A Social Perspective on Implementation of e-Government - a Longitudinal Study at the County Administration of Sweden

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Abstract: A longitudinal study of implementation of e-Government at the County Administration of Sweden was analysed and discussed from a social perspective. Two interview studies at the legal and traffic departments were compared. Interviews were made with decision makers, handling officers and administrative assistants focussing on social consequences of work situations, work processes and quality of e-services to the clients. The MOA-model was used as a frame of reference for the study. According to the analysis, coping and sense making strategies by the respondents increased. e-Government made demands for new competencies for employees and clients. Internal and external digital divides are social consequences of the implementation of e-services. Management increased their focus on efficiency aspects related to e-Government. There is a need to integrate competence of social aspects into the development process of e-Government. The users were aware of the importance of social aspects of IT implementation. There is a need for competence development of social consequences related to IT implementation also for development personnel and different interest groups.

Keywords: Implementation, e-Government, digital divide, social consequences, coping and sense making strategies.

1. Introduction

Many countries have put a great deal of effort into developing and implementing e-Government during the last decade, even Sweden. In fact, Sweden shared the third position with US and Denmark in a recent bench marking study by Accenture (Accenture, 2007). According to a government vision formulated in a bill in 1999 (Näringsdepartementet) the country should become an information society "for everyone". The use of IT should contribute to growth, employment, a sustainable society and equality. The public organisations should be precursors in this development and contribute to increased availability of public information and services to Swedish citizens. Public authorities should be stimulated to develop "the 24h authority" (Statskontoret 2000), where public service and information should be available to the citizens at any time by using electronic self-services. The development of eGovernent also means increased electronic co-operation within and among public organisations which even puts demands on development that is not technology-oriented. The development towards e-Government involves social changes of work roles, attitudes and new competence needs.

For nearly a decade Accenture has tracked the progress of more than twenty governments in different countries that have moved towards high performance through leadership in customer service. In their eighth report (Accenture, 2007) they found governments at important crossroads. The main focus for public service organisations has been on improvements of front end services to the citizens, neglecting the importance of also aligning back end aspects, such as value, infrastructure, work force competence and cultural change. Many governments continue to underestimate the impact of their workforce and what restructuring must take place to acclimate people to new ways of working.

In this article I will present and discuss a longitudinal evaluation study of e-Government in the County Administration of Sweden, focussing especially on social aspects of e-Government. The County Administration is one of the biggest public organisations in Sweden, divided into twenty-one separate County Administrations situated in different regions. The regional administrations are responsible for different specialised areas such as environmental issues, social issues, veterinarian issues, etc. The employees dealing with matters in these areas mainly have academic backgrounds and work as handling officers in different areas of expertise.

The aim of the study was to especially focus on social aspects in order to contribute with increased understanding of the importance of these aspects for the implementation process. Implementation of e-Government has earlier been criticised for focussing too much on technical aspects (Grönlund 2001, Schedler & Summermatter 2003), thereby ignoring the importance of social aspects. The evaluation model MOA-E was used as a frame of reference for the study and will be presented in the next section. Social aspects could change during the implementation process, and therefore a longitudinal study seemed relevant.

2. The MOA-E model

The MOA-E model was developed by the author and has been used in several evaluation studies (e g Grundén 2001, 2004). Ideas about co-ordination and control influence the choice and design of technology and organisation and imply many important decisions. Important aspects that could be affected due to different designs of technology and organisation such as work situations of the staff, work processes, and services provided to the clients. Interrelated relationships between design of technology and organisation are stressed in this model. Different consequences for work processes, work situations, and quality of the services provided to the client, could arise depending on different designs of organisation and technology.
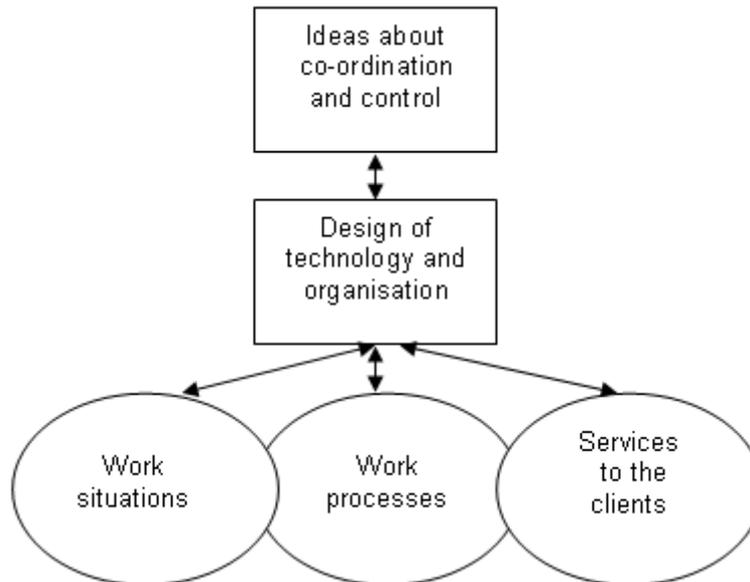
Figure 1: The MOA-E model

An evaluation study can focus on different parts of the model. In the study presented in this article, special focus is given to the social aspects of work processes, work situations and client relationships. There are complex interdependencies between work processes from a managerial perspective, work situations for the staff and the services provided to a patient. An unsatisfying work situation for the personnel could negatively affect quality and efficiency aspects of the provided service. A satisfying work situation could have the opposite effect. The development of e-services and e-Government puts demands on changes or work process and work routines which in turn affect the work situation and the client relationships. New competences are needed for the personnel. Different types of consequences could be examined depending on the point of time for the evaluation (Göranzon, 1984).

The model could be used for process-oriented longitudinal evaluation studies. The organisation can be studied before, during and after implementation and use of a new system in order to examine changes in quality and efficiency aspects of the changed work process and the work situation e.g. but instead of using discrete starting and ending points ("from-to"). I prefer the concepts "from-through", in order to stress the process-orientation of the study (Saldana, 2003).

3. The longitudinal study of implementation of e-Government at the County Administration

A vision and a strategy for the implementation of "e-Government 2007" were formulated early 2005 by the County Administration of West Gotaland. National government policies for e-Government were taken as a starting point for the internal development work. A project group was appointed for the development work. According to the vision the County Administration of West Gotaland should become an e-Government authority at the end of 2007. Then work activities mainly should be dealt with using electronic documents, electronic communication and electronic information retrieval. Electronic services to the citizens should be produced and delivered irrespective of time and geographical location. The development presupposes increased electronic co-operation with other authorities. The development process should lead to increase internal efficiency, quality and insight into work activities. The vision influence the development of IT support, changes of the organisation as well as the work situation of the co-workers.

As a starting point of the implementation of the "Vision of e-Government2007" there was an interest of the project group to investigate aspects such as attitudes and knowledge about e-Government of the personnel and competence needs. The first interview study was made during spring 2005 (Grundén 2007), before the implementation process had taken off. The first interview study before implementation was made in the social building authority, the legal authority and the traffic authority. Each authority was located in different geographical locations in West Gotaland. The society building authority mainly dealt with municipality detail plans, survey plans and infrastructure issues. The matters were often prolonged, and involved a lot of contacts with municipality employees and local politicians. According to the terminology of Bonham et. al. (2003) main work activities in this authority could be classified as Government-to-Government (G2G) activities. This department was not affected by implementation in the same way as the traffic and legal departments, when the second study was made, and was therefore not included.

The traffic authority mainly dealt with applications for driving licenses' permissions from citizens and occupational traffic matters. About 50 to 60,000 such matters are dealt with each year in the West Gotaland region. These work activities are mainly Government-to-Citizens (G2C) activities (ibid.). The legal authority dealt with miscellaneous matters such as appeals from citizens and organisations regarding municipality decisions, environmental matters such as sewage, authorization of surveillance enterprises, funeral matters, general elections, supervision of foundations.

The three different personnel categories; administrative assistants, handling officers and managers from different authorities were studied in both interview studies. In the first study five persons from the three different departments were interviewed (fifteen interviews on the whole). In the second study thirteen respondents from the traffic authority and five respondents from the legal department (a total of eighteen interviews) were studied. All interviews were semi-structured and took about forty-five minutes each. The interviews were tape-recorded and written down word by word. The evaluation model MOA (Grundén 2003) was used as a reference frame for the interview questions and the analysis. The model focuses especially on the different perspectives of the user's work situation, the work process, and the quality of the produced service from the client's perspective.

The results of the first interview study were presented for the project group of implementation of e-Government 2007 in West Gotaland. They then decided to initiate the development of a web-based study circle for issues related to e-Government as a way of competence development for the personnel. All personnel of the national County Administration were supposed to participate in this education. The main goal of the study circle was to give basic introduction to e-Government. The study circle should also stimulate work place discussions about e-Government related issues. The author participated in the working group developing the course. The second interview study was made during spring 2007. Then most of the respondents also had participated in the course. During the second interview study, the author also evaluated the course (Grundén, 2008).

A second interview study was made during spring 2007, in the legal and traffic departments, during early implementation stages; a few e-services already were implemented and some were ready for implementation. A new electronic software system for dealing with official matters, Platina, was implemented in the legal authority, and implementation of new e-services for driving license's permissions was in progress at the traffic authority. The implementation started with simple matters, (so-called "green matters") and will be followed by implementation of more complicated matters, (so-called "red matters"). In the legal authority they had also implemented e-services for security guards and foundations. A third interview study is planned to be carried out 2009, when more of the e-services are implemented and used in the organisation in order to examine further social changes related to implementation of eGoverment.

4. The results

In this section a summary of the results from both studies are presented. I have also included some quotations in the summary, in order to present a richer picture of some important aspects of the study. The studies are reported more in detail in Grundén (2007, 2008).

4.1 Results from interviews before the implementation – the first study

The respondents in general had not yet heard much about the Vision of e-Government 2007. The issue had been discussed at some personnel meetings, but not very much. They seem to have discussed e-Government primarily at the traffic department. Most of the respondents associated the concept of e-Government with availability of the electronic services from government to citizens 24 hours each day. Some

also mentioned a need for internal reorganisation of administrative routines. The respondents seemed to have a mainly positive attitude towards e-Government, but they were also aware of some presumed negative consequences.

4.1.1 Work situation

Most of respondents mainly thought that the implementation of e-Government had more to do with change of the employees' attitudes, work roles and culture of the work place, compared with technical solutions. One of the handling officers compares the e-Government with the internal computerisation in the eighties. He meant that at that time change of attitudes and culture seemed to be almost 100% of the development work. A handling officer mentioned that they had discussed the archive rules for about fifteen years, without making necessary completions. Some of the respondents were confused about the long time elapsed in order to make those documents more available. They did not think this is mainly a technical issue; instead personal attitudes and work culture seem to matter highly. Attitudes towards the use of paper documents instead of computer documents could also be a culture issue. People seem to like to read and keep paper documents, at least big documents and survey maps.

Some respondents feared risks for an increased work load and demands on more rapid dealing with matters, due to e-Government. The work could also be more impersonal, as a consequence of increased electronic communication.

Several respondents mentioned that the majority of employees were over 50 years old and the computer knowledge was also unevenly distributed in the organisation. There seemed to be a risk that many employees were not motivated enough to change, and could resist change instead.

> *"I think it will be extremely difficult for the older employees to accept e-Government. They also show such attitudes towards smaller changes, and this is a very big change, it will be difficult to engage people. The new generation is more conscious and used to this and has no problems" . (Handling officer, juridical department).*

All respondents meant that information and education about the vision of e-Government 2007 should be well rooted on the local level in different departments. They preferred a bottom-up strategy. Information adjusted to local situations was requested. The vision could be discussed at local level in group discussions and work place meetings. Some of the respondents seemed to have a negative attitude towards complete education courses mainly defined by the top level of the organisation. Instead a bottom-up strategy was requested.

4.1.2 Work process

Many respondents expected the implementation process of eGoverment to be going on for a very long time, probably five to ten years. The respondents in the legal authority meant that electronic dealing with matters will affect existing working roles to a great extent. The time needed for dealing with each matter was expected to be reduced. When a new diary system will be implemented (Platina), handling officers need to register all information regarding a matter in the system. Platina will replace the older software system (Diabas).Today many handling officers leave these work tasks to a registrator. This work division between registrars and handling officers had a long tradition in the organisation. Most of the handling officers had an academic background, and preferred to work within their expert fields. They did not want to put too much time on administrative work tasks. However, management wanted to change this work division, and a web-based course for dealing with Diabas was developed and offered to the handling officers. (Grundén made evaluation studies of this course, 2004). When such work tasks are reduced less registrators would be needed. But some registrators could receive other work tasks such as instructors and quality work. Some of the interviewed handling officers already had started to register their own measures, and they showed a positive attitude. However, they also mentioned that other groups resisted changing these work tasks.

Implementation of electronic dealing of driving licences' permissions was expected to lead to a reduction of the work load and fewer personnel will be needed at the traffic authority. Several monotonous work tasks will be transformed to web based inquires and controls:

> *"Many work tasks should be done by the customer instead of us, similar to electronic bank services, but in return the customers will get faster handling of their matters". (Handling officer,   traffic department).*

"We will get rid of many monotonous work tasks, thus the work will be easier. Today there are very many complements of the applications". (Decision maker, traffic department)

The respondents seemed to have a positive attitude towards this change and reduction of monotonous work tasks. There seemed to be a shortage of personnel in this authority, so the respondents were not afraid of losing their jobs:

"We have already had some discussions about the possible reduction of work tasks related to the new e-services. But you almost hope this will be a reality as we are so few employees in this department". (Handling officer, traffic department).

4.1.3 Services to clients

Most of the respondents mentioned the advantage of increased availability to e-services for the clients. Implementation of e-Government was expected to lead to increased transparency of the handling processes that could increase trust towards the authority from the citizens. Digital documentation seemed to be more secure compared with paper documentation. Some expected disadvantages with e-Government were increased vulnerability due to security problems that could occur. There also seemed to be a risk of more impersonal contacts with the clients.

External implementation and use of web-based services could be affected by computer habits and possibilities of different user groups. Younger people tend to use the internet more than older people.

4.2 Results from interviews during early implementation stages – the second study

Some of the respondents were already affected by the use of a new system for the handling process of e-services. However, most of the respondents had not started to work with e-services yet, but were affected by the overall change of the culture. They saw change of their work hitherto mainly as mental change. e-Government had been discussed much at the ordinary work place meetings. Most of the personnel expected the implementation of e-Government to take a long time, probably five to ten years.

4.2.1 The work situation:

Most respondents showed a positive attitude towards the implementation of e-Government, and stressed that it did not work to be reluctant towards development in the organisation. A common understanding was also that "you cannot stop the development, you have to keep up". There could, however, be problems for those employees who deal with manual, routine work tasks, if they did not have the capabilities to renew their competencies when their work tasks were computerized.

The users of the new e-services will probably put more demands on efficient and rapid handling of all matters, which could affect the internal prioritization of matters. Increased external demands could also lead to a more stressful work situation.

Many respondents mentioned risks for resistance towards the change by many older employees who are not motivated enough as they soon will retire:

"Many employees will soon retire. They doubt to engage in this change work. They will still not remain in the organisation when e-Government will be implemented. Therefore they are not enough motivated to put required strain on the change work". (Decision maker, traffic department).

Computer literacy was also unevenly distributed in the organisation. Younger people tend to use the Internet more than older people. It could be more difficult for the older generation to learn, some respondents meant. Many respondents meant that this was an important field for competence development. There also seems to be a need for both basic computer program knowledge, such as the use of Microsoft Word, as well as more complicated software and file management.

Most respondents were satisfied with the competence development possibilities at the County Administration. The personnel were used to being well informed and having access to good internal education possibilities. The County Academy for internal web-based education had offered such courses since 2002, but there were also traditional education activities taking place in the organisation. It was seen as very important to receive relevant information about the implementation for all of the staff, so they could understand the meaning of the changes, and give relevant information to the citizens about the new e-

services. It was also very important to receive relevant information "just in time", when it was needed. Some of the respondents preferred individual studies, with access to an instructor when they had questions to ask. Many respondents preferred a combination of individual and group studies. An advantage with group studies could be that other participants could pose questions you had not even thought about yourself. Different educational forms could be appropriate due to different work situations. Many of the respondents preferred practical exercises instead of too much theory.

4.2.2 The work process

In the legal authority they had already implemented e-services for security guards and foundations. They were also implementing a new electronic system for dealing with official matters, Platina. During a test period they worked with two systems at the same time, Platina and the older system for dealing with the diary, Diabas. They had started to use Platina for dealing with foundation matters. The work with the new system Platina for electronic administration of the diary meant a lot of changes for the work, compared with the work with the older Diabas system. The registrations in the older Diabas system were mainly made by the registrars, based on information from the handling officers. In the new Platina system, the handling officers were responsible for using the system during the entire process of dealing with a matter; from initiation to termination. This meant big changes of work routines and work roles for the handling officers, compared with the earlier division of work.

The respondents stressed both advantages and disadvantages with Platina. The use of Platina gave the handling officers a better general view and control of matters. But when more handling officers use the system, there could be more errors due to different individual ways of formulations. Still many handling officers were sceptical towards the coming change of the work division between the registrars and the handling officers. Many of those who had not yet started to use Platina, seemed to fear the coming use:

"Many fear Platina as "the new black cloud"…we are more or less forced to use it…I don't have the energy to learn a new computer system, I hardly master the old system". (Handling officer, legal department).

"I think Platina could be difficult to handle…A work mate who uses the system, told me that the system sometimes is very tough to use… There are always growing pains with new systems" (handling officer, traffic department).

In the traffic department e-services for drivers' licence applications were developed. Such matters would be electronically dealt with that were simple with no need for supplementary information (so-called "green matters"). The implementation of these e-services was planned to start with driving schools during the beginning of 2007, but the time schedule was revised and the implementation was instead planned to take off by the end of that year. When the "green matters" were implemented as e-services, manual judgements of the applications were no longer needed. The manual handling of these matters meant a lot of monotonous and stressful tasks. When the "green matters" were implemented time could be released for other work tasks, such as more complicated matters e. g. This would probably lead to a reduction of time needed for the total dealing with drivers' licences when the e-services were implemented, but this could be compensated by the fact that many older people soon will retire.

"If there were not so many employees who will soon retire, I would have probably reacted more strongly, because of the reduction of jobs". (Administrative assistant, traffic department).

Many handling officers did not think implementation of e-Government would affect their jobs, as their work was seen as too complex and not possible to computerize:

"It will not be possible with automatic dealing of matters other than for very simple cases.…It must be human beings who deal with more complex matters". (Decision maker, traffic department).

But process mapping of work contents have been initiated in many units, even for more complex work, in order to analyse computerization opportunities. Most respondents expect implementation of e-Government to take a long time, probably five to ten years.

Some of the respondents who have been employed for a very long in the organisation refer to the situation in the organisation in the eighties, when manual routines should be computerized. They mean that if the personnel managed the hard work at that time, they will also manage the implementation of e-Government; "it cannot be worse…".

Management seemed to have great expectations on the outcomes from e-Government. They expected increased efficiency and saving of resources. Employees who are retired were not replaced e.g.:

"Top management seems to expect to save a great deal of resources due to implementation of e-Government; vacant positions are not filled; management is waiting, then the co-workers have to take over work tasks from other employees who retire…During the last year there has been more focus on efficiency aspects from management". (Handling officer, traffic department).

4.2.3 Service to the client

The personal services to the clients tend to be more impersonal and formal:

"We are very service-minded today (at the local level). When you receive a phone call with a question from the customer, often you don't limit your answers to the concrete question, but also inform the customer about other related aspects that could be useful for the customer to know. But the development of customer services is moving towards a more impersonal direction; you only answer exactly about what the customer requests. Then it is up to the customer to seek for more information if needed. We have been taking good care of the client, but we will not continue with this in the future". (Handling officer, traffic department).

Different customer groups seemed to have very different computer habits and different needs for personal service, according to the interviews. For example, there seemed to be a digital divide between younger and older clients as well as for immigrants and disabled. Younger clients demand e-services, but the elderly, immigrants and disabled need more personal support.

"The new, young people use much more e-services, they are born with a computer in their hands. The older people are not…then we have to work in two different ways, with traditional paper routines and the digital system". (Handling officer, traffic department).

The external digital divide could contribute to increased differences between different societal groups (A and B groups) as consequences from the increased dependency on computers and the development of public e-services. The dealing with a matter using e-service will probably be faster compared with traditional manual routines:

"I think many old people like to talk to a handling officer and bring their documents with them. But then we maybe give them the answer that we could not give them via personal assistance, because we have the electronic systems, and then I think very many people in our society such as older people, immigrants or disabled, in a way are being neglected;. Instead elite groups will win, those who manage the digital technology. It is the new generation". (Handling officer, traffic department).

There could also be a tendency to give certain important customers ("VIP-customers", e.g. bigger companies) a faster handling process compared with other groups, which also could increase differences between different user groups.

There seemed however, to be an ambition from the authority to keep the traditional paper routines along with the new e-services, in order to satisfy all users, but probably the handling process will be slower for paper related matters. It is a challenge for the organisation to combine personal service with electronic routines. The trust for the authority from the citizens could increase if the authority succeeds to combine personal treatment with the increased use of e-services, according to a respondent.

A need for increased customer support was expected when new e-services were offered. Centralised customer support was planned. Centralised front desk support could relieve pressure from back-office work, but co-ordination between front desk and back-office customer support routines could be difficult to handle. Some respondents mentioned that customer support at the local level takes good care of the client. With the more centralised, computerized customer support, the customers were expected to take care of themselves.

Less personal contact with customers seemed to be consequences of the new e-services. Personal contact with customers could be a motivating aspect of the job today for some handling officers. A respondent implies that for some e-services (such as simple drivers' license applications), no personal contact at all is needed with the customer.

5. Analysis and discussion

In this section the two studies are compared and analysed. The focus of the analysis and comparison are changes of social aspects. The analysis is structured according to the different aspects of the MOA- model.

5.1 Work situations

5.1.1 Increased coping and sense-making strategies by the personnel

Most respondents from both studies showed a positive attitude towards implementation of e-Government, but the respondents from the second study showed more of coping and sense making strategies related to the implementation which probably are consequences of being closer to actual changes of their work situation compared with the respondents from the first study. Implementation of e-Government means a lot of work processes changes, and new competence demands, which could contribute to more stressful work situations for the employees, compared to the work before implementation. Often there are growing pains with new systems and often there is a need to work with two systems during implementation, the old and the new system which increases the work load and stress of the work situation. People do not always articulate their feelings of stress. Instead you could identify different coping and sense making strategies in order to handle a stressful work situation, from their stories told during the interviews.

The concepts "coping" and "sense making" are interrelated, but have evolved from different traditions. "Sense making" resides in the tradition of organisational thinking (e.g. Weick 1995) and IT adaption (e.g. Henfridson, 1999) while "coping" has evolved from behavioural research focussing on stress (Josefsson, 2007). The sociologists Lazarus and Folkman (1984) evolved a process-oriented and context dependent transactional model of coping, focussing on the interaction between the individual's cognitive appraisals and the environment. Coping could also be seen as defence mechanisms towards stressful changes in organizations (Angelöw, 1991).

Henfridson (1999) argues that sense making processes affect IT-adaption. The source of sense-making could be the ambiguity people feel when they try to understand an IT artefact that is new to their work practice. The introduction of IT artefacts in organisations is an ambiguous enterprise in general, and especially for e-Government, which affect organisation, work situation, work processes and the service produced for the clients in fundamental ways. Ambiguous situations are unclear and need to be interpreted in a sense making way according to Checkland and Scholes (1990). Ambiguous situations could be very stressful for the involved employees. Sense making could reduce this feeling of stress. Thus, both "sense making" and "coping" are related to stress reduction for the individual, but from different research angles.

Some of the older respondents of the second study compared implementation of e-Government with the computerization of the early 80s, when manual routines were computerized. If they managed to deal with that change, they would probably also manage to deal with implementation of e-Government, they reasoned. This is an example of sense making; the comparison with the early computerization contributed to a meaningful understanding of the implementation of e-Government, and could thus reduce their stress related to coming implementation work.

Many respondents from the second study did not think their work would be affected, as they saw their job as too complicated to computerize, although process studies of even more complicated work had started in the organisation. This could be an example of "denial" as a coping strategy in order to avoid stress (Angelöw, 1991). Many older employees who will soon retire were uninterested in taking an active part in the coming implementation. This is also an example of "uninterested" as a coping strategy (ibid.). "Denial" and "uninterested" are interrelated, but the difference is that if you are "uninterested" you are aware of the needed changes, but hope that you will not be affected if you stay "uninterested" and passive.

However none of the respondents showed pure explicit negative attitudes towards implementation of e-Government. They stressed instead that it does not work to be reluctant towards development in the organisation; "you can not stop the development, you have to keep up". The example indicates that they have accepted the overall situation, and acted in accordance with the main cultural norms of the organisation: not to be actively reluctant towards changes.

5.1.2 Competence and participation

Respondents from both studies stressed reduced needs for personal contact needed with the clients, and this seemed due to the use of the new e-services. Personal contact with clients is motivating and meaningful aspects of the job today for many handling officers. A respondent mentioned the fact that for some e-services (easy matters to handle such as driving licences' permissions), no personal contact with those clients was needed at all. Efficient communication with clients usually requires long term experiences by the handling officers, competences that are not needed to the same extent, when e-services are used. Instead, implementation of e-Government seems to put demands on increased computer oriented competences of the employees. There could thus be a risk of a reduction of competences related to the personal communication with clients and increased demands of computer related competencies.

The respondents requested a "bottom-up" approach for education and information. Some respondents showed scepticism towards educational courses mainly defined by top management. A few months before the second study, the respondents had participated in a course with basic information of e-Government implementation, with group discussions, which they appreciated. The pedagogy was inspired by a study circle approach; a kind of "bottom-up" pedagogy which stimulates the participants to discuss their local experiences.

Motivation to change is a central driving force for the employees in implementation work (Angelöw, 1991). Participation could stimulate motivation, a central aspect of the so called Scandinavian tradition of systems development (Scandinavian Journal of Information Systems, 1994). The respondents requested information and education related to their local work situation. Is seems to be an important challenge to integrate all employees in competence development activities stimulating their motivation and participation in the implementation work of e-Government. Participation in project groups could be a way of stimulating learning (Grundén, 2004). But in a very big organisation, like the County Administration, project development work usually is organized with representative participators as members of the project groups. Not all employees could participate in such groups, thus it is a challenge to find motivating educational forms stimulating participating and competence development.

The difficulties with competence development for some older employees, and other employees with problems to adapt to new demands, could be described as the *internal digital divide*. The respondents from both studies mentioned that a majority of the employees were over 50 years old, and there was a risk that they were not motivated enough to change their competences and work routines, and therefore could resist implementation of e-Government. The same aspects are stressed in the second study, but more examples of the phenomena were mentioned. Some respondents also mean that older persons could be more worried about the changes, than the younger. They could also have more problems to learn new work routines. There could thus be a need for differentiated work routines and less demands on competence development for some of the older employees, during a period of transition to e-Government.

It could also be difficult to find proper work tasks even for younger people who today deal with simple, monotonous work tasks, it they do not have the capability to renew their competences.

5.2 Work process aspects

5.2.1 Increased focus by management on efficiency aspects related to e-Government

According to the interviews from the second study the management expects increased efficiency gains from the implementation of e-Government. Electronic dealing with matters was supposed to reduce the time needed to handle a matter. Some electronic matters such as dealing with simple applications of drivers' licenses needed hardly any human handling at all. There were a lot of older employees in the organisation that will retire, and many of them were not replaced, due to expected efficiency gains. But in the short run, remaining employees will receive increased work load instead, until all e-services are implemented. Efficiency aspects seemed to be more and more important from a management perspective, according to some respondents.

Increased focus on efficient aspect related till implementation of e-Government could be analysed according to Ciborras (2002) metaphor of "hospitality". This metaphor is an alternative metaphor for thinking critically about relationships between organisation, people and technology. Many public administrations involved in implementation of e-Government have adopted structured techniques which emphasize planning and control by the host organisation, based on the more common "organic" metaphor, where power aspects are more

invisible, and explained by striving for balanced homeostasis of the system (Griffin, Trevorrow & Halpin, 2007). If management and developers instead are seen as hosts, and other employees and clients are guests, striving for increased internal efficiency could be seen as reasonable, according to the hospitality metaphor, but not if we use the organic metaphor. As management and development staff have the most control of the design and implementation, their internal goals could be given much attention, such as internal efficiency according to traditional management philosophy. Then there could be a risk that other goals could become secondary goals, such as the quality of the service to the client, and a good work situation for the staff.

5.3 Services to the client

5.3.1 Increased stress of the external digital divide

The respondents from the second study gave more detailed examples of expected external digital divide consequences due to implementation of e-Government. There seemed to be a digital divide between younger and older clients as well as for immigrants and disabled. Younger clients demand e-services, but the elderly, immigrants and disabled need more personal support. The personal service will be more impersonal and formal. The external digital divide could contribute to increased differences between different societal groups as consequences from the increased dependency on computers and the development of public e-services. The dealing with a matter using e-service will probably be faster compared with traditional manual routines. There seemed however, to be an ambition from the authority to keep the traditional paper routines along with the new e-services, in order to satisfy all users, but the handling process will probably be slower for paper related matters.

There could also be a tendency to give certain important customers a faster handling process compared with other groups, which could also increase differences between different user groups.

A need for increased customer support was expected when new e-services were offered. Centralised customer support was planned. Centralised front desk support could relieve pressure from back-office work, but co-ordination between front desk and back-office customer support routines could be difficult to handle. Some respondents mentioned that customer support at the local level usually took good care of the client. With the more centralised, computerized customer support, the customers were expected to take care of themselves, which could be a further disadvantage especially for the clients who need a lot of personal support.

The results from the studies thus support the thesis that development of e-Government could reinforce a development towards an increased digital divide among different groups. There could be a risk that we are moving towards a dichotomized society, where already marginalized groups (older, immigrants, disabled) will be even more marginalized due to less availability and competence to use the new e-services compared with the "new young generation", who puts demands on an even faster development of e-Government.

e-Government is not just about value-neutral technological advances in service delivery and communication, it also affects societal groups in different ways. The EC funded project eGovRTD2020 has identified some possible future scenarios using trend techniques (year 2020) of e-Government. The possible outcomes are judged on a scale of low and high impact on society and low and high uncertainty. Divisions in high and low skilled and rich and poor, as well as social exclusion of skilled, non-skilled, rich and poor and disabled people were depicted as high uncertainty and high impact (Bicking et al 2006).

In order to have more of a win-win scenario for the different interest groups of e-Government, there is a need to adjust the implementation of e-Government to also be relevant for those who cannot or do not want to use e-services, by also offering manual routines and more personal contact from the authorities and to offer relevant competence development for vulnerable groups of the society. The implementation of e-Government is closely related to democratic ideals of our society, and how these are realised.

6. Does knowledge about social aspects matter?

The respondents of especially the first study stressed the importance of social aspects related to e-Government implementation. They mainly had a user perspective, and no providers were interviewed. Usually they have a more technical oriented background as system developers and programmers that could affect their perspective of the implementation work. Senyucel (2005) found different views between providers and users. The providers had a more technical perspective, and the users stressed social and organisational

aspects as important. The respondents of this study stressed social and organisational aspects as important for implementation of e-Government. Most research hitherto reflects the notion of e-Government as much to be gained and little to be feared (Heinze & Hu, 2005). Articles addressing the dangers and threats are relatively sparse (e.g. Shelley et.al., 2004).

The analytical split between providers – users enables the notion of e-Government to be viewed from two perspectives. Congruence between providers and users is critical to the evolution and adaption of e-Government. The theories of Giddens (1998) could be taken as a relevant starting-point for such an analysis as they focus on the dialectic relationship between technology, people and organisational context. According to his theory different actors exercise power and legitimate their own behaviour in use of their own knowledge and experiences, recourses and norms. In such a dialectic context different human activities could be both reinforced and inhibited.

There seems to be a need for providers to make solid problem analysis of the work process, organisation and work culture before implementation work. It is important to have not only a "hard systems view" on the implementation process, according to the terminology of Checkland (1991). He differentiates between hard systems thinking and soft systems thinking. According to Checkland it is important to identify "the root problem" of a problem situation and to determine whether a problem is mainly of technical or social character, in order to find proper solutions. It is not unusual to propose a mainly technical solution for a problem that mainly has a social character.

e-Government is often associated with increased transparency of work processes and information about matters from a citizen's perspective (Bonham et. al. 2003). However, transparency could also be relevant for the problem analysis process in order to find the root problem. If "the right" problem is defined as the root problem, then the problem analysis is transparent. If "the wrong" problem is defined, then the problem analysis is more obscure.

The results from my studies indicate that important implementation aspects of e-Government are closely interrelated with different social consequences. Thus it is important with relevant competence development within this field, contributing to relevant knowledge of the development personnel in order to avoid social problems during implementation and use of e-Government. But relevant knowledge relevant competence of the developers will not be enough for a development of e-Government supporting democratic ideals of our society. We also need to use the competence in discussions and development works, involving different interest groups of e-Government, in order to contribute to more well-informed clients, decision-makers, politicians and employee groups.

7. Conclusions

In the study the following social problems related to implementation of e-Government are identified:

- Increased coping and sense-making strategies by the personnel related to increased stress during the implementation process.
- A tendency of increased internal and external digital divide among different groups.
- Increased focus by management on efficiency aspects making other goals as secondary goals (such as the quality of the service to the client and the quality of the work situation for the staff).

Increased knowledge about social aspects and consequences could be integrated in the development and implementation process by providers (as well as other interest groups), in order to avoid social problems related to implementation e-Government. There is a need of empirical based research studies in order to further explore the field of a social perspective on the implementation of e-Government.

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