsourcing of IT-functions in The City of Oslo involves extensive outsourcing and centralization of IT functions from different organizational units. The aim of the IT outsourcing in The City of Oslo is according to UKE (1997) enabling business development and innovation. To achieve this, the aim is to align the responsibilities to the organizations business manager with IT managers. Some claim that the politicians use outsourcing as a method to reduce employment levels in The City of Oslo. Others claim that the main objective for outsourcing is to gain competitive advantages through cost reduction and focusing on internal core activities in The City of Oslo. According to Computerworld Norway (2009) the IT reform in The City of Oslo had a cost overrun of 74 million NOK.

4.3 The IT organization before outsourcing

Before outsourcing different organizational units in The City of Oslo had their own

autonomy concerning IT functions (Appendix D). The City of Oslo had a decentralized IT function where local IT manager where responsible for IT competence and IT technology. Hence, The City of Oslo consisted of large and small IT departments counting for over 500 IT employee and 11 IT employees at organization strategic level (UKE, 1997).

The department that was responsible for common and centralized operations is UKE. UKE is known as the Agency for Improvement and Development (Appendix D). Local organizational units could autonomously govern their own IT system and infrastructure. Before IT-reform, some standardization for the whole of The City of Oslo exists. There was standardization of the procurement of PC, servers. In addition, UKE had standardized on e-mail system, ERP system (accounting and HR management) and web servers. The City of Oslo was an organization that had under department that were responsible for their own IT functions. Hence, the IT department belonging to The City of Oslo were autonomous; in addition they had collaboration across organizational units and with central organization UKE.

According to table 4.1 The City of Oslo is a large organization that could improve by centralization and standardization of IT. Outsourcing of IT functions could give comparative advantages like cost-reductions, lower IT staff and more focus on core values for The City of Oslo.

55 different local agencies/organizational units
43 000 employee (serving)
1400 locations
40 000 PC's
70 000 telephone numbers
One of the biggest mainframe network in Europe
One main portal: www.oslo.kommune.no containing 180 websites (intranet and internet)
60-70 000 e-mail out of the city every day

Table 4.1: The City of Oslo's IT before outsourcing (UKE, 1997).

4.4 The IT organization after outsourcing

The roles and responsibilities for IT personnel were divided into three functions. IT management is responsible for technology and organizational aspects. Business

management is responsible for business related IT aspects. IT operations are responsible for operational IT functions. New job task related to IT strategic issue and contract related activities are now delegated to UKE. Table 4.2 shows which roles are outsourced after the IT reform in The City of Oslo.

Table 4.2 shows the IT functions in The City of Oslo according to whether they have been outsourced or provided in-house. End-user support is provided by IT personnel in-house, if the problem is not resolved it is forwarded to SP and the service-desk. The same goes for the day-to-day monitoring of the SP work. After IS outsourcing the contract management were centralized to UKE, while the day-to-day monitoring of SP work was provided in-house in the organizations. Data center and mainframe management, system design and integration; and application development and support were outsourced to external SP.

	After IT reform	**Before IT reform**
Data center and mainframe management	O	I
System design and integration	O	I
Application development and support	O	I
Project management	N/A	I
Telecommunications/communications networks	O*	O*
Technical and user support	I	I
IT/IS strategy	I	I
Business development	I	I
Informed buyer	I	I
Contract monitoring (day-to-day)	I	I
Contract management	O*	I

O= outsourcing, O*=Outsourced to UKE, I= in-house, N/A= Not applicable

Table 4.2: Area of IT competence to be outsourced (Pinnington and Wollcock, 1995).

The City of Oslo signed contracts with 3 service providers for IT functions that were outsourced. Hence, three external companies were responsible for delivering the outsourced IT functions to the organization.

Ergo is responsible for providing servers and network functionality. In addition the

company has the overall responsibility for the service-desk. According to the SLA agreement the 1.line-support was provided in-house, and the 2. line-support was provided by the SP at the service-desk. Infocare is responsible for PC and printers (periphery equipments). EDB Business partner is responsible for databases.

Hence, the IT systems were outsourced to three SP outside The City of Oslo. And UKE (central unit inside The City of Oslo) was responsible for centralized IT functions like IT procurement and SLA contract administration.

CHAPTER 5: RESEARCH FINDINGS & RESULTS

5.1 Introduction

In this chapter we present the interview answers from the case study at The City of Oslo. The answers were extracted from table in appendix C which is based on semi-structured interviews and unstructured phone interviews of 8 organizations in the City of Oslo. The findings present answers from one or many respondents from the interview process and do not represent a statistical average answer from the respondents sample. The findings can give us in-depth understanding about the role change issues for IT personnel in case of outsourcing.

The table under presents the main findings based on the four chosen key terms in our research. The findings are supported by existing research literature, but there are distinctions which shall be discuss in chapter 6.

Key terms	**Main findings**
Roles and responsibilities (Chapter 5.2)	Outsourcing of IT functions has an impact on roles and responsibility change for IT personnel in an organization.
Job training & knowledge (Chapter 5.3)	The role change requires new job training and there are more demands for service oriented knowledge after outsourcing. Also demand for technical knowledge.
Personnel movement & knowledge (Chapter 5.4)	There are personnel movements from the organization and this causes vital loss of organizational specific knowledge. Have to retain vital business knowledge in the organization.
Relationship with service provider SP (Chapter 5.5)	New role for IT personnel is the monitoring and administration of the SP. However, SLA agreement has an important impact on the relationship IT personnel have with the SP. Trust issue between partners is important.

Table 5.1: Summary of the main finding from the case study

5.2 IT personnel: new roles and responsibilities

5.2.1 IT personnel & role, working tasks, role conflict and role ambiguity

The IT departments in The City of Oslo have changed after outsourcing IT functions to the SP. The respondents answered that they had a new role and working tasks after outsourcing. Formally they have got a new defined role by UKE. The task for a common IT employee is less technical but more based on reporting to the service-desk. In addition, they were responsible for monitoring the work of SP and UKE. The respondents claimed to experience role conflict due to unclear role definitions and little role information to end-users.

5.2.2 If you have got a new working task, how is it related to your knowledge?

Most respondents answered that they did not need more IT knowledge after outsourcing. As one respondent said; when we outsource this function, the IT knowledge needed to run that system is also outsourced. The new knowledge that they need after outsourcing is more service oriented knowledge because they have more interaction with SP, UKE and end-users. However, some actually say they need more IT knowledge despite outsourcing and they explained this with the demand of keeping up with new IT trends in order to discuss IT strategy with their SP, and also to monitor their work.

5.2.3 How is your motivation for assigning new responsibility and working task? If it is negative, please explain why.

Respondents generally had the same motivation as before the outsourcing process. Some argued that it was due to age and gender factors. Older employees that soon will retire argue that their motivation was unchanged. However, they do express empathy to IT personnel that might have a low motivation due to the outsourcing. They understand that ambitious IT personnel may have little to do in their new roles after outsourcing. Other factors that may enhance positive motivation is that UKE is doing what ever they can to improve routines and processes after the outsourcing of IS functions. Many are very loyal to the system; they feel that they can't change what already decided by the authority.

5.2.4 Please explain how you feel with regards to new responsibility and the power distribution of your new role?

The respondents were very clear on that the power distribution after the outsourcing has changed. IT personnel's ability to decide on IT issues for end-users has changed. They can't have the same impact as before; rather they have a role as coordinators to SP and UKE. Some found the situation frustrating because they some times only needed more administrative rights to solve problems for end-users. Instead they have to report to the IT support problem through the service desk. However, some have actually reported satisfaction with having less power and argued that the small IT department can't handle more.

5.2.5 How is the optimal solution of power distribution in order to support end-user more effectively?

The respondents agreed to have less power over end-user after the outsourcing. However, in order to provide for a better service, many of the respondents answered that they wanted more administrative-rights. With those right they could solve some IT tasks much quicker than the SP. One plausible explanation is that they could make the priorities themselves. It was also reported that SP handled routine tasks much quicker than non-routine tasks. Some have also reported the necessity of UKE's role and that they should take more responsibility to resolve conflict-issues or bottleneck-issues.

5.3 Job training & knowledge

5.3.1 Do you feel that you have the necessary skills to cope with the new environment?

The respondents said that they had enough IT knowledge to handle the new routines after the outsourcing. There is a shift from IT intensive knowledge to service-oriented knowledge. IT personnel received web based courses in service-desk held by the SP. Other respondents said that it is important to understand new IT methodology like ITIL in order to understand and communicate better with their SP.

5.3.2 The kind of job training received because of outsourcing

The respondents answered that they had only received web based job training in

service desk. Some respondents said they had different job tasks after outsourcing and demand more specific job training. New routines have been developed on a trial and failure basis in the organization after outsourcing. The placement of responsibility of the service desk can pose a challenge for the organization, and can be a threat to the service quality.

5.3.3 Do you think that the organization should emphasize on more job training programs for IT personnel? Please explain why.

The respondents answered that they understood the importance of both theoretical and practical IT knowledge in their new roles. Some have opportunities to attend courses but generally there was no emphasize or policies from the organization on this issue. Others have stressed the need for job training for end-users as they also have a new role when it comes to reporting IT support issues. The demand for job training depends also on age and future career ambitions in the organization. The respondents claimed that more interaction with SP and end-users requires knowledge in service-oriented tasks. However, the need for job training has not supported by the organization's overall plan and policy.

5.3.4 Is the new job training based on technological knowledge or more knowledge on service and interpersonal skills in the organization?

The respondents claimed that generally they need more service-oriented knowledge and less IT knowledge because of change in IT responsibilities. However, some argued that they still needed theoretical IT knowledge but less practical IT knowledge. The theoretical knowledge is required because the IT department is still responsible for IT strategy, and in addition it is necessary knowledge in strategic discussions with the SP.

5.3.5 How is the need of job training (new responsibilities) go you're your IT career ambition

The respondents unanimously agreed that there is no future in The City of Oslo for those who want to pursue a traditional career within IT. Some said it does not matter and have no impact on their motivation because they believe that one day the IT functions will in-source again. Already they see a trend that The City of Oslo is in-sourcing organizational specific applications again.

5.4 Personnel movement and knowledge capability

5.4.1 Do you know of any IT employee that have quit or gone to the SP?

The respondents answered that they generally know about IT personnel that have gone to SP. What is interesting to note is that the SP was very active in their recruiting campaign prior to outsourcing. Others have reported that IT personnel have gone to central organizations like UKE. Others again have quit and gone to other jobs with larger IT environment. In this process we lost key IT knowledge in whole of The City of Oslo. Other have stressed that the greatest loss is in organizational specific knowledge which could take years to build.

5.4.2 How is your attitude to this issue?

The respondents were clear in the answer that it is negative that IT knowledge disappears from the organization. Some respondents said that there was no future in the organization after the outsourcing because of the small IT environment left. Others claimed that they had less power to influence their IT role, and that is little motivating too. However, they understand that IT personnel go to SP because of more IT challenges and higher salary.

5.4.3 Is the IT knowledge capability in your department affected by people leaving?

The respondents claimed that outsourcing had negative impact on IT knowledge in their department because IT personnel were leaving. Key IT staff and younger people are leaving first because they have better opportunity in the job market. Knowledge that IT department looses are for example server technology and other technical knowledge related to running server and client platform. Also when key staff leaves, key knowledge about the organization is gone.

5.4.4 How does your organization cope with that central IT personnel with good IT knowledge leave the organization

Many organizations in The City of Oslo have to follow central policies with the result that IT personnel have to leave the organization which can cause the dismissing of IT knowledge in the organization. However, today the organization has to face the penalty of this decision by having more problems with lower IT quality in the organization. In addition, many organizations are evaluating if they need to hire IT personnel again.

5.5 Relationship with service provider SP

5.5.1 How is your experience with SP and UKE after outsourcing?

Respondents claimed that the new role related to the SP is administration and monitoring of their work. The organizations did not know the service level in the SLA which is governed by central organization UKE.

The invoices for IS outsourcing from UKE to the organization was unclear and lack essential information. Hence, it was difficult to monitor the SP's work performance against the invoices. The cost of the service was difficult to monitor. However, the respondents also claimed to see improvement from UKE. UKE is more willing to cooperate now and understand the complexity of the outsourcing tasks.

The cooperation with SP is OK when it comes to routine tasks. However, when it comes to supporting non routine task, the procedure to report is very bureaucratic. In addition, the time it takes to solve non routine task is very long. Others have argued in the interview that SP lacks essential organizational knowledge in order to understand the organization's needs. The respondents claimed to se improvement of the SP's work after 2 years.

5.5.2 Explain the communication with the IT department

The main communication channel is via the service desk. Under some circumstances the IT personnel can use other communication channels like phones and e-mails. However, the disadvantage with this solution is that not all SP have service desk as standard support application. This has caused many problems and makes the SP's communication challenging.

5.5.3 Do you think that the SP's have enough knowledge to support your organization?

The respondents answered that the SP had technical knowledge to serve their organization. However, many claimed that they do not have enough organizational knowledge (business knowledge of the organization) to serve their organization. According to the respondents, lack of organizational knowledge reduces the service quality to the organization. Despite the general critics, many respondents agreed that the SP after 2 years of service know more and more about the organization.

The critics argued that the SP standardized routine according to SLA hinders the organization to have an efficient IT function. Some said that The City of Oslo is so different that a standardized solution doesn't fit all. The SP has little knowledge on organization's specific applications.

The respondents also claimed that the personnel at the service desk should know more about the organization they are serving. Some of the dissatisfaction lies in people at the service desk not knowing what the case is about and hence forward the task to wrong personnel. Much of the role to IT personnel after outsourcing is to audit and follow up SP work through the service desk. In many cases the SP had formally claimed to have solved the case where it actually had not.

5.5.4 Does the SP solve IT problems better than you before?

The respondents unanimously said that the SP did not solve the problems better than before. They experienced the SP to be very bureaucratic. The problem with SP is that the delivery is of poor quality; also the support time is too long. One task has to go through many instances and the network after outsourcing is less stable. End-users also said that the service is worse.

We have examples of a case of MS office 2003 upgrade task that has taken over 1 year for the SP to solve. In this situation, the respondent claimed that UKE should take more responsibility and show more ownership. The problem is that UKE has unclear ownership and hence poor performance results from the SP.

The respondents argued that the problems are due to not knowing the local environments and its needs. Some argued that the decision to outsource is based on political and not economical reasons. However, some also said they were satisfied with the service given. And that they believed the system would be better over time.

5.5.5 Do you think that you have enough knowledge from the SLA to do you work?

The respondents said that they have not been given SLA or adequate information about the SLA from UKE. However, they have been informed that the SLA has a respondent time of 4 hours. However, there are no sanctions to SP that do not deliver within time.

Hence, there is no guaranty that a case will be solved.

The invoice for cost with the outsourcing is sent out by UKE. However, the invoice is not very detailed and costs can not be traced back to actual use. Due to low quality of today's SLA, UKE will start to negotiate a new agreement soon. Others claimed that UKE should take some of the responsibility with perceived failure of IS outsourcing due to that they have kept the SLA from the organization. The new system does not promote development and innovation.

CHAPTER 6: DISCUSSION

The table under summarizes the main findings from our case study. And the discussion that follows is based among those points.

Literature Review:	**The research findings:**	**Discussion:**
Roles and responsibilities (Chapter 6.1)	Outsourcing of IT functions has impact on roles and responsibility change for IT personnel in an organization.	Resistance to change by Sulivan and Smith (1993). IT personnel negative to the new role change Martinsons and Chong (2001).
Job training & knowledge (Chapter 6.2)	The role changes require new job training and there are more demands for service oriented knowledge after outsourcing.	A technological shift (Geishecker, 2008)
Personnel movement & knowledge (Chapter 6.3)	There are personnel movements from the organization and this cause vital loss of organizational specific knowledge.	IT personnel prefer technical oriented activities (Couger and Zawacki, 1980). Outsourcing has negative career prospect for IT personnel (Martinsons, 1993).
Relationship with service provider SP Chapter 6.4)	New roles for IT personnel are the monitoring and administration of the SP. However, SLA agreement has an important impact on the relationship IT personnel have with the SP.	The importance of partnership relationship with SP (Kern and Willcocks, 2000)

Table 6.1: The research findings and discussion points.

The objective of IT outsourcing should be aligned with the business objective of an organization. According to the respondents, the decision to outsource was based on a political diction and not based on business strategic issues supported by empiric data.

This incentive to outsource is supported by the findings of Lacity and Hirscheim (1993). The study of Dorsi (1998) also stated that IT outsourcing has been used increasingly in the public sector as instrument for changing the way public funded services are provided. However, the decision to outsource in the case of The City of Oslo contradicts common norms in outsourcing decisions like cost reduction and access to technology (Harris et al, 1998).

Abstractly, the role of IT is to enable the business to meet its goals. With outsourcing of IT functions new role are created for IT professional. We have seen that the gain of successful outsourcing cold be better cost control and lower TOC in delivering IT solutions to the organization. Critics argue that outsourcing of IT functions can cause role ambiguity for IT professional (Gupta et al, 1992), the SP get more power and reduced innovative capability to the organization.

Competitive advantage is now linked to the organization's ability to rapidly deploy IT solutions, and to change those systems as the business involves. In outsourcing arrangements, SP and SR have to collaborate in order to be able to adapt faster to this demand. However, a system based on formal governance of SLA and little based on trust, will challenge and hinder fast adaptation of IT functions to business needs.

One key success factor in the outsourcing process is the involvement of key IT personnel (Guphta and Guphta, 1992) in the decision process. The respondents claimed that lack of involvement from central organization (UKE) has been a major problem in our case. Hence, the process of contracting out could be more successfully by involving key IT personnel more.

6.1 IT personnel: new roles and responsibilities

Outsourcing of IT functions in The City of Oslo has an impact on role change and hence the type of knowledge required for IT personnel to the new role.

Many organizations in The City of Oslo had an incremental change rather than a radical role change for IT professional. Many organizations do not have a clear strategy for IT outsourcing and in-sourcing, rather they have an incremental approach to outsourcing issues (Pinnington and Wollcock, 1995). Hence, our findings from the case respondents support this issue. The new role of IT personnel is defined by UKE prior to outsourcing.

And new role associated with monitoring and administrating the SP is one of the major role changes we observed.

IT personnel role is still to support end-users, and they claim that with more administrative-rights, better services and priorities could be provided to the end-users. However, as SP is attached to existing SLA, their main strategy is to provide standardized support according to SLA agreement. Given administrative rights to IT personnel is therefore not easily done because the mandate to the SP is restricted by the SLA. Because IT personnel's role has been reduced to be a coordinator for SP and UKE, they have lost the power to influence on end-user in the same way as before. However, they expect that SP actually performs their new duty to the same quality. Dissatisfaction occurs when life performance does not meet up to expectations.

Individual resistance to change has been found as a major factor that prevents the organization from fully realizing the advantages of new initiatives such as outsourcing (Sulivan and Smith, 1993). However, we have not found support for this statement in our study. In contrary, many IT personnel are positively motivated about their new role and have few or little resistance to change. We found in our study that IT personnel generally have high motivations in their new role. They seem to be loyal to the system. However, bureaucratic and ineffective work during outsourcing by UKE has been much criticized by the IT personnel in The City of Oslo. The findings from our case contradicts Martinsons and Chong's (2001) findings of IT personnel negative minded to IT outsourcing arrangements.

Outsourcing of IT functions in The City of Oslo has an impact on power distribution in the IT department; and has an impact on IT personnel's working roles. The study finds support that IT personnel lose power to decide on support issues for the end-users. There is a power shift from IT personnel to the SP on support issues.

What we found is that both IT personnel, UKE and SP are eager to perform their responsibility to the uttermost quality. However, ineffective system solution on responsibility area can cause dissatisfaction among stakeholders and hence hinder delivery of a good service to end-users.

Outsourcing has profound impact on IT personnel's role change and their mentality (expectation, work attitudes). According to Martinsons and Chong (1999) IS outsourcing

changes IT personnel's roles and responsibility from a techno-dominant mind to understanding of business needs and human factors. Although our research support this view, IT personnel in our case still have to balance between the new and the old role.

Hence, incentive from the organization should be on emphasizing the attractiveness of the position for the employee. In addition other career advancement in the organization should be offered and considered for key IT professional.

6.2 Job training & knowledge

The respondents claimed to have received very little job training in their new roles. More job training and relevant courses should be provided in order to perform better.

We found in the study a change in knowledge from technical knowledge to service oriented knowledge. However, it still requires that IT personnel have theoretical technical knowledge about IT functions in the organization. This is because IT personnel still are responsible for IT development and strategy in the organization. The demand for less technical knowledge can be to hinder ambitious IT personnel. Our findings imply that IT personnel have adequate knowledge to perform their new job tasks after IS outsourcing.

The new knowledge requirement is not in relation to ambitious IT personnel's career plans. Hence, key IT staff will be the first to leave the organization. Thus, our findings imply that The City of Oslo have lost key IT personnel because of the outsourcing. And the lost key knowledge is not easily rebuilt in case of in-sourcing. In addition, from a knowledge requirement point of view, IT personnel need more knowledge on buying and ordering of services. The new arrangement requires knowledge in procurement and contractual work.

The organization should understand that management support in knowledge building is important for IT personnel performance. Therefore, emphasize on job training programs for IT personnel should be done. In addition, end-users must get adequate information about the new role to IT personnel. Role ambiguity is one of the challenges faced by end users over IT personnel.

Hence, we found support that IT personnel claimed that the organization does not value job training for IT personnel after outsourcing. There is a paradox when it comes to required knowledge for IT personnel. With outsourcing of IT functions, one may think that

the knowledge to retain that function in the organization also will vanish. However, when the IT strategic responsibility still belongs to the IT department, technical knowledge is still required to IT personnel. Organizational leaders do not seem to understand this connection. Our findings support the view that outsourcing of IT function can alter the demand for a type of IT expertise in the organization. We find support for less demand for practical IT technical expertise. However we also find that the organizations still have to retain theoretical IT technical knowledge.

Our study found support that IT personnel have a more service oriented role after outsourcing, and hence needs service-oriented knowledge. The new role is also related to collaboration with external parties like the SP and UKE. However, due to unclear definition of roles by UKE, IT personnel may face role ambiguity. The end-users expectation to IT personnel's new role may cause role ambiguity for IT personnel.

Training of end-users is important after outsourcing. Hence, adequate information security and IT user policy must be developed, implemented and communicated to the end-users. End-users may have internal resistance to change, and that must be dealt with by the IT department.

However, the competitive advantage in terms of IT knowledge, expertise, and innovative capability will be made dependent on outside stakeholder which in this case is the SP. The aim of the organization by outsourcing may lead to reduction in the organizations abortive capacity. That is the opportunity to recognise and exploit new marked opportunity by them selves.

6.3 Personnel movement & knowledge

We found in our study that there is a personnel movement away from the organization after the outsourcing. IT personnel can either; quit the work and find something new, or be recruited by the SP, or be replaced to other departments in the organization. The personnel movement to SP can be explained by the findings of Couger and Zawacki (1980). IT personnel prefers technically oriented activities because of their high growth needs and low social needs. The job at the SP can offer more technical challenge than the organization after outsourcing.

Badri (1992) and Khalfan (2004) have addressed the IT security issue posed by the SP. Hence, IT personnel's job movement to the SP can pose as a information security treats

for the organization.

According to Martinsons (1993) outsourcing of IT functions could dim career prospects for IT personnel in the organization. The claim has limited support in our findings. Although it has negative impact for the traditional IT career, the study shows that it could also boost IT personnel's career because new responsibilities are give to the IT personnel. In addition, the findings of Goff (1996) found a positive correlation between outsourcing and IT personnel's career prospect. Martinsons and Cheung (2001) claim that most IT personnel want to pursue a traditional IT career path from programmer's through analyst to project manager. When it comes to the traditional IT career path, we note that there are fewer opportunities for career progression and advancement for IT personnel in our case study of The City of Oslo. However, our findings also contradict this view because older IT personnel do not necessary follow the traditional IT career path.

In case of outsourcing it is important to retain a group of IT personnel with qualified competence within IT technical skills and company-specific knowledge. Hence, based on our findings from the respondents, we could assume that the HR planning prior to outsourcing has been on an ad-hoc basis. More emphasize should have been put on HR planning prior to outsourcing.

One consequence of IT personnel's job movement is the loss of vital know-how in the organization. Our findings support the view that IT personnel dislike this knowledge leakage. However, they have sympathy to those that do not find the new situation motivating and have to quit. Hence, our study find supports that outsourcing has negative impact on the organization's IT knowledge capacity. We also found support for key staff leaving the organization, and hence loss of local and organizational knowledge.

Others claim that it is OK that the IT knowledge in the department is dismissing, and defend this view by arguing that the same IT function and responsibility is gone. However, when SP is in charge you loose some of your power to influence and reduce the support time for end-users.

The movement of IT personnel can indicate satisfaction with the new system or their future career possibilities. Hence, a good HR plan for IT personnel prior to outsourcing could contribute to less uncertainty for IT personnel. Some SP bid for the contract with the assumption that incumbent workers will be transferred to the SP that wins the contract. It

seems that active recruiting of IT personnel from The City of Oslo to SP has been a calculated process.

According to the respondents, hiring qualified IT personnel to vacant positions in The City of Oslo is difficult. The reason is that the small IT department does not offer key IT personnel challenging IT working environments.

Our study finds support for the claim that the organization is not doing enough to stop the IT knowledge leakage from the organization. This will cause lower quality of the IT service provided from the IT department. Hence, we claim in our findings that poor treatment of the outsourcings process by UKE, has severe impact on IT personnel's job movements.

Most researchers do agree that innovation is a phenomenon that can be subject to human control and have impact of human interaction. We also know in addition that we create knowledge in interaction with others and with SP. The innovative capability of the organization is dependent on cumulative knowledge built up over many years in the organization. However, we see in the case of The City of Oslo; that this knowledge is slowly eroded through outsourcing.

Outsourcing has an impact on the IT department's existing skills and core competences. However, another cons that we noticed was that there was a leak of knowledge to SP. Hoecht and Trott (2006) claims that this factor is of the risks with strategic outsourcing of IS that we should take seriously. However, there is a changing organizational ownership of IT knowledge after outsourcing. IT outsourcing can be perceived as a mechanism for knowledge sharing between SP and SR (Jae-nam, 2001).

One of four organizations that outsource is going in-source the same function over time (Deloitte, 2005). Respondent claim that they believe The City of Oslo will in-source again one day. We have found in our study that organization loose key IT and business knowledge in case of outsourcing. In the reverse case of an in-sourcing, building up lost knowledge is not easily done.

6.4 Relationship with SP

One major role change for IT personnel is the transformation of responsibilities of IT functions to the SP. There are two important documents that IT personnel have to relate too, SLA and invoice. However, we have found in our study that poor structure and

responsibility can have a negative impact on the IT role performance. Unclear invoices can make it difficult to monitor costs. And limited access to the SLA agreement can hinder monitoring of SP work, and sanction for not serving the organization according to the agreed service level.

We found in our study that the SP had enough technical knowledge to serve the organization. However, we found that they lacked organizational knowledge and the use of organizational specific applications. The respondents also claim that the changing nature of the servicedesk can pose a challenge too. Lack of knowledge on local environment can also pose a threat to good service delivery.

IT personnel in our research claimed unanimously that the SP doesn't solve IT function better than before. The explanation to this is not necessarily the poor quality of the service, but rather a question of bureaucracy and longer support time.

The SP aim is to deliver a service to good enough quality in order to get repeated dealings. However, in this case one might think that the poor communication relationship between UKE and the rest of The City of Oslo's organization might hinder good feedback on SP work. In general it should be the interest of the SP to keep and earn the trust of the SR as this would be one of the key selection criteria for future contracts.

Another major challenge is the role of UKE and the administration of the SLA. Some argue that UKE treats the organization like external organizations. Hence, they only received limited access to SLA. Hence, effective contract monitoring means holding SP responsible for both existing service contract, and develop performance standards for new services. In general the feedback from respondent was that SP and UKE had a week performance in the beginning. However, after 1-2 years the service level seems to be better.

In the case study, UKE was responsible for the administrative and contractual part of the SLA. And local organizations in The City of Oslo were responsible for monitoring the SLA delivery. According to the respondents, high barrier of information exchange between UKE and local organizations hinders effective monitoring of the SP delivery. The results are unclear invoice and cost that are not traceable for IT personnel. In addition, high information exchange barrier hinders both parts in acquiring business knowledge about each other.

However, since every organizational unit is a sovereign entity in The City of Oslo, this organization of innovative capability can pose a challenge for The City of Oslo. Hence, knowledge sharing between the organization and UKE is essential to enhance innovative capability. However, this has in the case study proved to be very difficult because of trust issues.

We found in our study that the main communication channel was through the predefined servicedesk. We also found that lack of standard systems for all parts can be to hinder for better cooperation between stakeholders. The formal communication channel was perceived to be very bureaucratic.

The organization should be able to accurately measure IS service performance before they sign the contract and throughout the process (Willcocks et al, 1995). The clue is to hold suppliers responsible and accountable for their services to the organization. There are also danger in underestimating the importance of an internal IS department. Also we should consider the threats of opportunistic SP.

Lacity and Hirscheim (1994) argue that one benefit of outsourcing is to get a clear picture of the cost. Hence, according to our finding with unclear invoices, the result for the organization was not as expected.

There are two options; one is to have a detailed SLA where all aspects of communication are governed by the contract. The other is to have a less defined SLA where relationship between SR and SP are governed by trust. However, a bureaucracy governed SLA rather a trust based approach can be unproductive. However, beyond contract a fair amount of trust is required to make this relationship work. However there is a paradox inherent in this statement because of the short-time relationship with SP in outsourcing today. The degree of relationship with the SP is governed by the type of contract (selective or extensive) and the length of the contract. The literature also emphasise the importance of choosing the right service provider. The issue is not only outsourcing, but right-sourcing.

A large number of SLA contracts are being renegotiated or terminated (Hischheim and Lacity, 2000). Ensuring good quality contract is therefore necessary to have a longer time span on SLA contract, and hence better predictability for IT personnel's work role. One way to achieve flexible SLA contracts is to shorten the contract period. One easy way to

define short contract is the degree the contract time I related to the technology life cycle time. A study in UK found that 95 % of contracts are less than 5 years in duration. The formalized SLA doesn't support the relationship with SP based on trust. And in addition, makes it less collaboration between SP and SR.

We experienced that formal SLA and proactive SP can hinder the innovation to the organization. Although SP have access to the newest technology, they do not understand the organisational business needs fully. And hence, hinders innovation. Kern and Willcocks (2000) stressed the importance of partnership relationship beyond the formal SLA in IT outsourcing. Besides contractual issue, there must be a social process of give-and-take. Also the buyer's vision and values must be shared with the vendor's organization.

The findings from Harris et al (1998) imply that public organizations should explore ways to enhance flexibility in the organization. Doing so will lead to more satisfied IT employees. Hence, in order to perform better we need a more flexible SLA contract, and in addition, increase the development of a trust-based relationship.

According to Lacity and Willcocks (2001) one of the problems encountered with SLA contracts is the inability to adapt the SLA to changing business and technology needs of the organization. The respondents in our research claimed that it was an issue that the SLA contract was to hinder for changing business needs. Task not defined in the SLA was very difficult to solve for the organization in The City of Oslo.

Some argues that capable organizational culture between SP and SR could create better understand and knowledge exchange and enhance innovation. In our case it was an agreement between a public organization (SR) and private (SP) organization.

The advantages of using three vendors imply access to a diverse range of knowledge. However, many SP man cause difficulty in communication and knowledge sharing. Hence, the new arrangement doesn't promote innovation.

CHAPTER 7: EVALUATIONS

The objective of this chapter is to give an evaluation of the aim and objectives of this dissertation. Table 7.1 describes this dissertations aims and objectives, and the result.

Aims and objectives	**Research results**
Aim1: Investigate the impact of IT outsourcing on IT personnel's role change	Conducted successfully based on four chosen key terms. However the scope could be changed to fit better.
Objective 1: Conduct a literature review	Conducted literature review with limited research literature in this area. Could be more critical.
Objective 2: Create a research framework	Research framework created based on four key terms.
Objective 3: Present the case study	A case from The City of Oslo was presented.
Objective 4: Conduct interview and data analysis	Interview with nine organizations in The City of Oslo were conducted.
Objective 5: Have a discussion and present the findings	Discussion and findings presented in chapter 6 and 8.

Table 7.1: Overview over aims & objective for the research.

The work with the dissertation was arranged like a project. Hence, milestone and time schedule was set up in a plan according to appendix A. The agenda was defined by the word limitation of 12 000 words and a limited time-span of the work with deadline in the end of September 2009. However, due to the limited time-span of this dissertation, we could save time by running more parallel processes at the same time.

The aim of the dissertation is to research on the role change for IT personnel after outsourcing. Although this is a topic with much interest in the IT/IS and HR field, it has been an area with little research. Hence, it has been hard to find relevant prior literature in this field.

Objective 1 was to conduct a literature research of the field. We found most literature from

the perspective of the organization or the SP, but little about IT personnel's perspective. However, the dissertation could improve by linking the role change to organizational change, impact on the innovative capability of the firm and more. Also, the literature review could be improved by a more critical approach.

Objective 2 is to create a research framework. The research framework was created based on four key terms. Investigating in only one key term could give us a deeper knowledge of a research area, however a broader picture of this issue was provided for us by using four key terms in the dissertation.

Objective 3: A case study of The City of Oslo was presented. Reasons for this choice is that the case could give us valuable information over the field studied because of its size and the nature of the IT outsourcing, and also impact on over 500 IT personnel. However, since this is a study of a case that has proved to be a failure in the public eye, we could progress by studying a successful case parallel.

Objective 4: Interview was conducted with 8 organizations in The City of Oslo. A combination with other data gatherings methods like questionnaires could improve our work and give us statistic data over the topic (Guba, 1981).

Objective 5: The discussion was based on literature found, key term presented and data found in the case. The assessment could improve by a more critical and a more balanced approach.

CHAPTER 8: SUMMARY, RECOMMENDATION AND CONCLUSION

8.1 Lessons learned from the case in The City of Oslo

Understanding the new role of IT personnel makes us perform better within risk mitigation also more importantly perform better in reward enhancement for IT personnel in the organization.

There are several lessons that we can extract from our case findings:

1. Our findings from this research illustrate many of the issues found in literature. The IT role change should be taken seriously by the manager in the organization. The organization should provide for job training and information given to all employees in the organization.
2. Prior literature has focused on the change of knowledge from a technical aspect to a service oriented aspect. However, our research findings challenge the generalization of this claim. IT personnel also need to have theoretical knowledge.
3. The new role of IT personnel should be informed to end-users in a better way. This is important to avoid wrong role expectation and role ambiguity.
4. IT personnel's new role and performance is dependent on SP's performance and by UKE. Hence, the internal organization (UKE in our case) should change strategy and involve and include IT personnel more in SLA work.
5. Organization managers should emphasize more on job training for IT personnel. The HR department should emphasize on retaining key IT staff in order to hinder key organizational business knowledge loss, and sustain the innovative capability to the IT department.

8.2 Implication for research

The focus of this paper is on IT personnel and role change. Since this is an academic area with limited empirical work, our finding will contribute to a better understanding of IT personnel's new role in this field. In addition our findings will help researcher to understand the connection between role change and the demand for IT knowledge.

8.3 Implication for practitioners

Findings from the dissertation can help organizational manager understand better the new

role for IT personnel. Organizational manager should understand the importance of job training for IT personnel in their new role. Hence, offer job training incentives for all IT personnel involved in outsourcing. To avoid role ambiguity, information about the new role should be informed to all stakeholders, also end-users.

Not all IS outsourcing issues can be resolved in the SLA. Trust between SP and SP is another important issue to consider. Organizational manager should arrange for better collaboration and trust between partners.

8.4 Future research

Many issues are likely to become important in the future for manager and academics. Future research could investigate the relationship of IS outsourcing and innovative capability of the organization. Since we in this research found out that IT knowledge is being transferred from the organization to external entities such as the SP, we claim that the organizations innovative capability is reduced. Finding and mitigate the innovative capability leakages is of interest for researcher and practitioners. More research on tangible and intangible benefit of an organization by IT role change is needed.

8.5 Limitations

There are several limitations to this paper. One, we used only one or two informants from each organization to answer our questions. Second, demographic factors such as age can have impact for the result and our generalization of the findings.

Our research was based on a qualitative approach and gave us in-deep knowledge of the role change for IT personnel. It answers how-questions. However, the study could improve by adding a quantitative approach, to answer how many IT personnel quitted and more. Only interview were performed in this case study of The City of Oslo. However, we think that the data quality would have been improved if we had combine interview with other data gathering methods.

In order to have a more accuracy, using more than one research through triangulation is recommended. More data collection (wider sample) of different units and entities would assist us from to much generalization of the problem (Yin, 2004).

The case is based on interview with IT personnel; hence the result is from the view of IT personnel only. However, interview with other stakeholders like organizational manager or end-users over this issue could give us another view.

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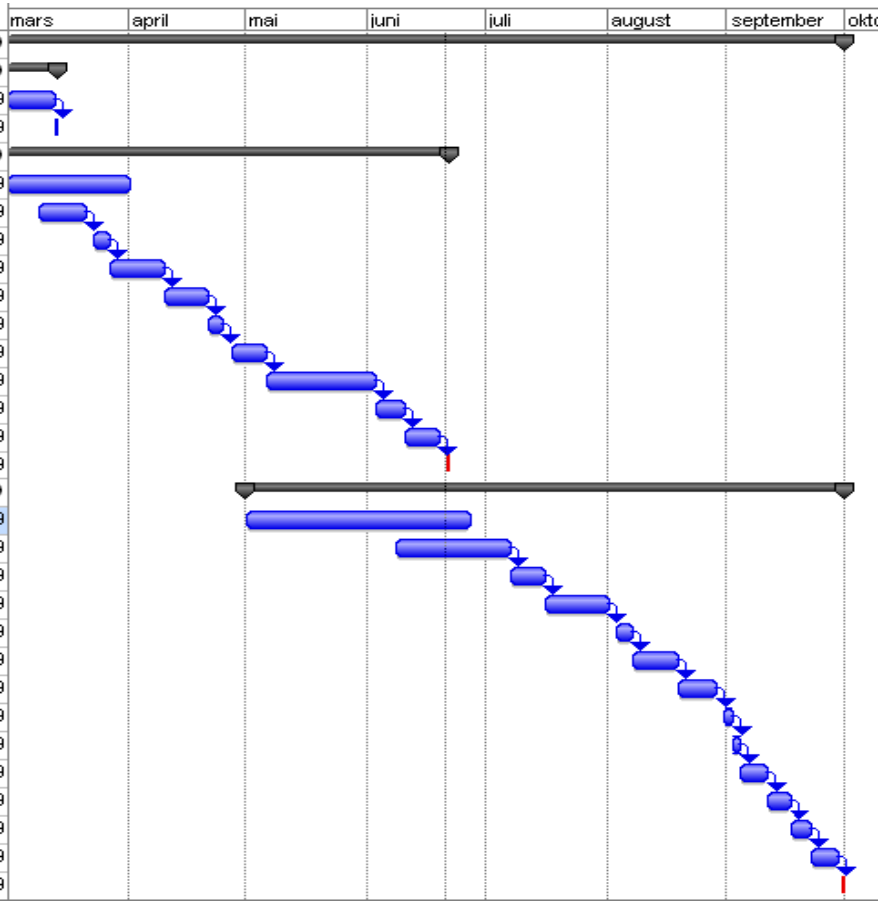
APPENDIX A: THE PROJECT PLAN (MS PROJECT)

ID	Aktivitetsnavn	Varighet	Start	Slutt
1	**Project MSc dissertation**	**55 dager?**	**sø 01.03.09**	**on 30.09.09**
2	**Apply for ethics approval**	**11 dager?**	**sø 01.03.09**	**fr 13.03.09**
3	Writing application	10 dager?	sø 01.03.09	to 12.03.09
4	Forwarding to superviser at Brunel	1 dag?	fr 13.03.09	fr 13.03.09
5	**Deadline deliverable 1**	**82 dager?**	**sø 01.03.09**	**sø 21.06.09**
6	Suching for literature	23 dager?	sø 01.03.09	ti 31.03.09
7	Writing litertature review	10 dager	ma 09.03.09	fr 20.03.09
8	Discussion with superviser	4 dager	ma 23.03.09	to 26.03.09
9	Suching for methodologhy	10 dager	fr 27.03.09	to 09.04.09
10	Writing suggestion to metodologhy	7 dager	fr 10.04.09	ma 20.04.09
11	Discussion with superviser over m	4 dager	ti 21.04.09	fr 24.04.09
12	Formulating hypothesisi, Key terms	7 dager	ma 27.04.09	ti 05.05.09
13	Writing 1. draft of delverable 1	20 dager	on 06.05.09	ti 02.06.09
14	Superviser feedback	5 dager	on 03.06.09	ti 09.06.09
15	Correcting draft delverable 1	7 dager	on 10.06.09	to 18.06.09
16	Delivery delverable 1	1 dag?	sø 21.06.09	sø 21.06.09
17	**Deadline deliverable 2**	**10 dager?**	**fr 01.05.09**	**on 30.09.09**
18	Suching for more literature & theore	42 dager	fr 01.05.09	fr 26.06.09
19	Conduct interview at The City of Os	22 dager	ma 08.06.09	ma 06.07.09
20	Data collection	7 dager	ti 07.07.09	on 15.07.09
21	Data analysis	12 dager	to 16.07.09	fr 31.07.09
22	Writing literature review deliverable	4 dager	ma 03.08.09	to 06.08.09
23	Writing discussin part	8 dager	fr 07.08.09	ti 18.08.09
24	Writing draft to conclusion and findi	8 dager	on 19.08.09	fr 28.08.09
25	Writing abstract	2 dager	ma 31.08.09	ti 01.09.09
26	Discuss draft with superviser (Ver	2 dager	on 02.09.09	to 03.09.09
27	Correct draft after discussion with	5 dager	fr 04.09.09	to 10.09.09
28	Forward ver 0.2 to superviser	4 dager	fr 11.09.09	on 16.09.09
29	Correct ver 0.2	3 dager	to 17.09.09	ma 21.09.09
30	Finish final vertion (ver 1.0)	5 dager	ti 22.09.09	ma 28.09.09
31	Deadline and delivery of dissertatio	1 dag?	on 30.09.09	on 30.09.09



APPENDIX B: TABLE OF RESEARCH QUESTION, KEY TERMS AND QUESTIONS

RQ	What is the impact of outsourcing on IT personnel's role change? A study of new tasks and responsibility, job training, personnel movement and IT knowledge capability, and new relationship with the SP.
Literature findings	1. Outsourcing of IT function have impact on IT personnel's responsibility and work tasks, and hence attitude. 2. Outsourcing of IT function has impact on IT personnel's job training need. 3. Outsourcing of IT functions has impact on IT personnel's job movement and hence IT departments knowledge capability. 4. Outsourcing of IT function has impact on IT personnel's relationship with service providers SP.
Key terms	1. New task and responsibilities 2. Job training 3. Personnel movement and knowledge capability 4. Relationship with SP
Questionnaires	1. New task and responsibilities 1.1. Please explain if you have got a new role or working task after outsourcing, and your meaning of role conflict/ambiguity. 1.2. If you have got a new working task, how is it related to your knowledge? 1.3. How is your motivation for assigning new responsibility and working task? If it is negative, please explain why. 1.4. Please explain how you feel with regards to new responsibility and the power distribution of your new role? 1.5. Do you have more control and power over end-user now? How is the optimal solution of power distribution in order to

	support end-user effectively.
	2. Job training 2.1. Do you feel that you have the necessary skills to cope with the new environment? 2.2. How is your experience of job training after outsourcing? 2.3. Do you think that the organization should emphasize on more job training programs for IT personnel? Please explain why. 2.4. Is the new job training based on technological knowledge or more knowledge on service and interpersonal skills in the organization? Please explain. 2.5. Explain the new job training (responsibility) with regards to you IT career ambition.
	3. Personnel movement and knowledge capability 3.1. Do you know of any IT employee that have quitted or gone to the SP? 3.2. How is your attitude to this issue? 3.3. How is the IT knowledge capability in your department affected by people leaving? 3.4. How do your organization cope with that central IT personnel with good IT knowledge leave the organization?
	4. Relationship with service provider SP 4.1. How is your experience with the new partners after outsourcing? 4.2. Explain the communication between IT departments. 4.3. Explain you perception on SP knowledge of your organization and its ability to solve problems for end-user. 4.4. SLA is a contract between SR and SP. Please explain your experience of this issue.

APPENDIX C: INTERVIEW AND ANSWERS

	Respondent A	Respondent B	Respondent C	Respondent D	Respondent E	Respondent F	Key points
1. New taks and responsibility							
1. Please explain if you have got a new role or working task after outsourcing, and if you have experience role conflict/ambiguity	No big changes after outsourcing. I have to report to servicedesk and monitore their work. I find this byrocratic. Role conflict where SP (3) them between and end users expectation to my new role.	Yes I have got some new work tasks. We still have some (servers) that I have to support. Have more responsibilities now. More support of end users and follov up servicedesk. I experience role ambiguity because it is expected more from me than defined in the new role (1. linjebrukerstøtte	Yes I have new role. More coordination and follof up task with servicedesk. Hav eto follow up people that have got new role also. Byrocratic with new written routine sfor follow up servidesk. Have some time experienced role colflict dminis my new role is not	Yes i have a little role change after outsourcing. However, we try to solve technical problems as much as we can before it dministr to serviedesk. Have not experience major role conflict also because we do not ahev total outsourcing.	Yes have new role and working tasks. Report to servicedesk, and coordination with UKE. Less HM management. New role for many as 1. linjebrukerstøtte .Role conflict because end unser expect me to delver the same as before.	Yes I have got new role and working tasks.Responsible for 1. linjebrukerstøtte that is defined by UKE. Mostly administration task, follow up servicedeks, minotoring SP.Less technical support but more service-oriented support.Role colfikt because it is difficult to	• New role and task after outsourcing • Less technical task and more support and reporting to serviedesk. • More cooperation with SP and UKE • More monitoring of SP work and follow up problems. • Respondents experienced role conflict and explained it to be poor role definition and poor new role information to end users.

	Respondent A	Respondent B	Respondent C	Respondent D	Respondent E	Respondent F	Key points
		defined by authorities)	well defined and informed.			know my role and the role of SP and also UKE. End usera re not familiar with the new routines, still expect the same from IT personnel.	
2. If you have got a new working task, how is it related to your knowledge?	No need for futher knowledge in IT to handle the new role. Advantages if you dministra ITIL because this is what SP use.	Can still use prior knowledge on new role.Have task that are wider that defined role.	Have enough knowledge. Don't need more dministr knowledge to handle service oriented tasks.Work with other in cooperation relationship.	Actually, I need more dministr knowledge.	No need for futher knowledge. Have more dministrat with SP and UKE. Function have been outsource so do the need for that knowledge.	Have enough knowledge. Have IT knowledge that are not in use cause of outsourcing.	• No need for futher IT knowledge in the new role. • More interaction and cooperation with SP and UKE. • More serviceoriented knowledge. • But some actually say they ned more IT knowledge despite outsourcing.

	Respondent A	Respondent B	Respondent C	Respondent D	Respondent E	Respondent F	Key points
3. How is your motivation for assigning new responsibility and working task? If it is negative, please explain why.	I am not motivated by the situation. Lack of dministrat.	I find this OK, things seems to be the same.	My motivation is dministr, it is OK. Can understand that other have lowe motivation. Age and gender can have impact on how you motivation. Sign of desperation..	The same motivation as before. Can dministra other that have not high motivation. Se that UKE have done their utter most for following up IT problems in the organizations.	The same motivation as befor and can prescribe age and gender. Are adaptable and have same tasks.Understan d that others have low motivation.	The dministr was very frustrating, but my motivation is dministr. Have to accept the cahngingis despite little involvement from dministrat.	• Genereally the same motivation as before. • Can't change what have been decided. • Understand that other might have low motivation. • See that UKE try their best to improve routines.
4. Please explain how you feel with regards to new responsibility and the power distribution of your new role?	The power distribution has change where I dministr power over end users. Can't decide on issues such as dministrat and server. The rigidity of IT support is defined by SLA.	Yes there is a change ibn power distributation. Hav only a role of a coordinator. Should wish I got more administrator-rights. More dependent on SP and UKE	Yes abolutly change. I have no power anymore. Could decide on more earlier, but not he power i centralized to UKE. However, can still decide on organizational-	Have less power now. IT functions ha sbeen sentralized. IT department are tired to standard contracts. Have minimal with IT technical rights. Have also complained but	Power change is actually OK. Have less administrator rights now, don't need more because the department is dminis now. Some task are solved quick others very slow	Yes the powerdistributati on has change and I don't have the same impact anymore.The sentralization of IT function has dimiliss the IT competence in our	• The powedistributation has change after dministrat. • IT personnel have little possibility to decide and help end users. • Have reduced the role of IT personnel to dmin a dministrat. • centralized IT function dminist with standard contract that inhibits IT personnels power to decide. • However, som actually like the situation and claims that they do not need more.

	Respondent A	Respondent B	Respondent C	Respondent D	Respondent E	Respondent F	Key points
	Innovationstagnation is the result.		specific systems. Not on server an more.	to no use.	actually.	organization.	
5. Do you have more control and power over end-user now? How is the optimal solution of power distribution in order to support end-user effectively.	Routne task is solved quickly while non-routne task takes long time. Power of UKE is also critical and their perception of what is dministr. Wants more administrator rights in order to solve simple IT problem squicker.	Administrator rights could help on service time. If have more power, can help end-user quicker. You cant decide on the priority to SP. Eksample on cases that take s long time to solve.	Have less power now, in addition the new dmin has an unclear role distribution. Problem with todays routines.	Want to know more about SLA.	Aksept that SP have the power , bu see that things take time.Depends on others on IT provision. Aksept that I have less admin-rights.	Wants more rights to decide on simple functionality. Aksept that other runs the server. UKE should take on more responsibilities. SPOC is not a sigle-point of contact.People in serviedesk haven't the local knowledge.	• Agree to have less power over end-user. • To solve this, many agrees on having more dministrator-right is the right solution to a quicker service to end users. • Alos, UKE should take responsibility. • Inertia in SP, routine task quicker than nonroutines. • SP decide on defining importance og IT problems
Job training							
2.1 Do you feel that you have the necessary skills to cope with the new environment?	Yes I have. Generally I need knowledge in ITIL. Need to understand IT	Yes I have enough knowledge. Advantage with ITIL.	Yes I have enough knowledge in this area. Actually easier	Yes, have a role that is the same, however it is less technical and	NO, I don't need IT knowledge now. Have got corse in Serviedesk.	Yes I hav enough knowledge. Less technical knowledge	• The respondents say that they have enough IT knowledge eto handle the new routines. • There is a shift from IT intensive knowledge to serviceoriented

	Respondent A	Respondent B	Respondent C	Respondent D	Respondent E	Respondent F	Key points
	knowledge in order to communicate with SP.		no with less demand on IT knowledge.	more serviceoriented knowledge that demands.	Have made internal routines and placed nfo on the web.	requires now. Got course in servicedesk and documentation of errors.	knowledge • SP have given corse in serviedesk, in addition new routines are settled in the organization. • Demand for knowledge such as ITIL inn order to understand SP.
2.1 How is your experience of job training after outsourcing? (Kind of job training after outsourcing)	IT manager have ot received direct job training after outsourcing. Want to learn more about servidesk routines.	Have not got job training. Have got web based job training in servidesk. Internal routines and has developed later. Developed routines and adapted to need in the organization.	Got web based training in servicedesk which I smandatory. UKE and BGO have joinly developed routines for serviedesk. The routine seems to be bureaucratic. Want that UKE is in charge of servcedesk to improve the quality.	Training in servicedesk. I have other responsibility that requires training too.	Only training in servicedesk. Understand that person responsible for 1. line support needs more technical knowledge.	Only got training in servidesk, except from that no training in new routines, or IT technologhy. In addition the training given was of poor quality. The development of new routine have been a lesion in trial and failure case.	• Have only received eb based job training in serviedesk. • Some have different job task after outsourcing and demands more specific job traing. • New routine has been developed on a trial and failure basis. • The responsibility of servidesk can pose a challenge for the organization, and be a treat to the service quality.
2.3 Do you think	I see the	Yes it is always	Yes it is	Generally there	Job training for	I have some job	• The respondents answear that they

	Respondent A	Respondent B	Respondent C	Respondent D	Respondent E	Respondent F	Key points
that the organization should emphasize on more job training programs for IT personnel? Please explain why.	importance of both theoretic and practical knowledge in order to do it well in the new role.	important to have job training. I have opportunity to attend courses but there are no oreal and yearly plans. In addition, there is no policy and plan for job training in the organization.	important with job training. If you have a new role you should have job training. Many have received IT role after outsourcing, but no training. Many hidden IT task and new role that are not formaized.	are demands for job training. Others have some money in their corse budget. Use time with SP and UKE as new job role.	end users in new routine is necessary. Also the need for job training depends on age and future career plan in the organization. I also have more interaction with 1.line-suppor.	training in use of applications like e-mail and more. End users should have a minimum level of IT competence in order to adapt to the new role. There are requirements in the new routine to what end users should know and report in the problem diagnotization phase	understand the importance of both theoretical and practical IT knowledge in their new role. • Some have opportunity to attend corses but generally there are no emphazize or policy from the organization on this. • Imoptant with job training for end users. • Need depends on age and future career ambitions too. • More interaction with SP and end users requires knowledge in service orented tasks. • There are hidden roles and task that should be formalized and provide job training on.
2.4 Is the new job training based on technological knowledge or more knowledge on	The same. There are three phases; deteckt, report and solve. The	Suggest that there are same demands on both technical and service	Less IT knowledge requires. More service oriented knowledge, and	Needs more service oriented knowledge. Still needs IT knowledge	More service oriented knowledge. Role change is greater for IT	More service oriented knowledge. The definition of Faglige	• Generally we need more serviceoriented knowledge and less IT knowledge because of change in IT responsibility. • However, some argues that they

	Respondent A	Respondent B	Respondent C	Respondent D	Respondent E	Respondent F	Key points
service and interpersonal skills in the organization? Please explain.	report part of this is very bureaucratic.	knowledge. The role has been broaden (more tasks).	support of end unsers. Needs more theoretical IT knowledge but not necessary practical IT knowledge.	because some of the functions is still in house.	consultant than manager I think.	premissgiver is still unclear, this will decide the dimensions of IT knowledge vs service oriented knowledge.	still need theoretical IT knowledge but ledd practical IT knowledge. • Some say they use much time in reporting to the SP and this bureocratic procedure is not very motivating. • Some say the training needs of technical vs service is dependent on your role, others argue that the weak definition of the new role (faglig premissgiver) may have impact on training needs.
2.5 Explain the new job training (responsibility) with regards to you IT career ambition	Generally there are no future for those who will have a IT career in The City of Oslo. Key IT staff is quitting and leave the organization with less strategic knowledge on IT in the	It is too little environment for IT. Some hope that the organization will insource one day. See a trend that in some area the IT function is insourced again.	Doesn't matter for those whoa are old, we will still stay here. Have enough prior knowledge on IT that is enough. Anyway, I understand that younge and ambitious person seek	I still got challenge in my work because I have got new job task within IT. The organization has got more IT task.	Have the same motivation, maybe cause of age. I do understand that younger and ambitious person do not have challenge in their work now. It seems to me that The city of Oslo doesn't	Outsourcing has not impact on my future career plans. It depends on age. Understand and have younger person that quited.	• Generally there is no future in the City of Oslo for those who want to pursue a career within IT. • It seems that the city of Oslo doesn't care that key IT staff quit and that important key IT knowledge is dismissing. • Some say it doesn't matter cause they believe that one day some on the IT functions will insource again. Already they see a trend too insourcing (organizational specific applications) are insourced again.

	Respondent A	Respondent B	Respondent C	Respondent D	Respondent E	Respondent F	Key points
	organization. No need for practitioners of IT professionals.		other jobs for there IT career.		care that key IT competences are disappearing in the organization. Have key IT personnel that have quitted.		• Age do have impact on how I perceive this change in role. • Hence, some have the same motivation as prior to outsourcing.
Personnel movement and knowledge capability 3.1 Do you know of any IT employee that have quitted or gone to the SP?	Yes , 4 person quitted or wnet to SP. There are three SP, and all have been active to recruite IT personnel from The City of Oslo.	Yes some have gone to Ergo which has main responsibility. SP have been very active to recruite IT personnel prior to or under IT outsourcing in The City of Oslo. Other have been looking after new jobs prior to outsourcing,	Yes vacancy because of outsourcing. No more IT trainees. Less technical environment so people quit to SP.	People that have to quit cause of outsourcing. Thos with longest ansinity stay.	Yes people have to quit because of the outsourcing. Some have gone to SP other gone to UKE. Lossing key IT knowledge but the most sever lost is in local knowledge.	Yes know of person that quit, in some cases the organization do not replace them.	• Generally the respondent knows about IT personnel that has gone to SP. • They started the recruiting campaign early and prior to the outsourcing • Some has gone other places like UKE (central organization), other has quitted. • They look for a bigger IT environment • In this process we loss key IT knowledge, but other have stressed that the greatest lost is in local knowledge which take years to built.

	Respondent A	Respondent B	Respondent C	Respondent D	Respondent E	Respondent F	Key points
		Hence the process of outsourcing has been very messy.					
3.2 How is your attitude to this issue?	There are no future in the organization, also you do not have much influence power. Some that go to Ergo argues claim motives like more challenge and higher salary.	I understand that people leave and that the city of Oslo needs to do this. Unsecurity about future challenge manke people leave.	I understands peoples reaction. Bad that IT personnel with technical knowledge quits. But your age and future plans decides how your feel about this process.	Not ok that knowledge disappear. Central organization should care more. Do not like the way the process has been handl, specially IT personnel amd the HR part.	The city of Oslo has lost valuable knowledge. Also believe that UKE doen't care about the knowledge loss in the organization. Lost local knowledge of the organization. Should have been more clearer in their role, UKE.	Understand SP action of getting knowledge. Think that IT personell that go to SP can experience role conflict.	• Some respondent say that there are no future in the organization • In addition you loose your power to influence in the process. • Some understand that IT personnel go to SP because of IT challenge and higher salary. • In general they don't think it is ok that knowledge disappears from the organization.
3.3 How is the IT knowledge	Yes outsourcing have impact om	It is not a real problem	Lower IT knowledge in	Have lost a great part of IT	The organization	The IT knowledge I	• Yes outsourcing have impact om IT knowledge in my department

	Respondent A	Respondent B	Respondent C	Respondent D	Respondent E	Respondent F	Key points
capability in your department affected by people leaving?	IT knowledge in my department because IT personnel are leaving. Alos, it is problem to hire key IT staff pecause of small IT environment. Change is difficult because The Cityof Oslo is so big and bureaucratic.	because we have different IT function now, so lack of IT knowledge is not a big hinder.	our IT department now. It is a new way to work and I suppose the organization have to adapt to this environment.	knowledge in the department.	has lost IT knowledge, however I think it is ok because we have lost the same function or responsibility. Howeverm when other are responsible you loose some of your power to influence. IT knowledge related to PC and client technology is gone.	reducing. Key IT staff and younger people are leaving first because they have better opportunity. Loos IT knowledge on server level and other technical part. Alos when key staff leaves, key knowledge about the organization is gone too. This is not eaily replaced. Hence, menan that local knowledge on the organization should be kept and saved	because IT personnel are leaving • When we hire people it is problem to hire good IT personnel because the small IT environment is not attractive for good applicants. • Also change in IT strategy is difficult in The City of Oslo because it is so big. • Others have claim that it is OK that the IT knowledge in the department is dismissing, and defend this view by argue that the same IT function and responsibility is gone. • However, when SP are in charge you loos some of your power to infuelce and reduce the support time. • The IT knowledge I reducing. Key IT staff and younger people are leaving first because they have better opportunity. Loos IT knowledge on server level and other technical part. Alos when key staff leaves, key knowledge about the organization is gone too. This

	Respondent A	Respondent B	Respondent C	Respondent D	Respondent E	Respondent F	Key points
						bnetter.	is not eaily replaced. Hence, menan that local knowledge on the organization should be kept and saved bnetter
3.4 How do your organization cope with that central IT personnel with good IT knowledge leave the organization	The organization has follow central policy where IT personnel have to quit. However, today the organization have to face the penalty of this decition by having more problem with lower IT quality in the organization. Many organization are evaluating if they need to	The organization do not have any substitute for IT knowledge that is gone.	Information about consequence done in the organization. Some organization ledear want to expose this IT knowledge leakages to the media, while others are very reluctant to that.	The organization has not dealt with this, but I also see that leaders are willing to do an effort when demanded.	No action from the organization. Have budget for job traing and courses.	No central policy for this. Still have budget do take courses. However, the IT budget is mostly going to UKE and SP. The organization have low priority on this issue.	• The organization has follow central policy where IT personnel have to quit. However, today the organization have to face the penalty of this decition by having more problem with lower IT quality in the organization. • Many organization are evaluating if they need to hire IT personnel. • The organization generally have no plan to substitute the IT knowledge that have been gone. • Some organization ledear want to expose this IT knowledge leakages to the media, while others are very reluctant to that • No action from the organization. Have budget for job traing and courses. • IT budget that could go to knowledge building goes instead to

	Respondent A	Respondent B	Respondent C	Respondent D	Respondent E	Respondent F	Key points
	hire IT personnel.						UKE.
Relationship with service provider SP 4.1 How is your experience with the new partners after outsourcing?	Many perceives UKE as a SP although there are a part of The City of Oslo. The cooperation with SP is OK when it comes to routine tasks. Non routine task are very burocratic. Actioally, SP have not enough knowledge to handle our organization. Ergo and Infocare performed badly	Ergo have a unstable service performance. No routine task takes to long time to solve. Bad dialog betweem SP'ers. Unklear role between SP. UKE has been informed but have low priority by UKE.	Have tried this for 2 years now. SP where arrogant in the start but now they understand more. They know that it is a complex issue to outsource The city of oslo. Handle standard and routine task only. Do not know SLA. UKE will not cooperate, acted as a external part all the time.	In the beginning it was very problematick. Now it is better. SP has been more efficient now. Think it is doubbel the cost of budgeting by outsourcing. Little information from invoce by UKE.	Cooperation with UKE is ok. All support go through serviedesk and handle by Ergo. Have to use much time in monitoring SP work.	The cooperation with UKE has been better but was not so in the beginning. See that UKE tried harder now.However, UKE as an organization lack essential knowledge on SLA, outsourcing and teamwork. The cooperation with SP is OK. Hoewer they have many new faces that need traing all the time.	• Many perceives UKE as a SP although there are a part of The City of Oslo. • The cooperation with SP is OK when it comes to routine tasks. Non routine task are very burocratic. Actioally, SP have not enough knowledge to handle our organization. • Ergo and Infocare performed badly in the start. • However, after 2 years the quality seems much better. • UKE are not willing to cooperate. Are reluctant to inform more about SLA. We do not know the service level. • SP has unstable performance. • SP where arrogant in the start but now they understand more. • They know that it is a complex issue to outsource The city of oslo

	Respondent A	Respondent B	Respondent C	Respondent D	Respondent E	Respondent F	Key points
	in the start. However, after 2 years the quality seems much better. UKE are not willing to cooperate. Are reluctant to inform more about SLA. We do not know the service level.		In meeting they have defended SP. The invoce is unclear. And have high cost.				• UKE will not cooperate, acted as a external part all the time. • In meeting they have defended SP. The invoce is unclear. And have high cost • Feel that SP has been better and more efficient now. • Communication trough servicedesk and Ergo, while compains to UKE. • See that UKE tried harder now.However, UKE as an organization lack essential knowledge on SLA, outsourcing and teamwork. • The cooperation with SP is OK. Hoewer they have many new faces that need traing all the time.
4.2 Explain the communication between IT department.	Main communication via servicedesk.	Servicedesk and phone. Do not know service person from Ergo as they also change from time to time.	Servicedesk. Actually, you can not call the SP. Have different communication channel dependent on	Servicedesk and e-mail. Actually, serviedesk is not standard between SP'ers and that mean some have to	Servicedesk. Did have several meeting though.	Servicedesk. Mice people at ergo, always wants to help you with a smile.	• The respondet say that the main communication is vis serviedesk. • Exceptiobal they can use the phone or e-mail but this is not recommended. • However, the disadvantages with this solution is that no all SP have Servicedesk as standard support

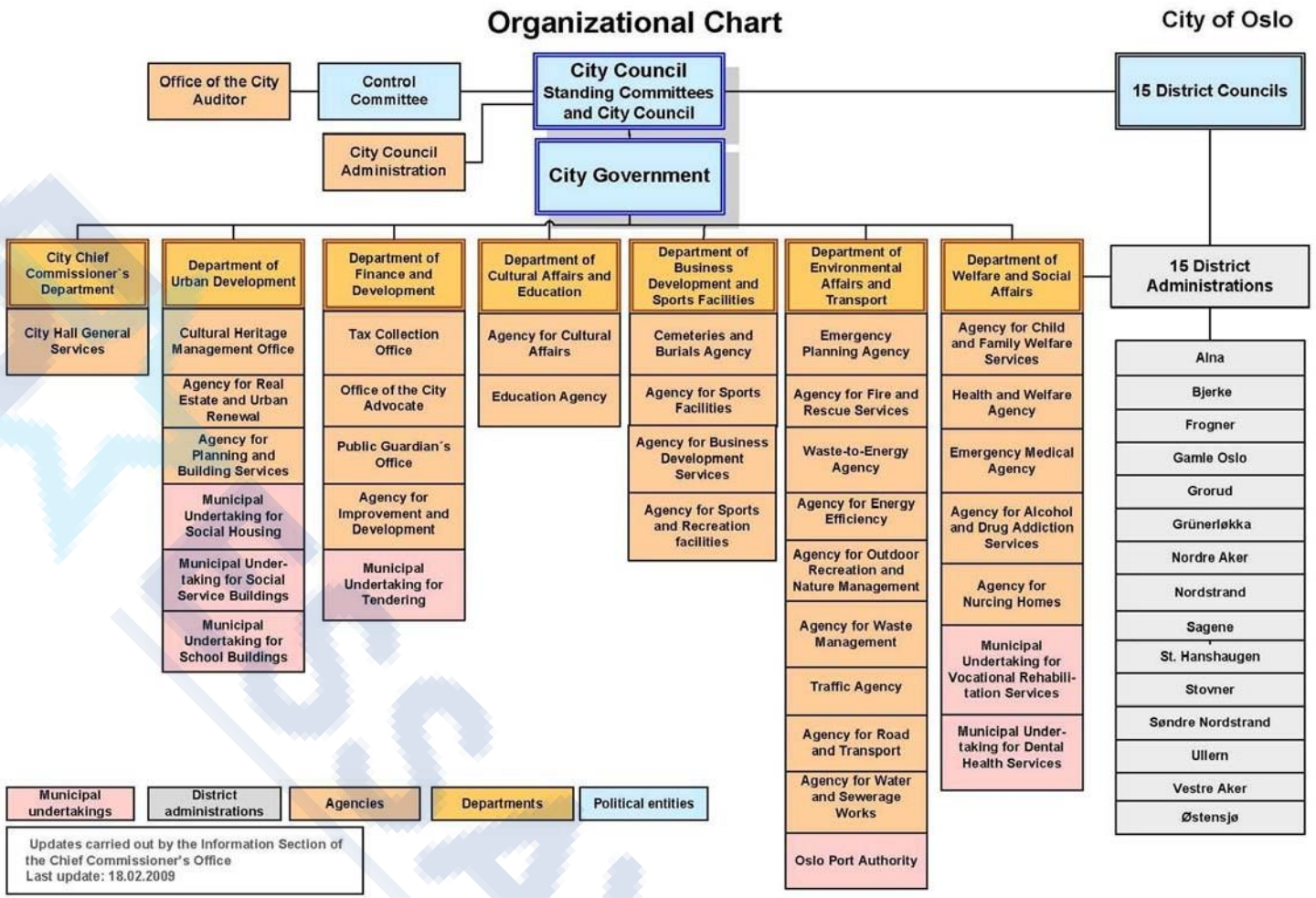
	Respondent A	Respondent B	Respondent C	Respondent D	Respondent E	Respondent F	Key points
		Lack the personal friendship.	who you want to speak with. The responsibility organization is not optimal, UKE should solve this challenge.	cut and phase. Problem that some SP can hide away and run from problem.			application. • Some have to use cut/phase. • Another challenge is that there are many forms of communication channel dependent on who you want to communicate with. • This should be delt by UKE, to find better ways to report problems,.
Do you think that the SP have enough knowledge to support your organization?	Technically yes, but no in organizational specific knowledge. Know SW and knows more about the organization after 2 years contractual agreement. They standardize solutions. Do not know if	The SP do not know all aspect of our organization and hence our needs. Do only standard services and according to SLA. However, they have gain some expertice of the organization by hiring former IT personnel to	No do not know much generally. Do not know The City of Oslo's need. Also knows little about organizational specifick applications that we run.	They have technical knowledge, however they do not understand the need of the organization. You need to know the organization in order to do so. Here IT personnel in the organization can help SP.	They had little knowledge about the organization in the beginning, but know it is better. However, external can not know the organization good enough because they do not work there daily Not knowing the need make the	No they have not enough knowledge. The bottleneck is in the servicedesk! Internal routines of the SP is not always good enough. People in front of servidesk should know more about the organization.	• Technically yes, but no in organizational specific knowledge. Know SW and knows more about the organization after 2 years contractual agreement. They standardize solutions. Do not know if standardization fits to all organization in The City of Oslo. • Do not know our needs • Only perform standard routines according to SLA • Littløe about organizational specifick application • Not knowing the need of the organization can make the support part difficult, also together with

	Respondent A	Respondent B	Respondent C	Respondent D	Respondent E	Respondent F	Key points
	standardization fits to all organization in The City of Oslo.	their organization.			support job difficult and also with lots of error..		poor routines in SP servidesk • People in front of servidesk should know more about the organization •
Do the SP solve IT problems better better than you before?	The respondent unanimously said that the SP did not solve the problem better than before. I experience the SP to be very bureaucratic.	No not solving better. They use long time to solve the problem. One task has to go trough many instaces. The network after outsourcing is not more stable. And its is slower too.	No absolutely not. Takes too long time to solve tasks.Do not know local environment and needs. End users also said that the service is worse. Think that the decition to outsource is of political reasons and not economic.	Worst before but I see improvement. Actually we are satisfied with the quality.	No not better than before.	No not better. Vi solved problem better and faster before!! Anyway, we believe that the system will be better with time. Example with MS office 2003 upgrade task that have taken over 1 year for the SP to solve. Actually, UKE should take more responsibility to solve all these problems and	• The respondent unanimously said that the SP did not solve the problem better than before. I experience the SP to be very bureaucratic. • The problem with SP is that the delivery is of poor quality, also the support time is too long. • One task has to go trough many instaces. The network after outsourcing is not more stable. • Do not know local environment and needs. End users also said that the service is worse. Think that the decition to outsource is of political reasons and not economic • Few say it is ok Anyway, we believe that the system will be better with time. Example with MS office 2003 oppgrade task that have

	Respondent A	Respondent B	Respondent C	Respondent D	Respondent E	Respondent F	Key points
						challenge. The problem is that UKE has unclear ownership with ditto poor result from SP.	taken over 1 year for the SP to solve. Actually, UKE should take more responsibility to solve all these problems and challenge.The problem is that UKE has unclear ownership with ditto poor reslt from SP
4.4 SLA is a contract between SR and SP. Please explain your experience of this issue	The respondent said that they haven not been given SLA and information about the SLA from UKE. Have not enough information of the cost from SP.	Have not an update SLA. Claim that there are not responsible directly due to that UKE has kept the SLA.	NO SLA. I know that there are no sanction possibility for SP that have not done their agreed work. There are agreement on when SP should start problem detection, but no agreement on when the task sould be solved. Due to this problem UKE will	No SLA. Do not know responstime. No time limit to solve a problem. No a clear define SLA.	No SLA. Know that SP shall start work after 4 hours, but there are no sanctions possibility. No garanty that a case will be solved. UKE plan to produce an internal SLA.	No SLA and no respons time agreement. UKE will renegosiate the SLA. The invoce from UKE is bad, not detailjed enough. Ca not control if cist is right.	• The respondent said that they haven not been given SLA and information about the SLA from UKE. Have not enough information of the cost from SP • Claim that there are not responsible directly due to that UKE has kept the SLA • I know that there are no sanction possibility for SP that have not done their agreed work. There are agreement on when SP should start problem detection, but no agreement on when the task sould be solved. Due to this problem UKE will negotiate a new agreement and SLA. The new system do not promote

	Respondent A	Respondent B	Respondent C	Respondent D	Respondent E	Respondent F	Key points
			negotiate a new agreement and SLA. The new system do not promote development and innovation.				development and innovation. • No a clear define SLA • Know that SP shall start work after 4 hours, but there are no sanctions possibility. No garanty that a case will be solved. UKE plan to produce an internal SLA

APPENDIX D: ORGANIZATION CHART OF THE CITY OF OSLO



APPENDIX E: ABBREVITATIONS

CEO	Chief Executive Officer
ERP	Enterprise Resource System
FQ	Focus Question
HR	Human Resources
IS	Information System
IT	Information Technology
ITIL	IT Infrastructure Library
NOK	Norwegian Kroner
RBV	Resource Base View
RQ	Research Question
SLA	Service Level Agreement
SP	Service Provider
SR	Service Recipients
TCO	Total Cost of Ownership
UKE	Utviklings- og Kompetanse Etaten Agency for Improvement and Development

APPENDIX F: RESEARCH METHODOLOGY

Semi-structured face-to-face interview from organizations in The City of Oslo: Time duration 1-2 hours with IT manager and IT personnel.

Organizations	**Comments**
Gamle Oslo District Administrations	Interview with IT manager
Grorud District Administrations	Interview with IT manager
Grunerlokka District Administrations	Interviews with IT manager and IT personnel
Vestre Aker District Administrations	Interviews with IT manager and IT personnel
Agency for Real Estate and Urban Renewal	Interviews with IT manager and IT personnel

Unstructured phone interview from organizations in The City of Oslo: 15-30 minutes unstructured phone interview with IT manager.

Organizations	**Comments**
Agency for Planning and Building Services	Unstructured Interview by phone of IT manager
Agency for Fire and Rescue Services	Unstructured Interview by phone of IT manager Unstructured Interview by phone
Bjerke District Administrations	Unstructured Interview by phone of IT manager Unstructured Interview by phone