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# INNOVATION IN A REGULATED ENVIRONMENT?

## - LEGAL BARRIERS FOR E-GOVERNMENT DEVELOPMENT

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**Abstract**

This paper explores the contrast between 1) the rhetoric and visions in Swedish national e-government policy and 2) practical problems in real e-government development. In this respect it particularly explores the possibilities and obstacles for an innovative e-government development in relation to the highly regulated environment of public administration. The paper uses a case study on e-government development (allowances for personal assistance to disabled persons) for analysis and illustration. Different kinds of regulations are investigated (general administrative regulations, domain-specific regulations, e-government policies) and their roles as barriers and enablers are identified. The value balancing between different sets of regulations is seen as a key issue with regards to how to establish an e-government with a high degree of process innovation. The paper advocates for a value balancing process characterized as a systemic approach with identifying and prioritizing basic values. Value balancing is investigated through a socio-pragmatic framework on institutions and interpreted as a kind of meta-institutional activity.

Keywords: e-government, laws, regulations, innovation, institution

## 1. Introduction

E-government development is often governed by national policies and programmes. There are also trans-national programmes, e.g. policies issued by the European Union [e.g. EC, 2003]. In Sweden there have been several programmes for national egov development. The minister responsible, Mats Odell, presented, in January 2008, an action plan for Swedish egov development [Ministry of Finance, 2008]. This document is now the main policy document for egov development in Sweden.

The action plan expresses goals, guidelines, priorities and hopes for an innovative and collaborative egov development in Sweden. This can, for example, be read in this quote: "Swedish public administrations have regulatory frameworks that enable sector-wise cooperation on eGovernment and efficient information management, making the information easily accessible and usable, while at the same time bearing in mind integrity and security aspects" [ibid].

In this quote, it is emphasized that *regulations* should be *enablers* for effective information management. This can be seen as a contrast to the *constraining* aspect of regulations which is often thought of as being the case.

The purpose of this paper is to investigate possibilities and obstacles for an innovative and collaborative egov development. This purpose is inductively generated from a case study on egov development. The contrast between the problems and obstacles in practical egov development and the visionary policy formulations became obvious to the author during this case study. This discovered conflict between policy rhetoric and practical problems is the main impetus for writing this paper. This kind of conflict has also been identified by other scholars; e.g. Li [2003] writes "There is a gap between the rhetoric about the potential of e-government and the reality on the ground".

In this paper particular attention will be paid to aspects related to laws and regulations in order to investigate their roles for egov development. The notion of judicial interoperability has been central to this investigation. It is interesting that the Swedish action plan for Swedish egov development [Ministry of Finance, 2008] explicitly refers to an earlier Swedish government official inquiry on IT standardization [SOU, 2007], where judicial (or legal) interoperability was introduced in addition to technical, semantic and organisational interoperability. In SOU [2007] a lack of judicial interoperability is described as incompatible regulations or unclear legal positions.

Legal issues have, of course, been discussed in egov literature. However, judicial interoperability does not appear to be a key issue in e-government research. Some problems related to legal incongruities have been touched upon by Scholl & Klischewski [2007]. Confer also Goldkuhl [2008c].

The paper is based on an interest regarding how to create innovative IT solutions in the public sector. This interest is shared with several other scholars; e.g. Andersen [2004], Carter & Belanger [2005], Davison et al [2005], Dovifat et al [2007] and Peristeras et al [2002]. E-government development can be considered as a kind of *process innovation* [Andersen, 2002] as defined by Davenport [1994].

The paper is structured in the following way: In the next section, the research approach will be described. The paper is based on a case study on egov development. This case study has been used for further reflection and inquiry given the research purpose described above. In section 3, a regulative and institutional account will be given as a basis for later discussion in the paper. Some fundamentals regarding statutes in Sweden will also be described. A socio-pragmatic framework on institutions is presented as the basis for the empirical analysis. Section 4 comprises a description of the case study; that is the development of joined-up e-government within personal assistance to disabled persons; with particular emphasis on problems related to allowances. In this egov development there were clear ambitions to create new innovative IT-solutions that reconfigured the interaction between different public agencies. This case will be further analysed in section 5 where different problems of legal incongruities will be discussed. This analysis will be pursued particularly in relation to the ambition to create innovative egov solutions. Different barriers of legal character will be identified and described. The paper will summarized and concluded in section 6.

# 2. Research approach

This research is taken from a case study on egov development. Two researchers (one of them, the author of this paper) have been actively engaged in the development of workpractice and IT-system in the area of personal assistance to disabled persons. The development project involved collaboration between several parties. Representatives from 14 Swedish municipalities and the Swedish Social Insurance Agency (SIA)

actively participated in this project. This e-government project was initiated and managed by the "Platform for Co-operative Use" (*Sambruk*) – a Swedish non-profit organisation which primarily supports collaborative e-government development projects in the Swedish public sector. *Sambruk* (www.sambruk.se) is a membership organisation and it consists of approximately 80 Swedish municipalities. It is a kind of "digital collaborative arrangement" [Haug, 2007].

Two researchers participated in the project as analysts/designers. An action research approach was used in this study. The researchers combined the role of 1) change agents in the egov project with 2) roles of observation, exploration and testing. This is typical in action research projects to combine a role of active change with a research focused role [e.g. Susman & Evered, 1978; Davison et al, 2004]. The research can also be characterized as a *practical inquiry*, with objectives 1) to contribute to the actual local setting of this project as well as 2) to make general practice contributions. This latter objective is an attempt to create knowledge that is valuable for practical e-government in general. The concept of practical inquiry has been articulated in Goldkuhl [2007a; 2008a] and it is inspired by pragmatic philosophy [Dewey, 1938; Argyris et al, 1985; Cronen, 2001].

The egov project started with a workpractice diagnosis investigating the current ways of performing the work. This included problem analysis, goal analysis and process modelling. New work processes were then designed together with the design of an IT-system including e-services to the clients. One of the goals of the egov project was to strive for joined-up solutions. This was partially inspired by the national action plan for egov development [Ministry of Finance, 2008], that includes visions of this kind. It was important within the project to create solutions which could significantly reduce the manual burden of time report handling. At the start of the project, all the municipal representatives complained about the workload involved in this paper handling. These new solutions should be designed taking different parties' goals into active consideration (clients and their fiduciaries, municipalities including personal assistants, managers and administrators, and SIA). It was important to create solutions that were well reflected from an inter-organisational and interoperable perspective. It was not acceptable to sub-optimize one party's goals. The egov project was clearly striving for process innovation. The project will be further described in section 4 below. An analysis of the different legal barriers in the project will be conducted in section 5.

One important aspect of practical inquiry is the use and development of *practical theories* (Cronen, 2001; Goldkuhl, 2008ab). Practical theories should assist us to see things, aspects, properties and relations which otherwise would be missed. "Its use should, to offer a few examples, make one a more sensitive observer of details of action, better at asking useful questions, more capable of seeing the ways actions are patterned, and more adept at forming systemic hypotheses and entertaining alternatives" (Cronen, 2001, p 30).

The results of this paper should be seen as an embryonic practical theory concerning legal barriers and institutional dilemmas in egov development. Different propositions have been related to each other in socio-pragmatic patterns using *theory diagrams* [Axelsson & Goldkuhl, 2004; Goldkuhl, 2007a]; confer Figures 2 and 6-8 below. The theory diagrams express, in a propositional and abstract way, actions and their different preconditions and consequences [ibid; Strauss & Corbin, 1998]. These propositions and theory diagrams are the result of a *qualitative analysis* based on findings from this case study. Observations have been abstracted in a search for analytic generalization [Yin, 1989; Lee & Baskerville, 2003]. The analysis is based on

empirical material of diverse kinds; project documentation, field notes taken by the two researchers, correspondences with officials at the Swedish Social Insurance Agency and different Swedish statutes and policy documents.

A combined inductive and deductive research approach has been adopted [Goldkuhl & Cronholm, 2003]. The empirical data have initially been studied in an inductive way making place for discovery and generation of new concepts [ibid; Strauss & Corbin, 1998]. Eventually, theoretical perspectives have been introduced (cf. especially section 3.2) to also make the analysis theory-informed.

This case study has been reported elsewhere [Goldkuhl, 2008b; Sjöström & Goldkuhl, 2009]. In these other papers, there has however been other focus than what is treated in this paper.

# 3. A regulative and institutional basis

## 3.1. Statutes and e-government

Laws and other statutes play a decisive role for egov development. They form the regulatory ground for the development of egov systems, which means that it is always necessary to take different statutes into account when developing e-government.

There is a need here to clarify the different types of statutes in the Swedish legal system (Figure 1). The Swedish parliament (Riksdagen) has the legislative power concerning laws. Some laws are foundational, i.e. the constitutions. Not all statutes are issued by the parliament. The ministries also have a right and power to issue regulations. In addition some authorities also have the power to issue regulations which have legal character. When progressing from laws, via ministry regulations, to authority regulations, this means a move from more overarching towards more detailed formulations. Laws are often concerned with outcomes ("what"), while authority regulations are concerned with practices and procedures ("how"). Some authority regulations can be very detailed expressing exactly the kinds of forms that should be used for certain types of communication (e.g. certain application forms).

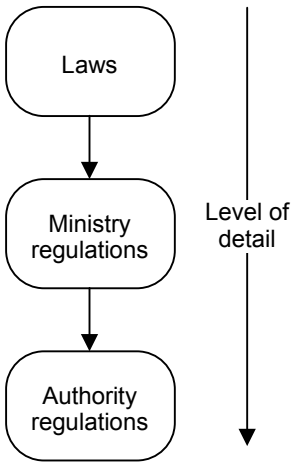


Figure 1. Hierarchy of statutes

Different statutes together form a *set of regulations*. In some domains, e.g. support and service to disabled people, which is the case study in this paper, there are usually several related statutes. A domain-specific law may be complemented by ministry and authority regulations, which consist of more detailed regulations.

Not all statutes can be seen as domain-specific. Some should be seen as general, cutting across different domains. For example, there is the general administrative law [SFS 1986], which is valid for all kinds of exercise of public authority in public agencies. There are other statutes that cut across different domains, e.g. regulations concerning electronic exchange of information between public agencies. This differentiation between *general vs. domain-specific regulations* will be important in the analysis in section 5 below.

Laws and regulations are ways for the legislators to express and emphasize certain *values* in society. Every statute expresses certain values. Different values are expressed in different regulations. There may be *value conflicts* between different (set of) regulations. However, these value conflicts are often not resolved by the legislators. Such resolution and prioritization of value conflicts is usually left to the public administrators to manage. This managing of different values from different sets of regulations will be called *value balancing*. This will be a key concept in the analysis of section 5 below. This core category evolved during the empirical analysis. Confer Figure 2 for depicting these propositions.

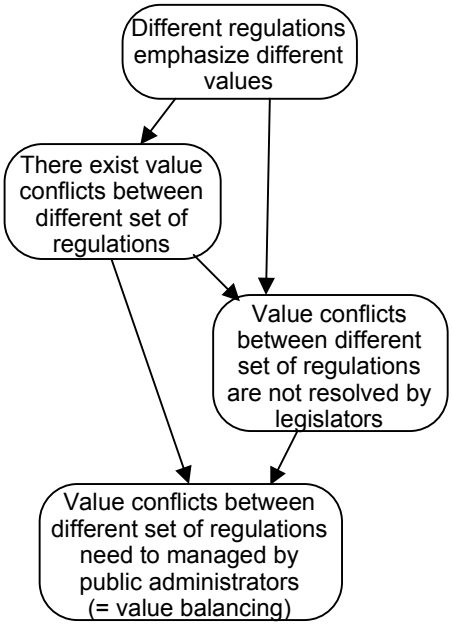


Figure 2. Value conflicts between different set of regulations (theory diagram)

## 3.2. Institutions and social actions

Statutes are written norms with the intent of regulating behaviour. Statutes are not the only type of norm that regulates public administration. There are other types of norms that influence the behaviour of public administrators and other stakeholders. This will be shown below when analysing the case study.

This section elaborates a socio-pragmatic institutional framework as a basis for the case analysis and theory development. The formulation of this framework is triggered by observations from and analysis of the case study. The framework uses institutional theory and transforms it to a socio-pragmatic conceptualisation that is appropriate as a basis for the analysis. The framework looks at institutions (as e.g. statutes, policies, bureaucratic habits) in relation to social action. The purpose is, of course, not in this limited space to create any comprehensive account of institutions

and social actions. I need however clarification of some central concepts and a way of reasoning for the further analysis. In order to reason about legal norms and other possible institutional elements in an informed and concrete way I will try to relate institutions to social actions conducted by public administrators and public organisations. My focus is social interaction when investigating the role of institutions. It can be seen as an attempt to make the micro-foundations of institutions more explicit which is considered a not realised need in neo-institutionalism [DiMaggio and Powell, 1991, p 16]. Ilshammar et al. [2005] have argued for the use of institutional theory to explain and clarify e-government development in Sweden.

Scott [1995] has described three aspects (or "pillars") of institutions; that they at the same time contain *regulative*, *normative* and *cognitive* elements. Regulative means rules that constrain and regulate behaviour. Normative means values (what is desired) and norms (how to achieve valued ends). The cognitive pillar includes words, signs and shared meanings. These three pillars are however not mutually distinct. There is a great conceptual overlap between these realms. "Rules" vs. "norms" can be seen as a way to emphasise different aspects of the same thing, e.g. a statute. Rules, norms and values are highly dependant on words and shared meanings.

Scott [1995] uses the concept of an *institutional carrier* (with reference to [Jepperson, 1991]) to describe how institutions may exist and proliferate. This concept of an institutional carrier seems promising although the three carriers (cultures, social structures, routines) mentioned by Scott do not either seem to be conceptually distinct.

I will use this notion but take another way ahead (earlier described in [Goldkuhl, 2003]). Carrier means that an institution is carried by some means. There must exist something that carries the institution. *Where* does this carrier exist? This is an ontological question [Goldkuhl, 2002]. To answer this question I use the ontology of socio-instrumental pragmatism (ibid). In this ontology different realms of the socio-material world are defined:

- Humans
- Human actions (of interpretive, reflective and interventive character)
- Human inner worlds (of intra-subjective and inter-subjective character)
- External objects (signs, material artefacts and natural objects)

An institution may exist simultaneously in several of these realms; being a *multi-existing phenomenon* (ibid). Actually, several carriers must exist in order to have an institution. Legal statutes are linguistically expressed and thus they exist as external linguistic signs. An institution cannot, however, exist as just a written text. It must also rely on humans' inter-subjective inner worlds. It must be carried through inter-subjective human knowledge. This is a typical feature of the cognitive turn in neo-institutionalism [March and Olsen, 1989; Powell and DiMaggio, 1991; Scott, 1995].

In order to exist, institutions must also be continually reproduced by human action [Berger and Luckmann, 1967]. Humans act according to institutions and this is a way to reinforce, stabilize and to proliferate institutions in the social world. Through actions, institutions can also gradually change. The results of institutional action (manifested in results of linguistic or material character) will also reinforce institutions. Situational action results will be objectified traces of institutions and continually remind people of the institutions.

In order to act according to institutions, they must exist as knowledge by the actor. This knowledge does not need to be explicit and discoursive. The knowledge can reside in, what Giddens [1984] calls, practical consciousness. This knowledge is

used in the humans' different actions; when interpreting the external world, reflecting on it and intervening in it (cf. [Goldkuhl, 2002; 2003; 2005] for description of these different action types).

This knowledge of institutions (internalized in the person), functions as an internal disposition for institutional action. Descriptions of institutions also function as external dispositions, which may remind people of what is explicitly stated; e.g. when consulting the statute-book. These dispositions are the main carriers of institutions. The enactments of institutions and their manifest results will however also function as kinds of institutional carriers. This means that institutions are multi-existing phenomena. We can say that institutions at the same exist in different realms:

- Institutions as external dispositions (recorded descriptions)
- Institutions as internal dispositions (inter-subjective knowledge)
- Institutions in actions (interpretive, reflective, interventive)
- Institutions as traces (situational results of institutional actions)

This has been illustrated in Figure 3 which is modelled with inspiration from the socio-instrumental pragmatism ontology [Goldkuhl, 2002].

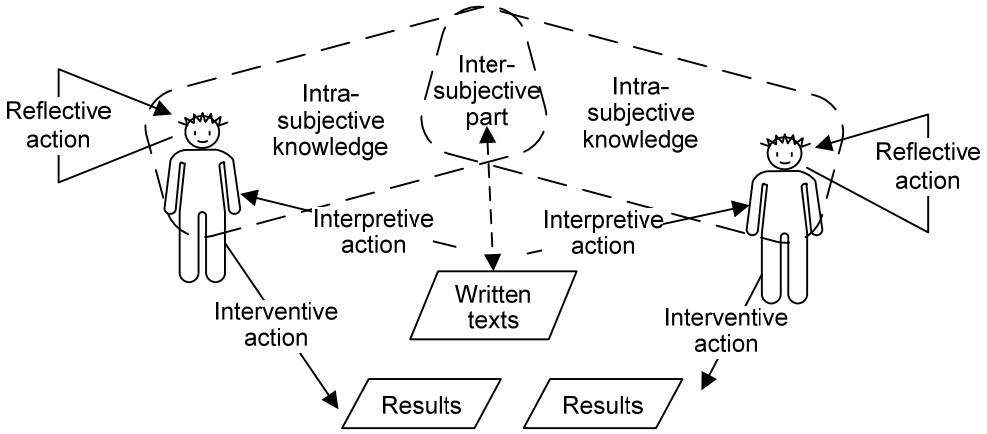


Figure 3. Institutions as multi-existing phenomena
(with inspiration from Goldkuhl, 2002)

From this typology of institutional carriers it is possible to distinguish between 1) institution as type and 2) institution as instantiation. External and internal dispositions are on the type level. The institution type is instantiated through action leading to more or less permanent results. Actions and results can however also exist on the type level when the discourse topic is the institution itself. For example when discussing different legal norms in relation to a proposed IT solution, there may be different statements concerning the institution as a type. This will be shown below in the case study (section 4 and 5). It is also necessary to acknowledge that within one institution incongruities may exist between different carrier contents [Goldkuhl, 2003].

Institutions can be created in different ways. When bearing in mind laws and regulations, it is obvious that there are specific constitutive acts which precede the institution. The legislation process functions as an explicit procedure for creating and establishing the institution. Not all institutions arise through such a planned and intentional design process. There are many institutions that arise through processes of habitualisation [Berger and Luckmann, 1967] leading to routines of different kinds.

Institutions as collective habits enacted in routines may not have any particular linguistic account. Confer Goldkuhl [2003] for a discussion of and comparison between evolution and design of institutions.

In the area of egov innovation, institutions can be sets of regulations, policies (e.g. the action plan) and different organisational norms and procedures. This framework will be used below during the analysis (section 5.3).

# 4. A case study: Allowances for personal assistance

## 4.1. Project conditions

In Sweden, the *Act concerning Support and Service for Persons with Certain Disabilities* [LSS; SFS, 1993a] regulates different types of services provided by the municipality to disabled persons. The intention of the law is to give support to disabled persons in their everyday life. One of the services regulated in LSS is personal assistance. Through the LSS act, these persons can obtain at most 20 hours personal assistance from the municipality or some other assistance provider. For more than 20 hours assistance per week, there is a need for an investigation and an allowance decision from the Social Insurance Agency. A municipality pays the first 20 hours and above that, the Social Insurance Agency pays the allowance. This is regulated by a complementary law; the *Act concerning Assistance Allowances* [LASS; SFS, 1993b].

The referred project - an e-government initiative concerning allowances for personal assistance - was started due to the very cumbersome administration and needs for better quality in time and cost accounting. The two acts (LSS & LASS) have given rise to fairly complicated work processes and interaction patterns between different stakeholders.

## 4.2. Current workpractice

The actual project started with an analysis of the current workpractices in the municipalities (performance and administration of personal assistance to clients). Process modelling, together with problem and goal analysis, was conducted [Goldkuhl, 2008b; Sjöström and Goldkuhl, 2009]. In Figure 4, parts of the current workpractice have been depicted. It is often the case that, over time, several personal assistants are involved in providing a client with support because of the extensive for such support. Every personal assistant must report their daily working hours and at the end of the month, the manager (for the personal assistants) must create an invoice, by aggregating all the time reports from all the assistants, and sum the time spent on each client. The personal assistants' time reports are sometimes missing, incomplete, or hard to interpret due to ambiguity or poor quality hand writing. The invoices (written on a special form) are required to be signed by the clients according to the regulations issued by the Social Insurance Agency. The clients, or their fiduciaries, must certify that the stated number of invoiced hours really has been delivered as personal assistance. The collection of all these signed invoices is very time consuming. These invoices should be extremely detailed and should consist of information relating to all the personal assistants who have provided support to the particular client during the stated month.

This monthly certification regarding the exact number of invoiced hours by means of the signatures from the clients is dependent on them either remembering exact details or is based on their personal notes (cf Figure 4). Several clients, because of their disabilities are unable to sign the invoices and in these cases the client's

fiduciary must sign the invoice. In general, it is highly unlikely that the fiduciary will be able to guarantee that what has been invoiced is what was actually delivered. This has caused there to be significant criticism against this certifying practice from the Swedish Association of Local Authorities and Regions and chief guardians.

Due to the regulations on different levels, the workflow regarding invoices and their bases is complicated. In addition to the extensive paper work involved, there are other ramifications such as erroneous payments due to incorrect or incomplete information, which in turn causes multiple adjustments to be made to the payments between the municipalities and the Social Insurance Agency.

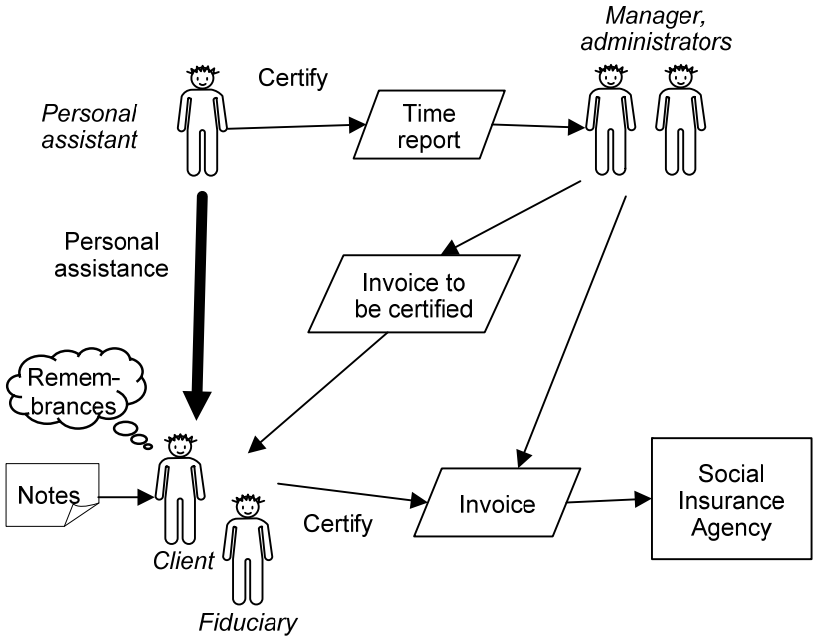


Figure 4. Current workpractice: Allowances for personal assistance

The analysis of workflow and problems, as briefly described above, was complemented by an analysis of different goals. This goal analysis was partially based on the set of regulations concerning support and service to disabled persons. We identified the following important goals:

- Quality-assured basis for allowances
- Correct payments
- Paid allowance shall correspond to the work done
- Payment of allowance from SIA to municipalities should be on time
- Time and resource efficient handling of the allowance process (Municipalities ↔ SIA)

## 4.3. Process innovation

Based on these analyses, two goals, which required change, were formulated: To improve the quality assurance and to simplify the information handling throughout the total allowance process (from time reports, via invoices, to payments). These goals have governed the creative process in the search for new solutions. The ambition of the project group was to strive for radical innovation, rather than marginal refinement. The search was for innovative redesigns of the allowance process and not to merely

automate the current workflow ("pave the cow paths"). IT should be used as an innovative instrument and not as a way to preserve the existing inefficient processes. We based our redesigns (see below) on a thorough understanding of current workpractice and regulations. We did not restrict ourselves to the actual formulations on the most detailed level (the authority regulations of the Social Insurance Agency).

The proposed changed workpractice is depicted in Figure 5. The time reporting from the personal assistants should be conducted with the assistance of appropriate mobile devices which thus involves a data capture directly at the source. The time reports should be sent directly to a new IT-based time accounting system. This system should handle the work periods for clients, which involves both the planned work periods (the schedules) and the reported work periods. A comparison of these periods should be made by the manager of the personal assistants and the exact time period for the invoice should be settled. An important idea behind this system proposal is that it should enhance *social transparency*; more details are provided in [Sjöström and Goldkuhl, 2009]. The time accounting system should be accessible and transparent to different stakeholders (the manager, the personal assistants, the clients and the fiduciaries). It should be possible for the stakeholders to comment on the different registered work periods. For example, if the reported work period does not correspond to the scheduled work period, the manager can put in a question into the system. The personal assistant can respond to this as a comment. The client and the fiduciary can also make comments. This transparent time accounting system with its commentary abilities should improve the quality basis for the invoice which is sent to the Social Insurance Agency. The proposal is that this principle of social transparency should make the personal signatures unnecessary. The cumbersome work with collecting the signed invoices could be closed. The invoice could be sent electronically to SIA where it could be handled in an automatic way in their IT systems.

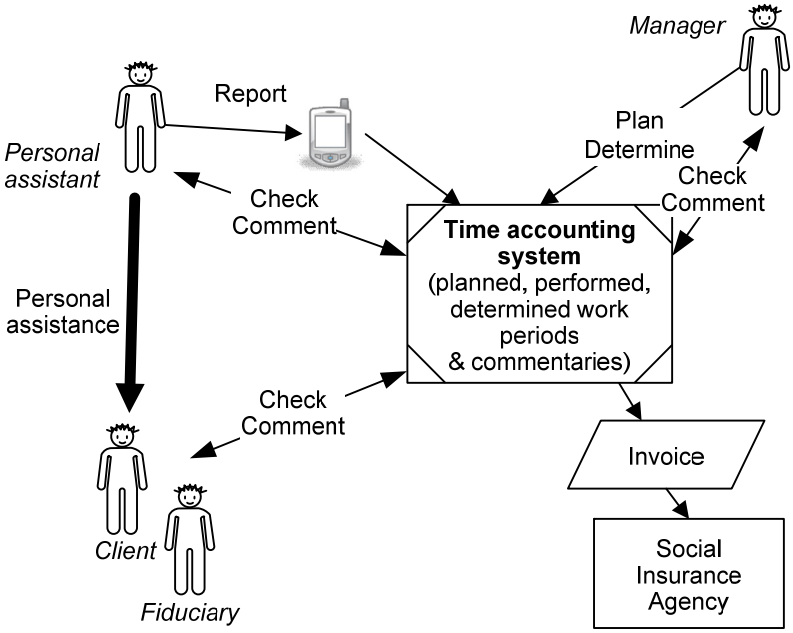


Figure 5. Redesigned workpractice:
Allowances for personal assistance

This proposed solution was described and discussed with representatives from the Social Insurance Agency. However, the public administrators (from SIA) contested

the proposed solutions both orally in meetings and through a memo. They felt that there were several non-acceptable parts in the proposed solutions. They referred to the laws and other regulations in this domain. After their oral objections, a more thorough analysis of the different statutes relating to the proposal was made, which was documented [Goldkuhl, 2007b] and sent to the SIA. A written answer was received (a memo), in which their objections remained and without the consent of the SIA it was not possible to realise the proposed solutions. Thus, there had to be a reduction in the level of ambition and a solution designed which was more closely matched to the current workpractice; see section 5.4 below.

In the following section I will analyse some of this controversy between the project and SIA.

# 5. Analysis: Barriers for innovative e-government development

## 5.1. Legal barriers

Every e-government development has some legal bases. In this case, a set of regulations existed that governed and constrained the development. In what way did the different regulations influence the configuring of possible egov solutions? What general lessons can be learned from this case? I will analyse some parts of the discussion[1] between the project group and the Social Insurance Agency concerning the proposed solutions (from section 4 above). This will be done in order to formulate some learnings in more general terms.

The main objection from SIA was that we would omit the signatures of clients. In their authority regulations, it was explicitly stated that the invoices should be signed by the clients. If any fraud was identified, the signatures were seen as a basis for possible legal action. The SIA officials also contested the general idea of developing joint IT solutions between the municipalities and SIA. They claimed that no judicial relation existed between the SIA and the municipality, which was seen as a precondition for establishing such collaborative IT solutions. The judicial relation was between the SIA and the client.

Based on these objections, I made a more thorough legal analysis of the bases for our proposed solution [Goldkuhl, 2007b]. In this analysis I did not restrict my legal inquiry to the domain-specific regulations of support to disabled persons. In addition to these domain-specific regulations, the general administrative regulations were studied in addition to the Swedish e-government policies; as the current egov action plan [Ministry of Finance, 2008]. This legal analysis aimed at explicating the basic values within the regulations. It was necessary to detect the general administrative values that should govern interactions between different public agencies and between public agencies and citizens.

## 5.2. A holistic approach: "The Authority of Sweden"

In the innovative design made by the project group, the aim was to provide solutions that were good for several stakeholders, not only optimized for one party. There are legal grounds for this type of holistic approach. In a regulation concerning public agencies' work [SFS 2007 6 §], there is a formulation that clearly gives support to this

[1] I will not go into detail concerning the argumentation. This has been done elsewhere [Goldkuhl, 2007b].

type of holistic approach: “A public agency shall act, in cooperation with other public agencies and others, in order to take advantage of benefits to be gained for citizens and for the state as a whole” (my translation). This is a statute that should prevent public agencies from sub-optimizing their operations at the expense of others. Actually, the project group was highly critical of the SIA as the demands for signatures on invoices created so much additional work. The signatures were seen as inappropriate instruments for creating quality with regards to the invoices.

There is another general administrative law that also promotes collaboration between public agencies [SFS 1986 6 §]. “Each public agency should provide help to other public agencies within the frame of their practice” (my translation). Based on this statute it was expected that the SIA should assist the municipalities to create more cost-efficient processes.

In this design, a systemic approach was adopted: To look at the total public administration as one single actor, “The Authority of Sweden”, which should act in a coordinated manner in relation to its citizens. Different authorities were assumed to interact in order to shape and apply rational and efficient processes in relation to the citizens. Such inter-agency management should be as seamless as possible, i.e. the agency borders should not create any unnecessary bureaucratic friction. From this perspective, it is not acceptable that a public agency, through its regulations, legal interpretations and other actions should pass on work and costs to other public agencies. From this perspective, collaboration barriers occurring between different agencies will be an anomaly.

## 5.3. Value balancing

When analysing the differences in the argumentation concerning legal interpretations between the project group and the SIA, I have come to the conclusion that the key issue is the *value balancing* between different set of regulations. In section 3.1 above this notion was introduced; confer especially Figure 2. Value balancing means the process where public administrators or other actors in a practical situation interpret different applicable sets of regulations and evaluate their possible value conflicts and come to conclusions concerning how to balance the different values against each other.

In this case, three types of regulations have been identified: 1) Domain-specific regulations (concerning support and service to disabled persons), 2) general administrative regulations and 3) e-government policies. The two first are legal institutions. The e-government policies do not, as policies, have a strict legal status, but they should be seen as guidelines for egov development in public administration. These policy declarations should be taken into account by public administrators. The division into these three types of regulations appears to be valid for many other egov applications. A general model of the value balancing processes is described in a theory diagram (Figure 6). The three types of regulations (mentioned above) are seen as preconditions for the process of value balancing. Different kinds of outcomes might arise from a value balancing process as can be seen from Figure 6.

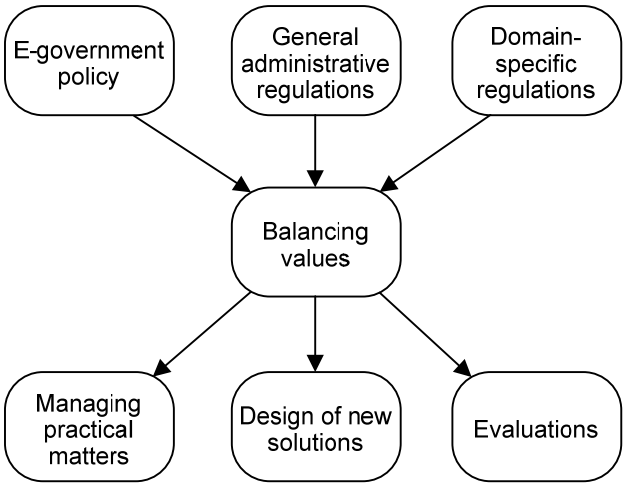


Figure 6. Value balancing concerning egov development

The project group's value balancing is described in Figure 7 and the Social Insurance Agency's value balancing is described in Figure 8. The difference is the perspective that governs the value balancing processes. In the project group, we were governed by a *systemic perspective with priorities to basic values*. This has been described above; the search for solutions that are rational and efficient for different stakeholders ("…take advantage of benefits to be gained for citizens and for the state as a whole") and a search for basic values in laws (both general and domain-specific) and not to be constrained by detailed formulations in authority regulations.

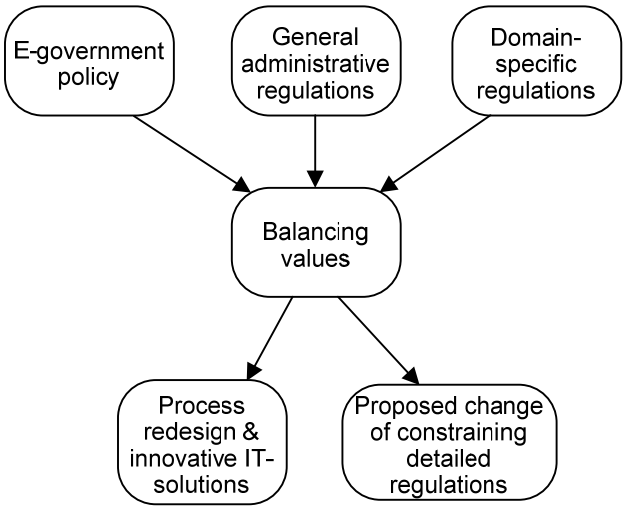


Figure 7. Value balancing through a systemic approach with priorities to basic values

In the value balancing process made by officials from SIA, they gave *priority to the set of domain-specific regulations* (support and service to disabled persons). In their oral and written argumentation they referred only to this set of regulations. In my written memo [Goldkuhl, 2007b] analysing their arguments and clarifying our value balancing, I gave several references to specific statutes in general administrative regulations (some are mentioned above). In the written answer from the officials at the SIA, no single comment concerning this discussion on general administrative regulations and egov policies was provided. This discussion was totally dismissed and

the SIA officials once again only referred to the domain-specific regulations. In a meeting where we presented our proposed solution to the SIA officials we also presented the systemic perspective "the Authority of Sweden". This presentation was met by surprise and incomprehension. It became obvious that the SIA officials usually did not think of practices outside the borders of the authority. This was joint interpretations and conclusions by the four members of the project group participating in the meeting.

The diverse ways to conduct value balancing will offer different ramifications. A systemic approach with a priority towards basic values in both general administrative regulations and domain-specific regulations offers possibilities for process redesigns and innovative IT solutions. With this may also follow proposals for changing some detailed regulations that otherwise may constrain the solutions.

Only prioritizing domain-specific regulations may have more constraining ramifications. To adhere strictly to detailed regulations within the domain will probably not allow for much leeway with regards to other designs of inter-organisational processes. A detailed legal status quo will constrain many new ways of configuring work. This approach to value balancing will also filter out egov policies. The public administrators will only see the domain-specific regulations.

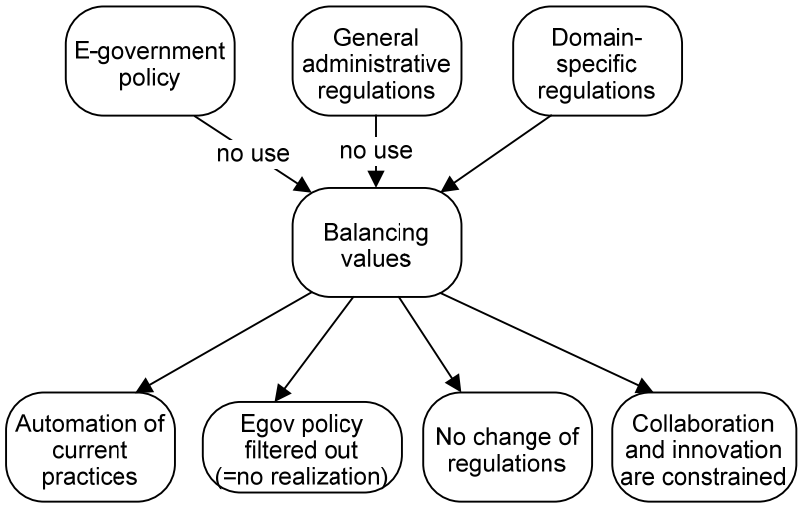


Figure 8. Value balancing through prioritizing domain-specific regulations

"Prioritization of domain-specific regulations" and "systemic prioritization of basic values" can be seen as two kinds of institutions. The first one relates to the habitual norms of the public administrators at the SIA and these norms were discovered during this inquiry. The second one can be viewed as a proposed norm ("institution in progress") that was instantiated by the project group. These different norms/institutions can be seen as meta-institutions, i.e. institutions managing other institutions (regulations, policies). These different meta-institutions were enacted during the value balancing process. This study has thus contributed by providing clarification of value balancing as a meta-institutional activity working on institutions (legal statutes and other public norms). This meta-institutional activity may also be governed by some meta-institutions as described above. This analysis is rooted in the socio-pragmatic framework on institutions presented in section 3.2 above.

In the qualitative analysis of this case study there has been a striving for abstract formulations of the different propositions. This means that any case-specific

formulation has been omitted. In Figure 6-8 principal socio-pragmatic patterns have been expressed with preconditions, actions and possible consequences. This can be viewed as being parts of an embryonic practical theory. This practical theory, in this case, has the role of clarifying and explaining problems and possibilities of innovative egov development in a regulated environment. It gives explanations to this particular case, but the intention is that it can also be useful for further egov developments. It clarifies some preconditions for an innovative egov development when describing it as a value balancing process attempting to take into account different set of regulations with a focus on their basic values and also aiming at systemic solutions adapted to different stakeholders. The sketchy theory also describes problems that can occur if the only focus is on domain-specific regulations. In such a situation there is a great risk that regulations will only act as constraints, leaving very little room for innovation.

These observations and conclusions seem to be in line with what is stated by Knudsen [1997]. Knudsen claims that it is difficult for public administrators whose focus is on operations (and its emphasis on bureaucratic rule-following) to think of new ways to conduct the practice. He differentiates between planning in new projects where visions and innovation come to the foreground and the bureaucratic way of working where current regulations set the conditions for the conduct of work. The planners and the bureaucrats have problems to understand each other and to cooperate.

### 5.4. How to handle the barriers

The egov project has not so far proved to be successful, although it has led to several important insights concerning egov development [this paper; Goldkuhl, 2008b; Sjöström and Goldkuhl, 2009]. The visionary process innovation will not, in the short run, be realised because of the negative reactions from the SIA. A less ambitious solution will be implemented by a group of municipalities. The project group has long resisted designing a solution with e-signatures on the invoices made by clients or fiduciaries as this has been viewed as a means of sustaining current inefficient workpractices. However, a temporary solution consisting of this technique might be necessary while awaiting more radical redesigns in line with the original proposed solution (Section 4.3; Figure 4).

This realization project is a short term solution approach. For more long term oriented solutions a new R&D project has been started with Sambruk, some municipalities and the Social Insurance Agency as project partners. The goal of this project is to find new possible solutions. The ambition is to make the SIA into a project partner instead of a counterpart.

## 6. Conclusions

Much of the controversy described in sections 4 and 5 concerned different *legal interpretations*. This is one important aspect of judicial interoperability. Which regulations and values should be given priority in the egov development process? If the design process should adhere to all detailed formulations, there will be little room for innovative solutions. This means that egov designs should sometimes consist of requests for a change of regulations. This is actually performed in many larger egov projects.

There are legal barriers for egov development, but all these do *not* need to be *strict barriers*. They can be removed, step one in thinking and step two by those who

have power to change them. If they are not removed in thinking, they cannot either be removed through a legal reform process. There are definitively constraints for innovation in a regulated institutional environment. But there may be paths ahead and they need to be identified and accomplished consciously.

As stated above, a key issue in egov development is how to conduct the *value balancing* between different sets of regulations. The approach suggested here is to articulate the basic values in different regulations. In the value balancing process, priority should be made to such basic values and not to be restricted by detailed prescriptions on how to perform certain operations (as sometimes is stated in authority regulations). The hierarchy of statutes (Figure 1) needs to be taken into account. Laws should be given higher priorities than authority regulations, which may have formulations that are adapted to certain "accidental" practices. The arguments for an explicit value-balancing process are to be seen as arguments for *transparent governance*, where the different governing forces are made explicit to the affected stakeholders. Bovens and Loos [2002] describe the emergence of the "digital state" as a process from legality to transparency. They do not mean that legality disappears, but rather that it is moved into the background. I would rather argue for a fusion of these principles. The interpretation and application of different legal and quasi-legal regulations should be made as clear as possible. Public administrators need to show in a transparent way how different regulations/institutions are valued together. This may also contribute to the accountability and legitimacy of public administrators decisions.

Another crucial issue in egov development is how to obtain the *visions of high integration* as stated by several scholars [e.g. Layne and Lee, 2001; Wimmer, 2002] and also in several policy documents; one such is the Swedish action plan for egov development. In order to succeed with integration projects this requires holistic thinking. It is not possible to take the perspective of one single authority. One must instead look at relevant parts of the public sector and of course at the citizens in certain aspects. As been identified above (section 5.2) there are legal conditions, in general administrative statutes, for adopting such a holistic approach. In spite of these legal formulations, it is obviously difficult to achieve an integrated egov approach. This has been shown through this case study. Domain-specific regulations tend to take over. Bureaucrats in certain domains tend to lend to their specific regulations and dismiss general administrative regulations. This is a natural part of their institutional behaviour. I have observed this special kind of behaviour in other projects/domains as well. There are needs for more counter-power against this sub-optimisation based on narrow legal interpretations.

In modern egov development there is a quest for IT as an innovative force; to achieve *process innovation through IT* [Andersen, 2004]. It is not satisfactory that IT is used only for automation of current practices. If the practices are regulated on a too low (detailed) level, these regulations will be a barrier for process innovation as was shown in this case study.

This case study has shown a *difference between the rhetoric and the practical development of e-government*. There are definitely regulations that are constraining and not enabling as stated in the action plan for e-government development; cf quote in section 1 above. I presume that the national egov policy is formulated with general administrative regulations in focus. However, there is a huge amount of domain-specific regulations that have constraining functions in relation to innovative egov development. There are many formulations, especially in authority regulations that restrict operations into cumbersome ways. There is a great judicial and governmental problem that there is so many formulations in regulations that are not technology

neutral. The current technology has been taken for granted when new laws have been legislated and this technology has crept into the legal formulations. The challenge for the legislators, on all levels (Figure 1), is to formulate the regulations without unnecessary technological restrictions; less on *how to conduct* the practices and with more focus on *what values* should be achieved.

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