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# Exploring the importance of citizen participation and involvement in e-government projects: practice, incentives and organization

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## Abstract

**Purpose** – The purpose of this research is to investigate if, and in that case, how and what the e-government field can learn from user participation concepts and theories in general IS research. We aim to contribute with further understanding of the importance of citizen participation and involvement within the e-government research body of knowledge and when developing public e-services in practice.

**Design/Methodology/Approach** – The analysis in the article is made from a comparative, qualitative case study of two e-government projects. Three analysis themes are induced from the literature review; practice of participation, incentives for participation, and organization of participation. These themes are guiding the comparative analysis of our data with a concurrent openness to interpretations from the field.

**Findings** – The main results in this article are that the e-government field can get inspiration and learn from methods and approaches in traditional IS projects concerning user participation, but in e-government we also need methods to handle the challenges that arise when designing public e-services for large, heterogeneous user groups. Citizen engagement cannot be seen as a separate challenge in e-government, but rather as an integrated part of the process of organizing, managing, and performing e-government projects. Our analysis themes of participation generated from literature; practice, incentives and organization can be used in order to highlight, analyze, and discuss main issues regarding the challenges of citizen participation within e-government. This is an important implication based on our study that contributes both to theory on and practice of e-government.

**Practical implications** – Lessons to learn from this study concern that many e-government projects have a public e-service as one outcome and an internal e-administration system as another outcome. A dominating internal, agency perspective in such projects might imply that citizens as the user group of the e-service are only seen as passive receivers of the outcome – not as active participants in the development. By applying the analysis themes, proposed in this article, citizens as active participants can be thoroughly discussed when initiating (or evaluating) an e-government project.

**Originality/value** – This article addresses challenges regarding citizen participation in e-government development projects. User participation is well-researched within the IS discipline, but the e-government setting implies new challenges, that are not explored enough.

**Keywords** – e-government, IS development, user participation, citizen participation, citizen involvement

**Paper type** – Research paper

# 1 Introduction

There is a long tradition within the information systems (IS) research field of emphasizing user participation in IS development projects. User participation and user involvement have earned great research interest for several decades, not at least within a Scandinavian research tradition (e.g. Bjerknes et al., 1987; Ehn, 1993; Bjerknes and Bratteteig, 1995; Iivari and Lyytinen, 1998; Kyng, 1998), but also in general social-technical design approaches (e.g. Land and Hirschheim, 1983; Mumford, 1979; 1983). Inviting users to take part in development teams have been made for both quality and democratic reasons, such as distributing workplace power (Kensing and Blomberg, 1998). User participation has by many scholars been viewed as necessary for successful IS development, but there have also been many studies questioning the effects of user participation regarding system success (Lynch and Gregor, 2004). Studies have also highlighted the paradoxes of participatory practices (e.g. Howcroft and Wilson, 2003a). Heeks (1999) questions, for example, the view of participation as a silver bullet in IS development by discussing its different shortcomings and constraints. Cavaye (1995) reports on an extensive review of studies showing both positive and negative relationships between user participation and success. Regardless of a majority of positive or negative consequences, user participation in IS development has mainly concerned situations where the future users are known in advance and consequently a rather well-defined group. The users are usually working within an organization that will use the future system – developed or adjusted to fit a particular organization in-house or by a system supplier; e.g. in an enterprise system (ERP system) situation dedicated to a certain industry or market segment.

In electronic government (e-government) policies and strategic steering documents there has often been a strong rhetorical emphasis on the citizen perspective. In many governments' national strategic action plans for their e-government agenda, citizen aspects, as a part of "customer orientation", are distinctly put forth. The ambition to ease citizens' authority contacts, provide better public services, make governmental internal decision processes and other internal processes more efficient, and increase possibilities to participate in democratic processes are a few examples of intended citizen benefits to be found in many strategic governmental intentions and documents (e.g., Government Offices of Sweden, 2008; The Norwegian Government's Policy for the Information Society, 2005; The Danish E-government Strategy, 2007; Building Britain's Digital Future, 2010). The same ambitions are also present on the European Union (EU) level, which the EU policy framework for the information society and media (i2010) clearly shows (Commission of the European Communities, 2005). The new EU ministerial declaration on e-government follows the same theme as we can read that "*Citizens and businesses are empowered by eGovernment services designed around users needs and developed in collaboration with third parties, as well as by increased access to public information, strengthened transparency and effective means for involvement of stakeholders in the policy process*" (Ministerial Declaration on eGovernment, 2009 p 2). The same trend is also visible outside EU and Europe; e.g. Canada ([www.gov.on.ca/mgs/en/IAAndIT/STEL02\\_046962.html](http://www.gov.on.ca/mgs/en/IAAndIT/STEL02_046962.html)) and New Zealand ([www.e.govt.nz/about-egovt/strategy/nov-2006/](http://www.e.govt.nz/about-egovt/strategy/nov-2006/)) have formulated e-government strategies with similar content.

Despite these appealing citizen-centric ambitions there are many situations where the aim to take citizens' needs into consideration fails to be fulfilled in practice. The citizen perspective often seems to have been forgotten or hidden away in the design and implementation processes of e-government solutions so far (Damodaran et al., 2005). In Sweden for example, the National Audit Office discovered, in an evaluation of national e-government projects, that agencies' internal efficiency was the dominating motive for initiating e-government projects (The Swedish National Audit Office, 2004). However, when shifting from a focus on development of e-government infrastructures and internal governmental IT systems to public e-services, the citizen-centric ambitions are no longer possible to neglect. In order for public e-service efforts to succeed the engagement of citizens is crucial (Jones et al., 2007). Simultaneously, citizen participation is much more complex and therefore

difficult to achieve compared to user participation in IS development situations with known users (Axelsson and Melin, 2007). Public e-services are developed for large, heterogeneous user groups (maybe even a whole national population). The question who should participate, and how, is thus very difficult to answer.

In this article we take the need for citizen engagement as our point of departure. We are convinced that the e-government field must focus on citizens' needs, demands and challenges in order to develop public e-services that are used by many with a satisfactory result. This is supported by Jones et al. (2007) who state that citizen engagement is important when implementing e-government systems to transform service delivery. They also argue that we have to "[...] gauge citizen perspectives on the development and deployment of e-government" in these cases (ibid. p 150). We discuss citizen engagement in terms of *participation* and *involvement* in public e-service development, following Hartwick's and Barki's (1994) definitions of the two concepts (presented below).

The purpose of this article is to investigate if, and in that case, how and what the e-government field can learn from user participation concepts and theories in general IS research. We aim to contribute with further understanding of the importance of citizen participation and involvement within the e-government research body of knowledge and when developing public e-services in practice. Our empirical findings are derived from a Swedish e-government development project with two outputs; a public e-service for citizens' applications for provisional driving licenses and an e-administration (internal) system to handle the incoming electronic applications at the authority. This case consists of two development projects, which show several differences regarding the degree of user engagement. In the article we describe and compare these two projects in order to interpret and identify reasons and explanations for the different results and effects of the development projects. Three analysis themes are induced from the literature review; practice of participation, incentives for participation, and organization of participation. These themes are guiding the comparative analysis of our data with a concurrent openness to interpretations from the field.

It is important to note that we have chosen not to use the term e-participation (e.g. Macintosh, 2006; Andersen et al., 2007; Kamal, 2009) in this article, as this concept refers to a much broader spectrum of citizen participation issues than we are focusing here. Our focus is on citizen engagement in the development of public e-services, not on e.g. how citizens can use IT in order to connect with elected representatives or participate in policy making processes (e.g. Sæbø et al., 2008). Nevertheless, we find our scope in this article closely related to these kinds of issues and our choice of concept should be regarded as a means to sharpen our arguments; not to dissociate us from the e-participation field.

After this introduction the article has the following disposition: In the second section the concept of user participation is discussed in the light of previous IS development research. User participation is also analysed in relation to existing e-government studies. In the third section the research method is described, followed by a presentation of the empirical case in the fourth section. The comparison between the two development projects is performed and discussed in the fifth section. In the last section we are summarizing our conclusions from this analysis and proposing some ideas for further research.

## **2 User Participation within IS and e-Government Research**

This section of the article presents and discusses theories and previous research on user participation in the research fields of IS and e-government. The section ends in a summary of analysis themes induced from the literature review.

### **2.1 User Participation in IS Research**

In Scandinavian IS research there has been a strong interest in user participation during IS development for several decades (e.g. Bjercknes et al., 1987; Ehn, 1993; Bjercknes and Bratteteig, 1995; Iivari and Lyytinen, 1998; Kyng, 1998). User participation has been seen as a means to increase

working life democracy (Ehn, 1993) and has in many situations been regarded as the obvious path for IS development. As a specific school of user participation within the IS discipline, participatory design (PD) evolved in the 70's (Floyd et al., 1989; Schuler and Namioka, 1993). PD has a clear focus on political effects of IS design and is much oriented towards changes in distribution of workplace power due to technology introduction (Kensing and Blomberg, 1998). Besides this political focus, PD also emphasizes user participation as such, as well as methods and techniques to support participation (ibid.). In this section, we discuss user participation in the IS discipline without concentrating the discussion to a certain school, as, e.g., PD, cooperative design (Grønbaek et al., 1993), user-centered design (Olson and Olson, 1991), or a critical research strand within IS research focusing on the oppositions, conflicts and contradictions explicitly seeking emancipation (e.g. to redistribute power between different stakeholders within an organization – from management to users) (Myers, 2009). The reason for this limitation is that we have a more interpretative research approach (further described in Section 3) and thus do not explicitly handle political effects and power distribution in this article.

Although there is wide interest in user participation in the IS research field, there have also been many studies questioning the positive effects of user participation. User participation has even been judged as counterproductive in some cases (McKeen and Guimaraes, 1997; Howcroft and Wilson, 2003a). Howcroft and Wilson (2003b) discuss this in terms of a dissonance between how user participation is presented in literature and how it is performed in practice. Studies have also showed that even though user participation does not imply successful implementation and use of the IT system, it seems to be important in order to capture user requirements and satisfy users' information needs (Butler and Fitzgerald, 1997).

Lynch and Gregor (2004) have conducted qualitative studies of 38 IS development processes focusing on user participation and systems outcome. Their results indicate that it is the degree of user influence in the design process that impacts the outcome. Lynch and Gregor (ibid.) define user influence as being dependent on both what type of participation that is present and how deep this participation is. Their study, thus, shows that user participation in itself is not enough; *we need to elaborate more on what participatory activities that are performed and how the participation is organized.*

In his critical review of participation in IS development, Heeks (1999) discusses several problems with participation. User participation is, for example, used without considering the political and cultural context in which it takes place. Heeks argues that participation cannot ignore context and should, thus, not be seen as a universal technique in all development processes. He also, among other things, discusses veneered, inequitable, and skewed participation processes (ibid.), implying that participation might be forced on a project, that participation in itself does not make injustice in organizations disappear, and that the selection of participants might be focused on those who already have power. In order to cope with these and other problems related to user participation in IS development, Heeks (ibid. p. 12) suggests three questions to be posed before deciding if participation is appropriate in the present project; 1) What is the political and cultural context? 2) Who wants to introduce participation, and why? 3) Who is participation sought from? Do they want to, and can they, participate? The reasons for participating is an issue that Howcroft and Wilson (2003a) also emphasize by recommending end-users to carefully consider the objectives of the system and its potential consequences on their future situation, before accepting to participate. Strauss (1998) indicates that management often perceives participation as a cheap solution to problems of low productivity, high absenteeism, poor quality, and conflict with the workforce. Land (2000) continues this line of thought by stating that developers might have working life democracy ambitions that clash with managerial reasons for participation. These questions imply that user participation is not self-evident in any situation; instead *we need to elaborate on the context of participation, when to propose user participation, for whose reasons participation is suggested and by whom.*

Mumford (1979), who is a pioneer in the field of user participation in IS development, distinguishes between three types of user participation, which imply varying user influence on the outcome:

- Consultative – i.e., user needs influence design decisions made by the design team
- Representative – i.e., affected user groups are represented in the design team
- Consensus – i.e., all users are involved through communication and consultation

Cavaye (1995) pinpoints six user participation attributes. These attributes represent dimensions that possess various values, and can be used in order to characterise user participation. The attributes and possible values are; 1) type of participation (all users or representatives), 2) degree of participation (level of responsibility for the participants), 3) content of participation (involvement in different design aspects), 4) extent of participation (variation in scope in different phases of the development process), 5) formality of participation (formal or informal organisation of participation activities), and 6) influence of participation (effect of participation on the development effort) (ibid. p. 312). The framework of Cavaye (ibid.) has later been used and further developed by Lynch and Gregor (2004) who added a seventh attribute; depth of participation. The depth attribute can be indicated by three factors; the stages of the development process where users are involved, the frequency of interactions with users, and whether the users have any voice in the development process (ibid.). This relates to their notion of user influence mentioned above. The degree attribute, above, is also discussed by Howcroft and Wilson (2003a) in terms of the relation between quality and quantity of participation. They argue that the formal degree of involvement does not consider the fact that a user's *actual* level of participation may differ from his or her *desired* level and this may affect satisfaction. The degree attribute is also discussed by Newman and Noble (1990) who define more superficial types of user participation as “pseudo-involvement” meaning that systems developers just want to catch user needs that are necessary for continuing the design process. *Put together, these seven user participation attributes are analysis instruments for characterizing participation in development projects.*

Hartwick and Barki (1994) argue for a separation between the concepts of *user participation* and *user involvement*, which they imply would increase the possibilities to reach successful IS development. They object to the use of these concepts as synonyms and, instead, they suggest that the concepts must be treated as different issues. In line with this view, they define user participation as “*the behaviours and activities that users or their representatives perform in the system development process*” (ibid. p 441). User involvement is referred to as a psychological state which is defined as “*the extent to which a person believes that a system possesses two characteristics, importance and personal relevance*” (ibid. p 442).

This conceptual division can be related to Beath and Orlikowski (1994) who state that “*[...] in systems development, the interdependence between users and analysts is often rendered as a relationship of dominance/dependence. The very notion of ‘user involvement’ portrays IS as naturally in charge and having the authority to decree the participation of users in the development of their own work support systems. The systems development context thus enacted is one in which some people are designated technical experts and others are designated consumers of technical expertise. Technical experts deploy information technology resources to build systems that users depend on in their work. Users rely on the technical experts to shape applications and hence the meanings the users will be able to ascribe to them.*” (ibid. p 373) Even though we agree that this can be the case in many IS development projects, it is not in this sense we use the concept of involvement here. Instead, we will apply the involvement concept in an e-government context, where citizens often are neither participating nor feeling involved in the development process and outcome.

## **2.2 User Participation in e-Government Research**

As discussed in the introduction above, most e-government studies have so far applied a governmental perspective. Fewer studies discuss e-government from a citizen perspective, or try to merge both perspectives. Reddick (2005) distinguishes between studies from the supply side (the agency) and studies from the demand side (the citizens). He states that there are very few studies that emphasize e-government issues from the demand side perspective (ibid.). Simultaneously, there are researchers

emphasizing the need to research problems related to the citizen perspective as well (e.g., Anthopoulos et al., 2007; Schedler and Summermatter, 2007).

It is also important to understand that studies on user participation in the e-government field not always imply that citizens are participating in the project. Følstad et al. (2004), e.g., refer to agency employees when discussing user participation, in line with one of our studied cases. Oostveen and van den Besselaar (2004) report on a study where participation was reached by letting social researchers act as mediators between citizens and designers by performing telephone interviews. Folkerd and Spinelli (2009) have studied the lack of user participation during requirements capture in public IT projects; focusing on agency employees. They find six areas that seem to suffer from user exclusion; project overrun, illogical and poorly structured user interfaces, users unable to develop a mental model of the entire IT system, unexpected effects to business processes, user ownership and acceptance, and lack of systems integration (ibid.).

There is, however, some recent research focusing on the need for public administrations to understand the needs and interests of the ones who are supposed to be served by the agency; i.e., the citizens (Schedler and Summermatter, 2007). This is particularly essential for agencies which implement e-government solutions. In such cases, the e-government development project teams need to consider the users of the resulting system in the same way as in any IS development project, according to the discussion above. This line of research often uses the metaphor of customer orientation (ibid.; King, 2007) to explain the need for increasing the citizen perspective, which is in line with a New Public Management paradigm (Hood, 1991). The same orientation can be found in Goldkuhl (2007) who focuses what it means to serve a citizen through an e-service and highlights a lack of client orientation when designing public e-services. Ekelin (2003) discusses the role of citizen participation in e-government. She argues that citizens who participate in e-government projects should be seen as active creators or feedback providers. Citizens have the responsibility to communicate their opinions regarding the public e-service under development, but this does not imply that citizens are seen as strategic partners in the development project. Thus, users become information contributors to the project but not co-designers (ibid.). In a recent report from OECD (2009) a division is made between people who are willing but unable to participate and people who are able but unwilling to participate. To make the first group participate governments must invest in lowering barriers for participation. To make the latter group participate governments must make participation more attractive. OECD's conclusion of this divide is that *"governments must expect to 'go where people are' when seeking to engage with them, rather than expecting people to come to government"* (ibid. p 3.).

As a result from the review of user participation literature within the IS discipline, in the section above, and the identified lack of a citizen perspective in many e-government studies, we argue that the citizen perspective needs to be strengthened in order to develop public e-services that correspond to citizen needs and demands. In order to pay more attention to the citizen perspective, the still emerging e-government field have lessons to learn from traditional IS user participation theories. Anthopoulos et al. (2007) state that, in order to consider a public e-service to be useful, citizens must feel that they are served and satisfied by it. Otherwise they will return to other channels (e.g. more traditional ones such as visits or telephone) for their government interaction, and the expected benefits for agencies will not be met. This can be related to Hartwick and Barki's definitions above, implying that citizen involvement in e-government is depending on the citizens' attitude towards the IT based interaction between government and citizen. Fischer (2000), who has studied citizen participation outside the field of e-government, states that citizen participation is complicated and needs to be thoroughly planned in advance in order to be successful. *We need, thus, to develop further understanding of how we can provide opportunities for citizens to both actively participate and be involved in e-government development projects.*

In their literature review on relationships between user participation and system success, Lynch and Gregor (2004) find a strong positive relationship between user involvement (feelings of involvement) and implementation success, but only a moderate relationship between user participation (participative activities) and system success. These findings are interesting and potentially valuable to relate to the e-

government field. When discussing citizen benefits of public e-services we see strong reasons for citizens to participate in the development process in order for the developers to identify citizen needs and demands and, thus, develop e-services that correspond to user needs. Citizen participation is, however, much more complex to achieve compared to user participation in internal IS development projects, as discussed in the introduction. This makes us consider the conceptual division between participation and involvement to be extra important in e-government. There is great potential within the area of facilitating citizen participation in e-government development projects, by, e.g., organizing citizen workshops, collaborating with citizen organizations, using electronic forums to gather citizen opinions, etc. Simultaneously, we have to increase citizen involvement in the outcome of these processes, i.e. to increase usage of public e-services. Citizen involvement regarding a public e-service could, according to Hartwick and Barki's (1994) definition, be related to two attributes; 1) the citizen's notion of importance and 2) personal relevance. Another way to express this is to say that citizen involvement in e-government is closely related to the citizen attitude towards, e.g., a specific public e-service. Does the citizen apprehend that the e-service solves an important problem and is it relevant for him or her to use this e-service? *We need to find ways to prioritize and develop public e-services that meet these two demands, in order to increase citizen engagement in e-government.*

### **2.3 User Participation Analysis Themes**

In the literature review above we have highlighted five statements. The first statement was about participatory activities and how to organize these. The second statement concerned the context of participation including incentives for participation. The third statement put forth participation attributes as analysis instruments for characterizing participation. The fourth statement was about the importance of citizen engagement, both as participation activities and involvement feelings. The fifth and last statement covered the need to develop e-government in ways that fulfil the above mentioned statements, in order to increase citizen engagement in e-government. Based on these statements we have induced three user participation analysis themes. For each analysis theme we pose a set of research questions that will guide our analysis of the empirical data (in Section 5) generated from the studied development projects (introduced in Section 4).

#### *Practice of participation*

How is participation practiced in e-government? How is participation practiced in the e-government e-service development project illustrated in this article? Who participate and how? How often and how deep? What are the similarities and differences from a comparative perspective?

#### *Incentives for participation*

Which are the incentives for external and internal users to participate and/or be involved in e-government development? Which roles are taken and by whom when organizing or participating in development?

#### *Organization of participation*

What implications for theory and practice are there based on the organization of participation regarding prerequisite processes and outcomes in the e-government project illustrated in this article?

## **3 Research Design**

The empirical data discussed in this article was collected within a research project concerning e-service development in the public sector in Sweden. In the research project we studied two related development efforts; the development of (1) a public e-service which made it possible for citizens to apply for a provisional driving license on the Internet and (2) an internal e-administration system which supported the management of the electronic applications at the authority. Below in the next section, we discuss these two study objects as "The Public e-Service Project" and "The Internal e-Administration System Project".

The main reason for choosing these two development projects as empirical grounding in this article is that they show several differences regarding the degree of user engagement. These two contrasting projects are, thus, suitable to compare in order to get a rich view of user engagement.

The research project was performed from 2005 to 2008 as an action research project. The project had the dual purpose of both developing and evaluating public e-services. Action research is a qualitative research method that is often used within the information systems field (e.g., Baskerville and Myers, 2004; Baskerville and Wood-Harper, 1996). At its best, action research contains situations where researchers inform practitioners and practitioners inform researchers in an equal and synergistic way (Avison and Wood-Harper, 1991). However, action research is also considered to be a time consuming and risky approach that might be heavy to manage (Simonsen, 2009). The approach is also considered to be personally demanding and challenging for researchers practicing it (ibid.). Avison et al. (2001) highlight the “double challenge” when trying to combine action *and* research that creates many difficulties; e.g. regarding relevance vs. rigour, the situational dependency and the need for control structures in order to create rigour. In our case the action research approach made it easier to gain good access to empirical data, build trust when collecting data, and get a thorough view of the development process. We have tried to handle this “double challenge” by being explicit about our different roles (as change agents vs. reflective researchers) in every part of the project, as well as making agreements with the practitioners about each party’s responsibilities in the project.

Data was collected in several ways during the project. We participated in many project meetings (on site or by telephone), sometimes taking the role as observer and sometimes as change agents. For example, we arranged modelling seminars, but we have also been critical reviewers of requirement specifications and prototypes of the e-service and IT system. We conducted interviews with different actors involved in the projects at several times during the three years of studies. The interviewees had the following roles in the three agencies: IT strategist, development project manager, system manager, internal investigator, case officers, IT development manager, and external consultants. The case officers represented internal users of the e-administration system and came from several of Sweden’s 21 County Administrative Boards.

The interviewees were selected in order to reach a broad view of apprehensions in the studied development projects. We asked open questions about how they understand the notion of e-service, what opportunities and threats they apprehend, success and failure stories, lessons to be learnt from the projects, and what kind of cooperation and coordination they regard as necessary for the development projects. The interviews had a semi-structured and semi-standardized design and were audio recorded. All the empirical data was analyzed in a qualitative, interpretive way (Walsham, 2006) without using any pre-defined categories or theoretical concepts. The analysis themes, induced from the literature review above, are however used to direct the structuration of the empirical data and the comparative analysis between the two development projects (further described below) in this article.

## **4 Two e-Government Development Projects**

As described above, we studied two e-government development efforts in our research project. The purpose of these efforts was two-fold; (a) citizens’ authority contacts in driving license matters should be facilitated by an e-service and (b) internal processes in the agencies concerning these errands should be more efficient. An important objective was that these outputs should have a distinct service focus of an inter-organizational nature, which should decrease unclear responsibility division between authorities. Three Swedish agencies were involved in the development efforts; Sweden’s County Administrations (SCoA) (which organizes the 21 county administrative boards of Sweden), the County Administrative Board of Stockholm and the Swedish Road Administration (SRoA). SCoA was in charge of the development projects. The projects were related but had different focus; citizen communication and back-office processes. Project representatives, mainly from SCoA, were selected based on personal interest in the project among persons who had enough unscheduled time to spend in the project. This resulted in a situation where project members were not selected due to their skills and

experiences. Thus, their project contributions varied a lot. Internal resources were, to a large extent, complemented with hired consultants since there was not enough internal competence for this kind of projects.

The overall process and background to the two development projects is that anyone in Sweden who wants to get a driving license, first has to apply for a provisional driving license from the regional CoA where he or she is registered. The provisional driving license is approved if the applicant is judged by the regional CoA to be able to drive a vehicle in a safe way. Thus, the permit is an important aspect of traffic security. The permit application was until the e-service was implemented, a paper form that was filled in, signed and sent by mail to the regional agency. The application has to be complemented with a health declaration, a certificate of good eyesight, and in some cases also an application that, e.g., a parent will be allowed to serve as a private instructor. Before the e-service was developed these paper documents were received and reviewed by a case officer at the agency. The case officer also checked if the applicant was punished for any crimes (such as being drunk in public places, drug possession, or any traffic misdemeanour). This information is registered in a database operated by the police and the case officer had access to this information through one of SRoA's IT systems.

Now, after the development projects, all information related to the application is submitted electronically to the agency and the case officer uses the internal e-administration system to view the applications. If the system does not find any problem regarding the applicant's health or crime record, the application is classified as a "green case" which means that the provisional driving license will be granted automatically. "Automatically" here implies that the case officer only has to tick an OK box in the system. In green cases the applicant also gets an a priori decision that the application will be approved. The provisional driving license is then mailed to the applicant in a few days. This process change means that now most of the case officer's time can instead be allocated for the "red cases", i.e., applications in which some kind of more complicated issues need to be solved or applications that will result in a denial. When the provisional driving license has been granted, the CoA reports this to SRoA through their inter-organizational IT system. When the applicant has completed the driving test and the theoretical test successfully he or she receives the permanent driving license from the SRoA. The mix of different responsibilities and contacts in the driving licence life cycle was regarded by the agencies as one of the main reasons for developing this e-service.

Besides the possibility to more efficient use of existing resources at the agencies, the e-service and the internal e-administration system also provided an opportunity to standardise the application handling processes across the nation and the 21 county administration boards. The agencies also had high expectations concerning the quality of data provided by citizens. The use of an e-service when filling in the driving licence application form makes it possible to automatically check the quality and the completeness of data. Another advantage with an e-service is that the underlying IT system directs the citizen to the appropriate CoA – instead of having citizens wondering which board to turn to. Below, the two development projects are further introduced.

#### **4.1 The Public e-Service Project**

The public e-service project aimed at developing an e-service that makes an automated decision in the above-mentioned "green cases" (i.e., applications that do not call for any extensive handling process) and supports case officers handling such cases. By achieving this, the agency will, in the long run, try to save and reallocate resources from handling "green cases" to more complex errands. The e-service development project initially started with no explicit strategy for user participation. The citizen perspective, and the potential of citizen involvement, seemed to be more or less forgotten. Instead, the development of the e-service for driving license matters started in a group of internal representatives from the SCoA and SRoA together with external IS development consultants. The outcome from the development project was not anchored in any citizen requirements or explicitly expressed problem outside the government agencies. The driving license issues were chosen as target for the public e-

service project because these issues were supposed to be rather uncomplicated to develop an e-service for. The development group was mainly focused on how the e-service would influence the internal procedures and routines at the agencies. The external consultants were left with rather free choices regarding how the e-service should be developed and designed. User requirements were mostly “guessed” (supposed) by the agency officers according to their prior experiences from direct citizen contacts and general impressions of citizen requirements and needs.

## **4.2 The Internal e-Administration System Project**

The other part of the development initiative, the internal e-administration system project, was conducted in parallel with the public e-service project. This e-administration system can be classified as *internal e-government* using Beynon-Davies (2007) categories. The scope and extent of this project was not totally clear from the beginning, but this project’s proportions grew during the project time. This project turned out to be much more technically and organizationally demanding than the e-service project. The same project group performed both project, but when focusing on the e-administration system the user participation was fairly high. Case officers from several SCoAs were present in the project and these persons were the future end-users of the e-administration system. Besides the participation of some representatives of the case officer group, “super users” were also selected. These users were offered training in system use early in order to be able to serve as teachers for other users after implementation. The e-administration system was implemented according to an implementation plan which implied that the old e-administration system was supposed to be used side by side to the new system for a period of time. This turned out to be rather time-consuming for the users who had to alter between systems depending on which channel the application was submitted through.

## **5 Comparative Analysis of the two Projects**

In this section we use our three analysis themes (summarized in Section 2.3) in order to discuss the results of the comparative analysis of user participation in the two studied projects. We also relate our results to previous studies. The results are summarized in tables regarding each analysis theme at the end of the sections below.

### **5.1 Practice of Participation**

In the public e-service project (summarized in Table 1 regarding the practice of participation) there was not citizen participation (who) at all. Participation was a non-issue when initiating the project, which had a clear agency perspective aiming at increased internal efficiency. No end-user (citizen) participation makes the quality of end-user participation low (or even non-existing). Instead, users of internal solutions, administrative officials, the project manager, and (internal) managers participated in the project. They tried to figure out what users wanted based on their own experience of contact with citizens from more traditional communication channels (e.g. telephone contacts) as well as their general impressions of what future e-service users would like to have in terms of services, functions, etc. The external consultants also based their decisions on experiences from other design projects. Therefore the depth (extent) of the participation can be described in terms of that most assumptions about citizens were made by the project group based on previous client contacts. Representatives from driving schools’ industry organizations also participated in the project and provided their picture of what future users would like. They also provided their perspective in terms of what kind of e-services their schools would like in professional use. The citizen perspective was not explicit which can be compared to the discussion by Anthopoulos et al. (2007) as well as Schedler and Summermatter (2007) about the need for an explicit citizen perspective in e-government. If we focus the content (what) of the participation, the change from using paper-based forms into electronic ones were more moderate than innovative. To a very high extent paper-based forms were translated into electronic forms; without using the new possibilities related to the new media with its inbuilt ways of creating interaction, search functions, etc. The participation (how) took place by arranging meetings on spot,

meetings over the phone discussing system requirements, mapping processes, using and evaluating prototypes regarding system interaction. The project group had weekly meetings over the phone discussing system requirements and project progress. The setting/context and the aim of the project were to develop a public e-service for application of provisional driving license including a medical health declaration.

In the e-administration project (summarized in Table 1 regarding the practice of participation) the participation included actors (who) in terms of representative participants from the focused organization. Users of other applications, case officers (who are the end-users of the e-administration system), project manager, managers (internal) also participated in the development project together with external consultants. The e-administration system was a standardized workflow system (managing cases and related documents) which was adjusted to this specific context. The project group (what) mapped processes in the organization, discussed system requirements, used and evaluated prototypes developed by the external consultant firms. The participation (how) was practiced through project meetings on spot, meetings over the phone discussing system requirements, process maps, prototypes and system interaction. User participation (depth/extent) mainly took place in early and in late phases (process mapping, requirements and prototype evaluation). Since the participants were much more familiar to back-office tasks the participation was deeper, but frequent mainly when defining requirements. Users made their voices heard in the development process; but major decisions were taken by project managers or external consultants. Users did not make any significant changes to the design of the artefact or the processes. We consider the overall approach to be rather participatory concerning the quality of the end-user participation – with a typical pattern of participating early and at the end of the information systems development process. This can be compared to Gulliksen et al. (2003) who discuss user participation in different phases of a development process. As the participants were not chosen to participate due to their expert competence, their contributions to the final outcome of course varied.

Also in the e-administration project the quantity/frequency of the meetings were held weekly over the phone discussing e.g. system requirements and project progress. The setting/context for the e-administration project was to develop an internal IT system for handling errands and related organizational processes.

**Table 1 Comparing practice of participation in the two e-government projects**

Practice of participation / Project	Public e-service project	e-administration project
Who?	No citizen participation. Users of other applications, administrative officials, project manager, managers (internal). Representatives of driving schools' industry organisations. External consultants.	Representative participation from the organization. Users of other applications, case officers, project manager, managers (internal). External consultants.
What (content)?	To high extent translations of paper-based forms to electronic forms. Not much innovative changes.	Process mapping, discussing system requirements, using and evaluating prototypes of a workflow system.
How?	Meetings on spot, meetings over the phone discussing system requirements, mapping processes, using and evaluating prototypes – system interaction.	Meetings on spot, meetings over the phone discussing system requirements, mapping processes, using and evaluating prototypes – system interaction.
Depth (extent)?	Mostly assumptions about citizens made by the project group based on previous client contacts.	User participation mainly in early and late phases. Frequent mainly in requirements definition. Users made their voice heard in the development process; but major decisions were made by project managers or external consultants.
Quality?	No end-user (citizen) participation.	A rather participatory approach.
Quantity/frequency?	Weekly meetings over the phone discussing system requirements and project progress.	Weekly meetings over the phone discussing system requirements and project progress.
Setting/context?	Developing a public e-service for application of provisional driving license including a medical health declaration.	Developing an internal IT system for handling errands and related organizational processes.

## 5.2 Incentives for Participation

In the public e-service project (summarized in Table 2 regarding the incentives for participation) citizen participation and reasons for involving citizens in the project were not discussed during the initiation of the project. The project started based on a special commission given to SCoA by the Swedish government. SCoA was obliged to develop four public e-services within any area of their responsibilities. Provisional driving license application was chosen since this area was regarded as easy to develop an e-service within, thus, the decision was not based on any citizen demand or need. This is a good example of what Heeks (2006) calls “*an opportunity which could be seized*” (ibid., p. 162) in opposite to “*a problem that needs to be solved*” (ibid., p. 162); i.e. an identified problem with internal and external sources. In line with this lack of citizen participation, the role of citizens was defined as the receiver of the developed e-service. Citizens were not seen as an active contributor (e.g. Ekelin, 2003) in the project but as a future user of its outcome. This indicates a strong internal agency perspective on the e-service development – citizens should in the future apply for their provisional driving licenses by using the e-service. This can be related to Reddick’s (2005) discussion about the lack of demand side perspective on e-government. This is based on the general assumption that citizens demand one-stop shops for their governmental errands and that this also will make the case handling more effective.

In the e-administration project (summarized in Table 2 regarding the incentives for participation) internal users (case officers) participated in the project. Participation was introduced by the project management team and the main reason for this was that case officers were the ones with best knowledge about the application process. The role these internal users had was to represent all users and to have a consultative role (Mumford, 1979), which implies that they had a rather low level of responsibility for the process. Their main role was to serve as information contributors to the project (Ekelin, 2003). As in the public e-service project the internal agency perspective is dominating here.

**Table 2 Comparing incentives for participation in the two e-government projects**

Incentives for participation / Project	Public e-service project	e-administration project
Reasons?	Citizen participation was a non-issue. Not discussed in the planning of the project.	Participation introduced by the project management team.
Roles?	Citizen was viewed as the receiver of the developed e-service, not an active part in the development process.	A user representative and consultative role; low level of responsibility; rather informal organization of participation (see processes) below.
Perspectives?	Addressing the demand side from citizens (a one-stop shop) – to serve a citizen by launching a public e-service – from an in-house perspective.	Internal agency perspective dominates the design process (the agency supply side) using a window of opportunity (a special commission from the Swedish Government to develop e-services) to initiate and finance the project.

## 5.3 Organization of Participation

In the public e-service project (summarized in Table 3 regarding the organization of participation) the citizens’ needs were interpreted by internal representatives. These were recruited to the project based on their experience of the case handling process and/or the fact that they had spare time to spend in the project. Other prerequisites, such as experience of e-service development, use or other skills explicitly needed in the development project, were not considered. The external consultants presented a design solution of the e-service early in the project and this prototype was then followed rather closely. The process was very much focused on translation of the paper-based application forms to electronic media. The outcome of this project was a public e-service that turned out to be less demanded by citizens than expected. The time saved by using the e-service instead of a paper-based form was not appreciated as very important by most applicants as this is an application that is made only once or

very seldom. The e-service was developed with an identification method issued by major Swedish banks that excludes persons below 18 years which is a main user group of the e-service. These are examples of misjudgements that we interpret as due to lack of citizen focus and participation in the project. Without user participation it is difficult to capture user requirements and satisfy users' information needs (Butler and Fitzgerald, 1997).

In the e-administration project (summarized in Table 3 regarding the organization of participation) the internal representatives were recruited as reported above, as these persons were performing both projects. The participation process was rather informal and ad hoc-based. Occurring needs and challenges were driving the project rather than any tactic or strategic plan. The project group was gathered more on a daily basis when problems arose (and on the planned project meetings) and tasks were divided within the group. Such problems could be of many kinds; technology problems, interoperability problems, legal problems, consultant questions, etc. Regarding the outcomes and influence, major resources were spent on user participation by each regional CoA; e.g. by using frequent meetings over the phone. This was not compensated in time or other resources as SCoA did not have a model for this kind of inter-organizational projects. This resulted in an uncoordinated outcome with limited influence on the design of the artefact and the organizational processes. Important design decisions were mainly made by the project managers or external consultants. This situation has some similarities to user participators as project hostages (e.g. Kaasbøll and Øgrim, 1994) or pseudo-involvement (Newman and Noble, 1990). So participation in IS development in this context is no silver bullet by just letting the users participate (cf. Heeks, 1999; Lynch and Gregor, 2004).

**Table 3 Comparing organization of participation in the two e-government projects**

Organization of participation / Project	Public e-service project	e-administration project
Prerequisites?	Recruiting administrative officials with long experience and/or spare time to participate in a development project	Recruiting administrative officials with long experience and/or spare time to participate in a development project
Processes?	Following the external consultants early design proposals. Focus on close translation from paper-based forms to electronic media	Informal, ad-hoc, character of participation processes (based on upcoming needs in the project rather than a strategic or tactic consideration)
Outcomes (influence)	A public e-service that turned out to be less demanded by citizens, and an identification method that exclude persons below 18 years (i.e., a main user group)	Major resources spent on user participation by each regional CoA (e.g. by using frequent meetings over the phone) – no compensation in time or other resources with an uncoordinated outcome. Limited influence on the design of the artefact and the organizational processes. Important design decisions made by the project managers or external consultants (above).

## 6 Conclusions and Further Research

In this section the conclusions will be presented followed by some issues for further research.

### 6.1 Conclusions

The purpose of this research has been to investigate if, and in that case, how and what the e-government field can learn from user participation concepts and theories in general IS research. We have formulated three analysis themes with inspiration from user participation literature in order to guide our analysis in this article. By structuring and discussing the empirical findings according to these themes and the research questions they embrace, we have shown that user participation concepts and theories from general IS research can be fruitful to apply to the e-government field. Below, we draw some conclusions about how and what the e-government field can learn from this.

In the IS context, focusing on development of IT systems with known, often in-house users, participation and involvement often have been discussed in terms of who should *represent* main user

groups. In the e-government context, on the other hand, public e-services are developed for “all of us”, thus, an inclusive ambition must be present. Understanding the needs, requirements and challenges of future users is necessary in order to develop public e-services that will be used, since governments cannot actively stimulate or even force usage in the same way as a private organization can order employees to use a certain IT system. Commonly used methods for user participation, such as participating in the project group, in focus groups or test groups, etc. might be useful in the e-government context as well. But since such representatives for the citizen group always will be extremely marginal in relation to all possible users, we also need other methods to involve citizens.

This makes us draw the conclusion that the e-government field can get inspiration from methods and approaches in traditional IS projects concerning user participation, but in e-government we also need methods to handle the challenges that arise when designing public e-services for large, heterogeneous user groups. This should also be considered in the context of governmental rules, issues and laws (e.g. regarding equal rights concerning service accessibility) as complementary dimensions compared to IS development and e-service development in the private sector. Many e-government projects have one or several public e-services as one outcome and an internal e-administration system as another outcome, as in our studied case. A dominating internal, agency perspective in such projects might imply that citizens as the user group of the e-service are only seen as receivers of the outcome – not as active participants in the development. The risk is that the rather mature approach to user participation and user requirements capture that is present in many general IS projects is abandoned in favour of less user participating approaches. This understanding is an important contribution to e-government practice and theory, as we both need to handle this challenge when planning and performing e-government projects in practice and conduct research projects to develop more knowledge about possible ways to engage citizens in e-government.

The thesis discussed in this article is that if governments can make citizens interested in e-government issues and develop easily organized and attractive ways to contribute, a broader view of user needs, requirements and challenges will be gathered. The feeling of involvement and the ambition to participate are closely related to each other in this context. We cannot expect citizens to voluntarily participate (cf. the OECD, 2009, report introduced above) if they do not apprehend a notion of this being meaningful to them and thus “makes a difference” for them (cf. Hartwick and Barki, 1994). Involvement is a state of mind – the experience that the e-government expression (i.e., the public e-service) is important and relevant to me as a citizen. The feeling of involvement can be seen as a way to legitimize the development process to citizens (as well as to other user groups). This feeling might be influenced by several aspects related to a particular e-service or its context; such as how important the e-service is to an individual, how relevant it seems to be considering e.g. a life situation, in what way the solution is designed (regarding functions provided, user interface etc), how it is supposed to be used, what service content it offers, etc. Altogether this implies that citizen involvement cannot be seen as a separate challenge in e-government, but rather as an integrated part of the process of organizing, managing, and performing e-government projects.

By using the three analysis themes of participation generated from literature; practice, incentives and organization we have been able to highlight, analyze, and discuss some main issues regarding the challenges of citizen participation within e-government. This is an important implication based on our study that contributes both to theory on and practice of e-government. The themes and the related questions proposed (in Section 2.3) provide a way to structure the analysis of participation within e-government, or IS in general, as well as organizing for participation to actually occur in a development project. We reached further understanding of the practice of participation in the two studied projects by also discussing its incentives and organization. It became obvious that there were no explicit incentives for citizen participation in the public e-service project. A plausible explanation to this can be that the two projects were performed in parallel by the same persons. This fact might have made them neglect the end-user group of the public e-service. This is of course closely related to the organization of participation. There must be a well-designed way to organize how citizens’ interests should be considered in the project, in order to succeed regarding the development process as such, as

well as the result of the project (in terms of artefacts developed and the interdependent organizational processes).

In contrast to involvement, defined as a state of mind, participation is an activity. The one who participates takes active part in (some phase of) the process. Citizens can have many different roles when participating; not only to accept a developed solution, but also to propose solutions, share and discuss design proposals, etc. The way citizens are viewed in an e-service development project might differ a lot and also influence if and how they are invited to participate depending, e.g., on the type of e-service developed or the context of the e-service. The view might be anything from citizens as invisible, citizens as users of the final e-service, citizens as approvers of proposed designs to citizens as drivers of change. This last view implies expectations of the citizen as an active co-producer in e-government development projects. This is a role which of course demands a thorough organization of participation along with distinct incentives to actually actively participate within a development context.

When discussing participation in e-government projects it is also important to note that there are several stakeholders that are influenced by the results besides citizens and case officers. By increasing the citizen focus we do not intend to exclude other actors. Instead, we propose that e-government projects initially need to identify all related actors, in order to be able to organize the project in a way that involves actors in the most appropriate way. In this article, however, we have focused on citizens as this is a very central, but often unexploited, group in e-government projects. By qualitatively analyzing our two development projects we have generated some views on how user participation can be handled in practice. This does not imply that the picture we have presented here is valid for all e-government projects – taken a statistical generalization point of view. However, we claim that our results can be generalized from an analytical generalization point of view – based on a longitudinal action research project covering two e-government development projects and also using IS literature and e-government literature covering e.g. user participation grounding our approach and results. Our intention has been to use this case in order to describe and analyze some important aspects of citizen participation and involvement in e-government projects.

## **6.2 Further Research**

In parallel with the trend of developing public e-services and increasing the e-government ambitions on national and international levels, we see a fast change in IT use among many citizens. During the last two years the use of social media, such as Facebook and YouTube, has grown tremendously, as a part of the Web 2.0 phenomenon. A new way of interacting, communicating and sharing information has evolved. This has raised the discussion about e-government 2.0 (e.g. Baumgarten and Chui, 2009) where networks, blogs, wikis, on-line surveys, etc. are important features. Citizens belonging to this group are willing to engage and involve in e-government – but on their own premises. Maybe this will lead to a shift in how we view citizen involvement; going from discussing how governments should involve citizens to discussing how citizens will involve governments in their networks. There is a possibility that these societal changes will enforce citizen participation and involvement in e-government issues. E-government researchers have, thus, an important mission to study and critically evaluate these changes, in order to understand how the ambition of developing e-government into something that both renders government efficiency and citizen satisfaction can be fulfilled. New, innovative ways for citizens to participate in e-government development will be important to identify and evaluate in the near future, without the view that this will solve all the present challenges with e-government development like a silver bullet (cf. Heeks, 1999; Howcroft and Wilson, 2003a). This seems to be an important research agenda for studies on citizen engagement in e-government in the near future as well as explicitly highlight the phenomenon using the emergent concept e-participation in a broader context (cf. Macintosh, 2006; Sæbø et al., 2008).

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