

## **Intentions for simplicity and consequences of complexity: A diagnostic case study of an e-government portal and its back-office processes**

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### **Abstract**

The reform agenda for public sector development, including e-government, contains simplification as a pivotal concern. It should be easier for the citizens to interact with different branches of the public sector. Administrative burdens should be relieved through the use of modern IT. One such constituent is egov portals (based on a life-event view) that should simplify for the citizen. This paper presents a diagnostic case study of the Swedish business link portal *verksam.se*. Especially, the relations to back-office processes of municipalities have been studied. The results of this study reveal several dysfunctions of these simplification ambitions: Low integration between front-office and back-office IT; cumbersome back-office processes; decreased service to citizens from back-office administrators; a complex IT landscape for the citizens consisting of competing IT systems with redundancies and inconsistencies.

### **1 Introduction**

There exist many reasons for e-government development. One important principle is a quest for *simplification*. Through e-government, the work of public administrators should be simplified, and also the citizens' situations. This idea of simplification is not only a typical egov idea. It is also appearing in broader public sector reform ambitions. For example, in several countries there are ambitions to decrease the administrative burdens of businesses. There exist many national programs, e.g. in Sweden there are many reform initiatives in this direction (Ministry of Enterprise, 2013). It has actually been a general reform ambition to simplify and derestrict in Sweden for many years (Gustafsson, 1987). There exist also programs on the European level (EC, 2011). Such processes of simplification involve sometimes an increased use of information technology (IT). A European initiative is the "Service directive" (EU, 2006). It states that, in each country, there should be "*Points of Single Contacts*" (PSC) for service businesses when interacting with public authorities. This means that business link portals have been established and developed in most European countries<sup>1</sup>. In Sweden there exists the portal *verksam.se*. In Denmark there exist the portal *virksom.dk* and in Norway the portal is *altinn.no*. Simplification is used as a key concept and a core value of the latest e-government policy in Sweden (E-delegationen, 2010; 2011).

The use of *web portals* in e-government is often based on the idea of *life-events* (e.g. Wimmer & Tambouris, 2002; Vintar et al, 2002). This is an idea in opposition to bureaucratic silos, i.e. public agencies that deal with restricted tasks in isolation of each other. Citizens need to find their ways through the "bureaucratic jungle" of separate authorities when encountered with some complex situation. For example the setting up of a business requires contacts with many public agencies. Instead of finding out what authorities to contact and then to contact each of them, the new entrepreneur can visit the business link portal, i.e. only one place. In the EU Service directive this demand is expressed in the following way (EU, 2006): "In order to further simplify administrative procedures, it is appropriate to ensure that each provider

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<sup>1</sup> An overview of such single points of contacts can be found at: [http://ec.europa.eu/internal\\_market/eu-go/index\\_en.htm](http://ec.europa.eu/internal_market/eu-go/index_en.htm).

has a single point through which he can complete all procedures and formalities (hereinafter referred to as 'points of single contact')."

This paper addresses this public reform idea of simplification in relation to e-government. We have chosen to focus on simplification in relation to businesses. The idea of points of single contacts (as business link portals) can "in theory" be a good way to simplify for businesses and possibly also for public administrations. This idea needs to be scrutinised through empirical studies and critical reflection. The purpose of this paper is to study *the implementation of this reform idea of simplification through the use of points of single contacts* (as business link portals). This will be done through a *diagnostic case study of the Swedish business link portal verksamt.se*. It is not sufficient to study the portal as such. It must also be contextually investigated in relation to different public agencies and their IT environments. This is needed in order to understand how such a web portal affects the overall administrative processes. How is *front-office* and *back-office* integrated through the use of modern IT? This is a great challenge in egov development.

In the paper we distinguish between different stakeholders. Four types of stakeholders are treated here:

- Citizens/business representatives
- Public administrators
- Designers
- Policy makers

Citizens can appear in different roles in relation to government. In many situations they will represent only themselves (as private individuals). In other situations they may represent a business (being an owner or an employee). Sometimes it is important to distinguish between these different sub-roles and sometimes not. In this paper we study citizens in the role of a business representative. From this follows also, that we use different terms as citizen, business representative and also entrepreneur and service provider interchangeably. Different public administrators are studied in the paper; both from national public agencies and municipalities. "Designers" are used with a broad interpretation; including those who are design responsible and those who conduct functional or technical design. Policy makers include legislators and experts influencing regulations and other policy statements.

This paper is structured as follows: In the next section we review the literature concerning vital concepts for our inquiry (simplification, egov portals and life-events). In section 3 we describe the research approach including the theoretical lens used (socio-instrumental pragmatism). Section 4 contains an empirical description; our conducted case study of the Swedish business link portal verksamt.se. This is followed (in section 5) by analysis and theorizing. The paper ends with conclusions in section 6.

## **2 Simplification, egov portals and citizens' life-events**

As described above, *simplification* is a vital idea in many e-government initiatives. Wauters & Lörincz (2008) describe simplification and decreasing the *administrative burden* for citizens as a key issue for better citizen/user experience and uptake. They express the need for more empirical research in this area, i.e. we need "gathering evidence on the use of ICT as a tool for administrative simplification and a holistic view on administrative burden based on the user experience" (ibid p 6). Centeno et al (2005) claim that egov for businesses aiming for simplification has been more successful than egov for citizens. They suggest that important demands from businesses are easier to define. Such requirements are often related to speed and simplicity.

One established way to address simplification for citizens is through the introduction of "*one stop government*", that is integrated *web portals* (Wimmer & Tambouris, 2002; Klievink &

Janssen, 2009). Such a portal is an integrated IT tool in front of public agencies as a new interface to the citizens. The egov portal idea builds often on the use of the concept of a *life-event* of a citizen (external user) (Wimmer & Tambouris, 2002; Vintar et al, 2002; Kunstelj & Vintar, 2004; Haraldsen et al, 2004). The idea of a life-event is that this can require contacts with several public authorities, and thus different services and cases. Setting up a business is a typical kind of a life-event. A life-event approach “considers government operation from the perspective of everyday life. Its main purpose is to overcome the existent structure and complexity of public institutions.” (Vintar et al, 2002, p 3). An egov portal should contain information and services related to a life-event which makes it possible for citizens to have “a simple access to all services they need in one place” (ibid). The importance of a “unified entry point” is emphasized (ibid).

A portal is seen as a new integrating interface between the citizens and public agencies. There are back-office processes going on behind this portal/interface (Wimmer & Tambouris, 2002; Vintar et al, 2002). Klievink & Janssen (2009) address the important issue concerning portals and service integration. There is a difference if the portal is 1) only simplifying the interface for the citizen (just one access point) or 2) if it builds on an integration of services from different public agencies behind the portal. In the first case it will be easier for the citizen to find information and services and in the second case it should also be easier to perform the required information exchange tasks. As Klievink & Janssen (2009) describe the type of portal in situation 1: “the single portal ... looks like integrated government, in reality it is just a layer covering the fragmented organizations behind it.” (ibid p 280). This issue is also treated by Vintar et al (2002) and Kunstelj & Vintar (2004). They differentiate between portals that are based on “coordination” vs. “integration”. Coordination means bringing different information/services together in one place, while integration means “back-office reorganization”. Instead of calling the first level “coordination”, we would rather call it “co-localising”. This kind of approach is just to *place* different kinds of information and services together in one web portal site.

This relates to the scope of simplification processes. A more narrow design process is the focus for citizen/end-user simplification. Dunleavy et al (2005) asks for a more holistic approach that may “change the entire relationship between agencies and their clients” (ibid p 480). This includes “reengineering of processes, stripping out unnecessary steps, compliance costs, checks, and forms. It also stresses the development of a more ‘agile’ government that can respond speedily and flexibly to changes in the social environment” (ibid p 480). This issue is also touched upon by Torres (2004) as part of a discourse on simplification. He writes about the need for simplification of administrative procedures and communication channels (as the introduction of one stop shops).

The concept of life-event is often described by some additional concepts in order to clarify its meaning. Kunstelj & Vintar (2004, p 131) speak of “user’s needs and problems”. Wimmer & Tambouris (2002) complement life-event with the notion of “business situation”. Instead of using ‘life-event’, Bleek (2001) uses the concept of ‘situation in life’. We actually find this terminology, in principle, to be more adequate than ‘life-event’. Usually it is not only one specific event that concerns the citizen. Rather the examples of life-events (as e.g. setting up a business) involve several events and actions, which make it preferably to speak about “life-situations”. The notion of a life-event is something that is clearly time-restricted, which is not the case when we talk about life-situations. However, we will in this paper adhere to the established nomenclature and continue to use the term ‘life-event’, but with the conceptual addition that this may designate a *situation of the citizen involving several related needs, actions and events*.

The discussion on egov portals, based on the life-event view, seems to take for granted that this approach always lead to simplification. In this paper we take a more critical perspective. Based on an empirical study we investigate *possible dysfunctions* of egov portals. One element in the discourse on simplification through portals is that such a portal will become “a

single entry point” (Vintar et al, 2002). This assumption is questionable as Dias & Rafael (2007, p 83) note: “It is also important to note that, in this context, several access points to the administration will probably have to coexist.” The citizens need to *navigate* between different web sites (both a one stop portal and agency web sites) and find their way to the most adequate web site. The introduction of one stop portals may also introduce a considerable overlap and redundancy in presentation of information and provision of services to citizens.

### **3 Research approach**

#### **3.1 A diagnostic case study**

What is presented in this paper is the result of an *in-depth case study* with *evaluative purposes*. In order to obtain a deep understanding of the phenomenon business link web portal we have conducted a case study. The study object is the Swedish web portal *verksamst.se*. This is the point of single contacts in Sweden following the Service directive (EU, 2006). Although it is one example of a point of single contacts, we do not consider it to be totally similar to other corresponding web portals. However, a deep study of this web portal is considered to render some insights on the goals of simplification through web portals. Further research can study other similar web portals and compare with our results.

The research object is not only this web portal as such. The object to study included also the portal’s existing and potential relations to different public agencies and their IT environments. It was important to understand the web portal as an intermediary between front-office processes and back-offices processes.

One important reason for the study of this web portal was the excellent access to appropriate data. We got the possibility to arrange several workshops with knowledgeable representatives from municipalities and national agencies, which has given us rich and nuanced data about this portal and its existing and possible relations to other public agencies. The web portal is owned and managed by three national agencies (The Agency for Economic and Regional Growth, The Swedish Companies Registration Office, The Swedish Tax Agency). The main focus in early design of *verksamst.se* had been on national agencies. The relations to municipalities had not been a primary concern during this design process. In order to establish *verksamst.se* as the Swedish PSC, there had been some design considerations concerning the municipal sector and also some contacts with this sector. Many businesses have much interaction with different municipal offices and therefore it was considered as especially valuable to assess the relations between *verksamst.se* and municipalities in this research study.

We present results from our evaluative research. We call this a *diagnostic case study*. It has been a case study with explicit evaluative purposes. We have been interested in what works and what does not work and causes and reasons for this. In this evaluation we have combined four approaches with seemingly contradictions:

- Goal-based evaluation (Vedung, 2004)
- Theory-based evaluation (Walsham, 1993)
- Goal-free evaluation (Scriven, 1991)
- Open evaluation (Corbin & Strauss, 2008)

Goal-based evaluation means that we have taken into account both 1) the specific goals for this web portal as they were codified in legal, policy and other documents and 2) the general goals of simplification. We had a clear knowledge interest to assess how (general and specific) ideals of simplification had been fulfilled through this kind of web portal. There are objections against this type of evaluation that it may exclude side-effects and other unintended consequences (Scriven, 1991; Vedung, 2004). As an alternative, goal-free

evaluation has been proposed. As said above, different goals have governed our evaluation, but we have also adopted an open and goal-free evaluation in our search for knowledge. We had an interest for unintended effects and use-values that were not pre-conceived by policy makers. Goal-based and goal-free evaluation can be seen as opponents, but our view and experiences are that they are possible to combine if done in a conscious way.

A corresponding seemingly contradiction exists between theory-based and open/inductive evaluation research. Theory-based evaluation means that one uses some specific theory to govern data collection and data analysis. An open and inductive evaluation research means that the inquirer should be open-minded and not influenced by theoretical pre-conceptions in data collection and data analysis. Let the data speak is the motto. These two approaches can be brought to their extremes as unreconcilable antagonists. But there have been many advocates for a combination of 1) an open-minded approach in data collection and data analysis and 2) the use of extant theories without forcing categories on data (e.g. Kelle, 2005; Goldkuhl & Cronholm, 2010; Thornberg, 2012). Such a combined approach is often characterized as abductive, that is a sensitive alternation between induction and deduction. We have tried to be open-minded and not restricted in pre-theoretical categories in our collection and analysis of data. However, we have also been using a general conceptual framework in our analysis. We will briefly describe some elements of this framework (socio-instrumental pragmatism) below in section 3.2. This framework has also guided us in our development of theoretical constructs and conclusions.

As an interpretive and evaluative case study (Walsham, 1993), this research is mainly qualitative. But within the frame of a qualitative research, we have also conducted a minor quantitative inquiry, which means that we have performed a “mixed-methods” study (Denzin, 2010).

We have used several data sources in this evaluative study in order to obtain rich data for generating categories, evaluative statements and conclusions. As said above, we arranged workshops with knowledgeable representatives from national agencies and municipalities. We have also conducted interviews with such representatives and also with business representatives. A main source of data has of course been the web portal itself (verksamst.se). We have also studied different documents (legal, policy and management documents). Another important source was observation of public administrators’ behaviour through a test situation. It was this sub-inquiry that generated quantitative data. We describe this further in section 4.2 below. When we characterise this research as a case study it is important to note that we have studied several cases (e.g. 20 municipalities) within the study. We would also like to add that the study presented in this paper was an integral part of a larger evaluation of verksamst.se and its public and business context (Goldkuhl et al, 2010).

### **3.2 Applied theoretical lens: socio-instrumental pragmatism**

In order to interpret the empirical data and generate categories, explanations and conclusions, we have used a theoretical lens. As noted above, it has been important not to impose categories in a forceful way on data. This means that we need a sensitizing perspective that is useful in generating categories.

For e-government it is important to be able to take into account its *institutional* character. However, we need also to acknowledge the *human agency* character of this work. Public administrators and citizens do not act as robots enacting regulations and other institutional dispositions. We need to combine a micro (human agency) and a macro (socio-institutional) perspective. We need also to combine a social orientation with acknowledgement of the *technical* and *material* character of instruments (such as IT artefacts).

As our theoretical lens we use socio-instrumental pragmatism (e.g. Goldkuhl, 2003; 2005; 2007; Rittgen & Trejo, 2007; Sjöström & Goldkuhl, 2009) which combines the different

orientations mentioned above. Socio-instrumental pragmatism (SIP) is based on a clear social action view. Human actors conduct actions that are mainly social in character, following a classical definition by Weber (1978, p 4): “That action will be called 'social' which in its meaning as intended by the actor or actors, takes account of the behaviour of others and is thereby oriented in its course”. There are social grounds for actions and there are social purposes. To intervene into the world through the use of language is clearly a social action; in this case the conduct of a communicative action (Habermas, 1984). However, in SIP, the conduct of material actions is also seen as social actions, when they have social grounds and social purposes.

Human actors appear in a socio-material environment. Their actions can be seen to follow a three stage scheme (Mead, 1938; Goldkuhl, 2005): 1) A pre-assessment of action possibilities, 2) an intervention into the world with a continued perception and 3) a post-assessment of results and effects of the action. See figure 1. The basis for action is often some specific trigger combined with different action possibilities. SIP is based on the action-oriented perception theory by Gibson (1978) called affordance theory. Humans perceive the external world in terms of *affordances*. What the world affords are action possibilities and what it doesn't afford are action restrictions. There are both material and social affordances. In order to intervene in the world, humans often use *instruments* to *mediate* their actions. Such instruments will have a combined enabling and constricting function (Wertsch, 1998).

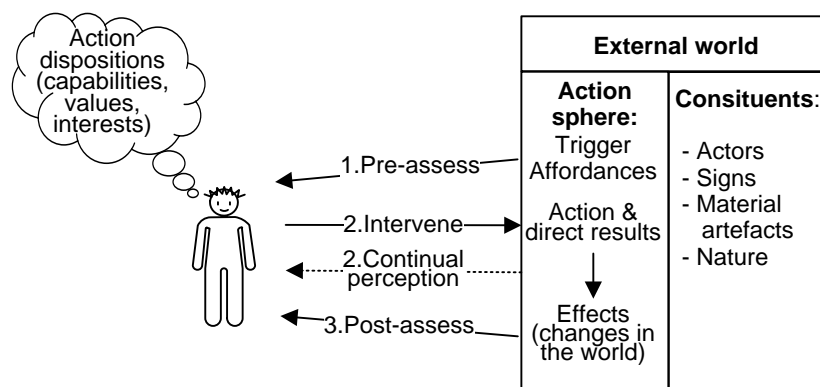


Figure 1. View of the actor as interacting with the world (with inspiration from Goldkuhl, 2005; 2007)

Action dispositions (figure 1) are personal capabilities of the actor, but parts of them are also social in character. Many conducted actions are of routine character. This means that they follow individual habits. Such habits can also be socially shared, which means that they will be of institutional character (Berger & Luckmann, 1966; Scott, 1995). When we talk about institutions we mean different inter-related and over-lapping aspects such as behavioural (“how to do things”), cognitive-interpretive (“what we know of the world” and “how to conceive things”), normative (“which values to be pursued”), regulative (“which rules to follow”) and linguistic (“how to talk about things”).

Such institutional elements will not exist only as subjective elements of the actors; “memory traces” as Giddens (1984) describes the existence of institutions/structure. Institutional elements may also be expressed in other *institutional carriers* (Scott, 1995; Goldkuhl, 2003). Institutional elements may be codified in linguistic signs and sometimes also materialised in technical instruments.

Socio-instrumental pragmatism has been developed especially for research in information systems (cf. Goldkuhl, 2005) and it has been used for research in e-government (e.g. Goldkuhl, 2007; Sjöström & Goldkuhl, 2009). This description of SIP was rather brief and it

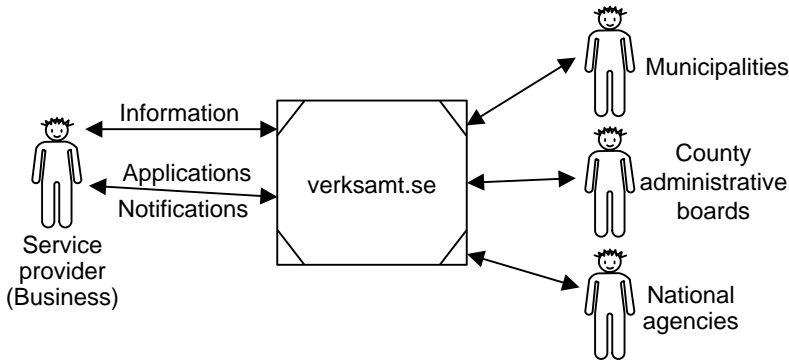
was also adapted for egov studies. The description serves as a conceptual background for the empirical analysis; especially for section 5.2.

**4 A case study: The Swedish business link portal and its back-office processes**

**4.1 Verksamst.se as a point of single contacts: simplification ideal**

The business link portal verksamst.se contains the Swedish point of single contacts following the EU Service directive. Sweden has chosen to have only one such PSC. The Service directive states the possibilities for a country to have several PSC:s. In the Service directive (EU, 2006), there are several statements concerning the simplification for service businesses (called “providers” in the directive). In article 6 the following is stated: “Member States shall ensure that it is possible for providers to complete the following procedures and formalities through points of single contact; all procedures and formalities needed for access to his service activities, in particular, all declarations, notifications or applications necessary for authorisation from the competent authorities, including applications for inclusion in a register, a roll or a database, or for registration with a professional body or association”. The goal of simplification can be said to be underlying this formulation. In article 8, simplicity for service providers are stated in an even more explicit way: “Member States shall ensure that all procedures and formalities relating to access to a service activity and to the exercise thereof may be easily completed, at a distance and by electronic means, through the relevant point of single contact and with the relevant competent authorities”.

Verksamst.se, as being the Swedish PSC, is seen as “one door in”. It is a mediator between businesses and different public agencies (figure 2). Verksamst.se contains information about how to set up a business and how to apply for permits of different kinds and a lot of other related information. For the municipal sector there exist some standard forms for application (in pdf format) at verksamst.se. These forms can be filled out by the entrepreneur and sent through verksamst.se to the relevant public agency. It is also possible to formulate questions that will be sent through verksamst.se to a relevant public agency. The entrepreneur can formulate a question in a web form and this question will be forwarded by verksamst.se to a relevant target. The response from the agency with answers to the posed question should also be mediated through verksamst.se.



*Figure 2. Verksamst.se as a Point of Single Contacts (a mediator between businesses and public agencies)*

There is a public agency interface of verksamst.se with possibilities for public administrators to respond to questions from entrepreneurs. This follows the Swedish law that is the national transfer and refinement of the EU Service directive. In this legal act on service trade (SFS, 2009) it is stated: “If a service provider has submitted an application or notification through the single point of contact to a competent authority, then this authority should, in the continuing case handling, communicate with the service provider through the contact point” (6 §). This means also that verksamst.se contains a message transfer function, and this

function can be used by public administrators for such responses to businesses. Figure 2 describes *verksamst.se* as a communication medium between service providers (businesses) and different public agencies. The service provider can state questions through *verksamst.se* and obtain responses through this same communication channel.

#### ***4.2 Verksamst.se as a point of single contacts: discovered complexity in processes***

We got information from our interviews and workshop sessions that *verksamst.se* was not so well-known in the municipalities. To dig into this a bit deeper we conducted a fairly simple inquiry test. We used *verksamst.se* to send a business-related question to a sample of municipalities. We formulated a question (from a fake business) concerning the sales of organic vegetables at a casual trading area. We requested information about locations, the need for permits and if there existed any queue to these locations. We made the request look like a real request from a business. The request should be taken seriously by the municipality. We used a sample of 20 Swedish municipalities. There are 290 municipalities in total in Sweden, which makes this a sample of 7%. We did not make any randomized sample; instead we intentionally selected municipalities that we knew were active concerning industry and trade policy. We could expect that these municipalities should answer the question.

The result from this inquiry test was surprising. Only a small part did actually answer the question (30%) and there were only one municipality (5%) that answered in the legally correct way, i.e. through *verksamst.se* (SPC). Figures from this inquiry can be found in table 1.

*Table 1. Frequencies of responses from municipalities*

<b><i>Amount of questions and responses</i></b>	<b><i>Amount of municipalities</i></b>	<b><i>%</i></b>
Sent request to municipalities through the PSC ( <i>verksamst.se</i> ); receipt from PSC.	20	100
Absent response from municipality	13	65
Response from municipality	7	35
Only confirmation (receipt)	1	5
Real response	6	30
Through e-mail	5	25
Through PSC ( <i>verksamst.se</i> )	1	5

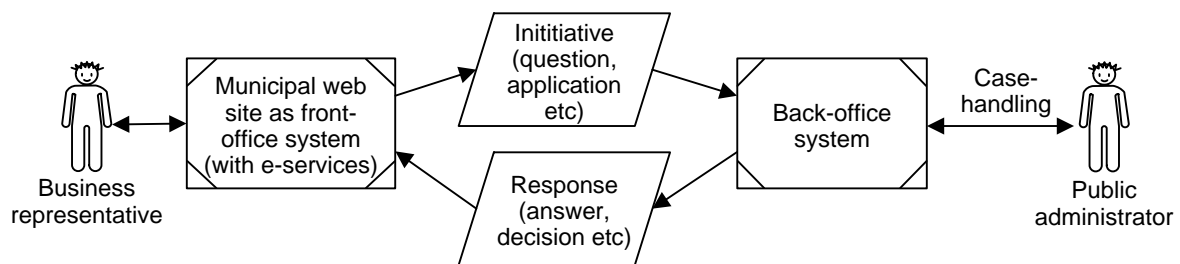
The response time varied between the municipalities. There were three municipalities (of six) that responded within 72 hours. Two responded within two weeks and one within four weeks. The municipality that used the correct way to respond (through SPC) responded within two weeks.

These data gave indication that the communication through *verksamst.se* (as the PSC) did not work as intended. We needed to understand better the work situation and instruments within the municipalities. The test results from these municipalities have been complemented with data from interviews and workshop sessions.

When looking from the municipal view-point another simplification ideal appears. This ideal does not take into account the use of a national web portal in-between the municipality (and its IT environment) and the citizen/business user. The municipal ideal builds on a seamless transfer of electronic data between web-based e-services and back-office case handling systems. A citizen (e.g. a business representative) should submit a question or an application through a web-based e-service system and this information should be transferred electronically into the back-office case-handling systems in the municipality. The relevant



public administrator can work directly into this system and prepare a response that will sent back to the front-office system where the citizen can get access to this response information (figure 3).



*Figure 3. Municipal ideal of seamless transfer of electronic information between businesses and public administrators*

What has happened when another front-office system (as the national web portal of [verksam.se](http://verksam.se)) has been introduced in-between the business and the municipality (and its public administrators and IT systems)? This introduction has not implied any simplification of back-office processes for a municipality. On the contrary, many steps have been added to the work procedures. Compared with a seamless transfer of information between municipal e-service and case-handling system, the PSC situation adds at least six more work activities in the municipality. In the PSC case, an application from a business will be forwarded by the PSC to an official e-mail address of the municipality. Such an electronic message is intended to be handled by the municipal registrar, who should forward this e-mail (with application) to the relevant case administrator. The six more work activities in the PSC situation are:

- The municipal registrar receives/reads an e-mail (with application as attachment) from the PSC
- The municipal registrar registers the application
- The municipal registrar forwards the application to the relevant case administrator
- The case administrator registers the application in the case-handling system
- The case administrator registers a confirmation through the PSC
- The case administrator registers the decision through the PSC

In the PSC situation, a standard form for application is used, and not the specific application form of the municipality<sup>1</sup>. This implies that there is a greater risk that there is some information that is missing or unclear in the submitted application. If so, this will lead to additional work activities. We have counted to at least four more activities:

- The case administrator registers for supplementary information through the PSC
- The municipal registrar receives/reads e-mail (with supplement as an attachment)
- The municipal registrar forwards the supplement to the case administrator
- The case administrator registers the supplement in the case-handling system

This was handling of an application case. How about just handling a simple question as the one in the inquiry test? Such a question will be sent from the PSC ([verksam.se](http://verksam.se)) to the municipality official e-mail, and will be initially handled by the municipal registrar. The registrar will select a relevant administrator and forward the e-mail with the question. The administrator should according to the legally prescribed procedure, log on [verksam.se](http://verksam.se) and submit an answer. When doing this, the identity of the question (created by the PSC) must be

<sup>1</sup> Different municipalities use their own application forms. This means that there exist many variants of application forms. In some municipalities standard forms are used.

used in order to get the PSC to forward the answer to the right receiver (i.e. the business representative who originally posed the question).

When a municipal administrator receives a question from a business representative through the PSC and forwarded by the municipal registrar, then this question is tagged with a PSC unique identity and also the name and e-mail of the business representative. It should be easy for the administrator to use the tagged e-mail address and through his/her e-mail client direct the answer directly to the business representative. According the legal act regulating the use of PSC, this is not the prescribed way to do it. In section 4.1 above, we quoted an article from this law stating that an authority should (continue to) use the PSC as the communication medium, if a business has started to use it for communication. For a municipal administrator it is obviously more cumbersome to use *verksamt.se* for this response instead of his/her e-mail client. When using *verksamt.se* there are several more manipulations to conduct. It is understandable that a municipal administrator is using the easier e-mail way of communication than through the PSC. This explains that among six responses to the question in the inquiry test, five responses were made through the use of e-mail and not through the PSC.

How should we explain that the other 14 questions to municipalities did not lead to any (adequate) response? There may be different causes for this. The cumbersome communication through the PSC may be one obvious cause. We found out, through interviews with municipal representatives, that the knowledge about *verksamt.se* is very low in the municipalities and that there had not been any establishment of routines for handling of messages from the PSC. There is obviously a great risk, when submitting a question through the PSC, that this question will end up in a “black hole”.

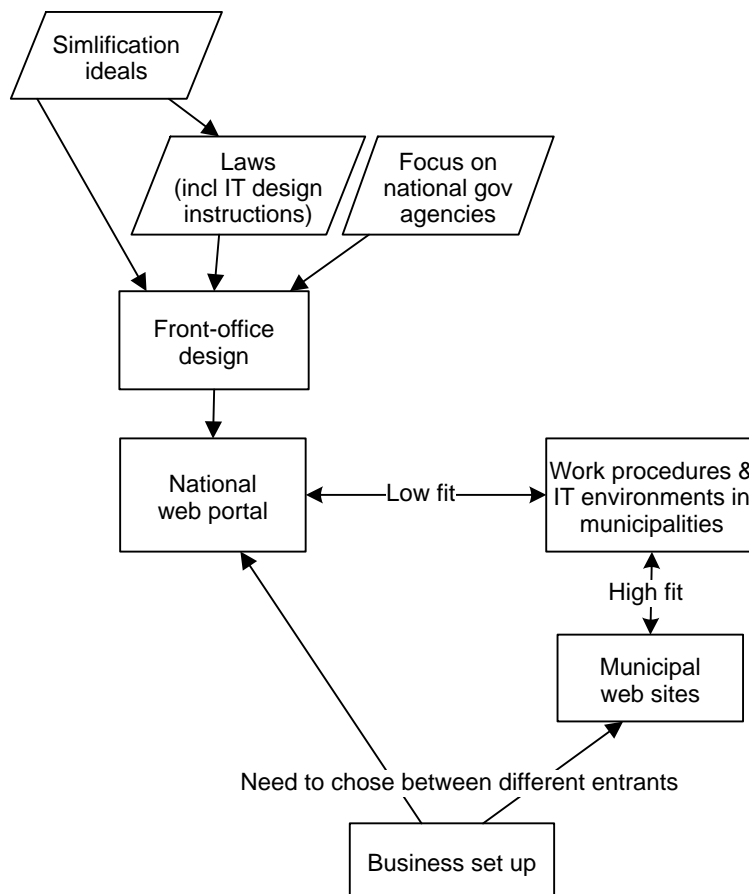
## **5 Analysis: Front-office simplicity and back-office complexity**

We will now use this case study to further the analysis and the drawing of conclusions. This means that we use the case study for theorizing purposes. For this theoretical evaluation (see section 3.1 above) we will apply the theoretical lens of socio-instrumental pragmatism introduced in section 3.2 above.

### **5.1 Restricted design**

A simplification ideal may turn, through implementation, into its opposite. The simplification ideal of creating national web portals (PSC) for businesses can give dysfunctions of complexity if not properly designed. What can be learned, from the described case study in this paper, is how commendable intentions of simplicity can increase complexity in back-office processes. There are three related problems concerning the design of the front-office web portal (figure 4):

1. The legislators have formulated the *laws* in an unnecessary restrictive way and without a proper consequence analysis.
2. The design of the web portal has been based on a clear *front-office perspective* with focus on *benefits for external users* (citizens/businesses). The back-office processes and benefits for public administrators have not been taken into account to any considerable degree.
3. The design of the web portal has been made with a restricted focus on *national government agencies*. The situation in municipalities (their work procedures and IT environments) has not been taken into account to any considerable degree.

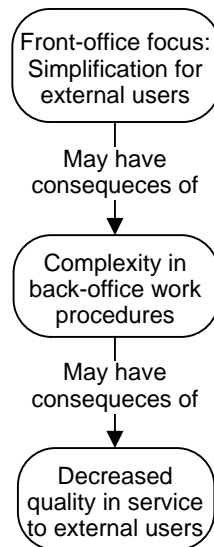


*Figure 4. Front-office focussed design gives low fit to back-office*

This gives a low fit between the designed web portal and the municipalities. The municipalities need to adapt to given preconditions and it is not always that they succeed in doing this. The web portal design is obviously based on a restricted service view, with a strong focus on citizen/business simplification. Simplification in public administration work has not been given high priority in the design process. The Swedish business link portal *verksamst.se* is owned and managed by three national public agencies (see section 3.1 above). The portal designers have worked out proper integrations between the portal and these agencies. Some other national agencies have also been associated to the web portal with clear-made integrations. However, the municipalities have not been addressed, in any considerable way, concerning the portal's relations to their workpractices and IT environments. From interviews with design responsible persons, it became clear that the municipal sector was considered as a fuzzy crowd. There are 290 municipalities in Sweden and the designers felt that it was impossible to have contacts with so many. There exist an official proxy organ for the municipalities (The Swedish Association for Local Authorities and Regions), but this body was at that time more strategically oriented concerning IT issues and not concerned with operational issues. The portal designers felt that they did not have any proper counterpart on the municipal side. Therefore, the design stopped at the door to the municipalities. The work processes and the type of IT systems in the municipalities were not taken into account in the design process. This includes also the fact that work processes can vary between municipalities.

The unintended consequences of back-office complexity in the municipalities (due to a narrow-minded design) gave also a lower front-office service. Since there is no proper integration between the front-office web portal and the back-office situation in municipalities, this has led to a low response frequency for questions submitted through the web portal. This chain of consequences (of socio-pragmatic character) is an important insight

from this study. Intentions for simplification may render consequences of a contrary kind; dysfunctions of complexity (figure 5).



*Figure 5. Intentions for simplification may render consequences of a contrary kind*

There are clear statements of how to design the IT systems (as Points of Single Contacts) in the European and Swedish legal acts. In this case legislation contains regulations implying IT design. The Swedish law (SFS, 2009) that legally transfers and implements the EU Service directive contains more detailed regulations than the Service directive. The Swedish legislators have made an interpretation that it should be easier for the entrepreneurs if the responses for public agencies will pass through the PSC if the communication has been started that way by the entrepreneur. It has been shown above in section 4.2 that the communication process will be cumbersome for public administrators and that this may have negative consequences for the businesses. There is actually not any service value stated by the legislator, only a detailed rule about what instrument to be used by public administrators in specific communication situations. It is definitively questionable if such detailed regulations should be formulated in the legal acts. If the legislator, instead of imposing an IT design, had formulated a clear value about communication, then the real IT designer should have had better design options. It is amazing that the legislator become so detailed concerning the use of IT means. There are no corresponding detailed regulations concerning manual processes in the work situation. This case shows clearly the dysfunctions of a (detailed) legal IT design.

The new national web portal for businesses has been introduced, but the municipal web sites will continue to operate with much information and services for the businesses. These municipal web sites need to be informative and functional since the national web portal does not contain sufficient information and application services. The introduction of a national web portal (with intentions for simplification) confronts the entrepreneur with more IT choices. The entrepreneurs need to navigate and choose between different web affordances. To introduce more possibilities (as a national web portal) in the public IT landscape does not necessarily make the situation simpler for the entrepreneur. The national web portal and the municipal web sites have a competing function (among them) in relation to the entrepreneurs seeking contacts with the public sector. We have also identified in our studies that there exist inconsistencies between the national web portal and different municipal web sites concerning information and services. This makes it of course more difficult to manage the setting up of a business in relation to government demands.

The implementation of the Swedish PSC has been a narrow-minded design approach in several respects. There is a need for a holistic approach that takes into account the citizens'

and municipalities' work procedures and IT environments (e-mail and legacy systems) based on an overall simplification perspective.

## ***5.2 Understanding the behaviour of the municipal administrators***

We now turn to the municipal administrators and try to explain their behaviour in a deeper sense.

- How come that they did not give a proper response at all (70% of the total sample)?
- How come that they responded in a slow way (50% of those who responded)?
- How come that they did not respond in a legally compliant way (83% of those who responded)?

We need to look closer into the socio-instrumental environment of the municipal administrators. The message from a business representative (mediated by the PSC and the municipal registrar) functions as a trigger for action. This is of course only the case if this message has reached the relevant administrator. If it has not reached its addressee (due to negligence or absence of established administrative routines), there cannot be any response.

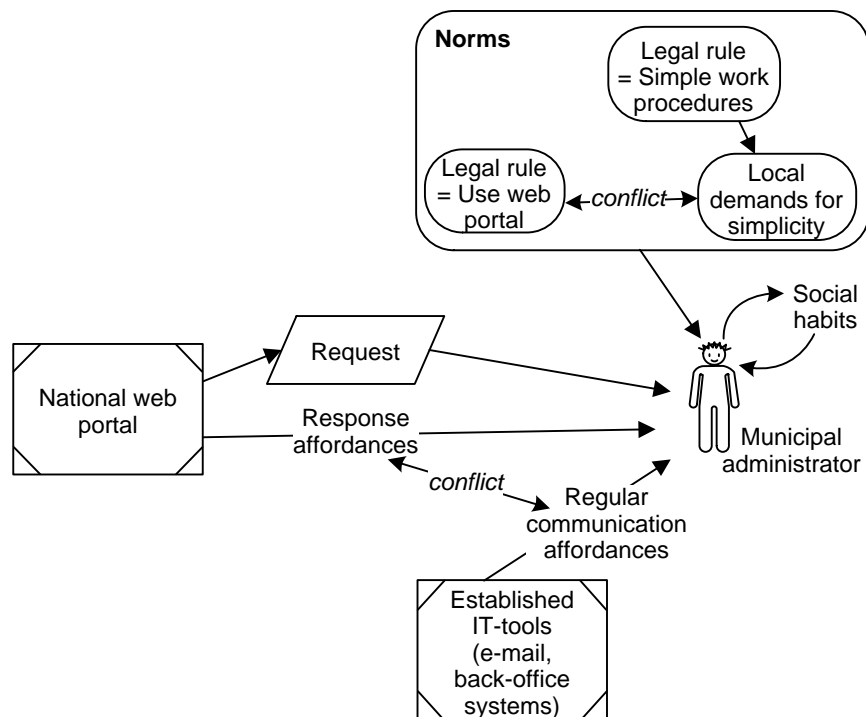
The action of a municipal administrator can be described according to the action scheme of pre-assessment, intervention and post-assessment (figure 1). When having received a message from a business representative (e.g. a question) the administrator needs to assess the action possibilities (figure 6). The action environment consists of both external elements and internal knowledge and values. There exist different external (IT) instruments that afford response possibilities. There are established IT instruments with well-known affordances for the administrator, as e.g. case-handling legacy systems (back-office systems) and regular e-mail. In this case there exist also, outside the organisation, a national web portal with response affordances. This system, with its affordances, is not as well-known as the internal IT instruments of the municipality. The web portal affordances are also more cumbersome than the internal instruments; the administrator needs to log on to the portal and needs to manage a specific message identity in order to direct the response to the right addressee.

There exist also different norms concerning the way of working for the administrator. In the municipalities, many administrators have a heavy work load. Therefore there are demands, both from the organisation and from the persons themselves, to conduct actions in a smooth and easy way. There are local demands for simplicity. These demands are also founded in legal norms as the general administrative law stating that administrative cases should be conducted as "easily, quickly and cheaply as possible" (SFS, 1986). However, there exists also a legal norm that explicitly states that the PSC should be used in such a response situation (from SFS, 2009; quoted above in section 4.1). This new and specific norm has actually not been established as part of many municipalities' institutionalised norms. This new norm is also in conflict with established ideals of working in simple ways.

The response request (mediated through the PSC) brings with it new and specific demands for how to respond. It is not even certain that the administrators are attentive to this specific response demand. The administrators obtain a question and the way to handle it is to answer in the normal way as easily as possible. They apply established social habits (behavioural/procedural institutions), which in this situation probably means that they use regular e-mail. It may also be the case that this new cumbersome way of responding hinders the administrator to respond at all. It can also delay the administrator in his/her response.

We have identified competing IT instruments/response affordances for the administrators. We have also identified competing behavioural norms (figure 6). We claim that there are strong incentives for the municipal administrators to comply with established ways of working. It is hard for new instruments with accompanying new norms to break through and guide the administrators into new behaviour. Even if it is actually means breaking the law.

However, there are no direct sanctions for this behaviour and little risk of being discovered. Probably, many administrators didn't even know that they were breaking the law.



*Figure 6. The social action situation of the municipal administrator when confronted with requests from the national web portal (PSC)*

Our explanation of this municipal administrators' behaviours are based on an identification of an action situation with external instruments (having differing affordances) and institutional elements such as norms and social habits. When confronted with a trigger for action, the administrator responds based on some deliberation concerning what is available for the administrator. This includes what instruments and norms are available. Based on this, the administrator will usually follow social habits. What is partially paradoxical is that the behaviour of the municipal administrators is based on simplification ideals concerning work procedures. Their behaviour is not in compliance with the "simplification ideals" of the Swedish legislators. Their behaviour is, however, according to our analysis fully rational as execution of efficient and responsive actions.

It needs also to be added that we do not judge that a direct e-mail response (which is not legally compliant) implies any service decrease for business representative. For this user there cannot be conceived to be any meaningful difference if the response is mediated through the municipal e-mail system or through the web portal and further forwarded by e-mail.

## **6 Summary and conclusions**

The reform agenda for public sector development, including e-government, contains simplification as a pivotal concern (EC, 2011; E-delegationen, 2010; 2011; Wauters & Lörincz, 2008). It should be easier for the citizens to interact with different branches of the public sector. Administrative burdens should be relieved through the use of modern IT. One such constituent is egov portals (based on a life-event view) that should simplify for the citizen (Wimmer & Tambouris, 2002; Klievink & Janssen, 2009; Vintar et al, 2002; Kunstelj & Vintar, 2004). However, it seems that such an approach is taken for granted to be fruitful. This study has contributed with a diagnostic inquiry, which has revealed possible

dysfunctions of a web portal approach. We have conducted an empirically in-depth study with an intent to also reveal unintended consequences. We have experienced a lack of such studies.

There are many scholars (e.g. Vintar et al, 2002; Kunstelj & Vintar, 2004; Klievink & Janssen, 2009) that claim the importance of taking into account back-office integration when developing a web portal. We have in this inquiry not studied the integration between different agencies. Our concern has been how the front-office portal is integrated with back-office work procedures. There is a great challenge to integrate one nation-wide portal with all the local authorities of this nation; as has been shown in this case. One claim from Vintar et al (2002, p 9) concerning the development of life-event portals and the integration with back-office processes is that “benefits are gigantic, in proportion to the effort and resources needed to achieve them”. We find such a claim naïve. Benefits might certainly be great, but probably huge efforts are needed in order to reach a back-office integration between different jurisdictions and authorities.

As shown through this inquiry, a front-office simplification can have dysfunctions such as:

- Low integration between front-office and back-office IT
- Cumbersome back-office processes
- Decreased service to citizens from back-office administrators
- A complex IT landscape for the citizens consisting of competing IT systems potentially with redundancies and inconsistencies

We do not conceive these dysfunctions as inevitable. We presuppose that there may exist other ways to design and implement egov solutions that can change the situation.

Our work has contributed with important theoretical insights. The main conclusions can be summarized in the following way: Simplification is always pursued in a practice context that may be characterised by both simplicity and complexity. Egov interventions done with simplification purposes, which do not take into sufficient account the prevailing practice properties, may render risks of generating more complexity for different stakeholders.

This study consists of an in-depth study of one web portal. Future studies should apply a similar approach studying other web portals with a purpose of comparison. We have initiated one such comparative study. The theoretical work initiated through this study and paper needs to be continued. We have here outlined some elements of a future egov theory, which can be labelled socio-instrumental egov practice theory.

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