

E-Services for and by Citizens – Incentives for Development of Local Public e-Services

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Abstract. Electronic government, or e-Government and its many synonyms, has been on the international agenda for several years. Today e-Government is an emergent research field and currently research is being conducted all over the world. Currently citizen inclusion and involvement is strongly accentuated in the development of e-Government, and e-Participation is a rather new research domain within e-Government and is seen as one key to success. This paper presents ideas to create potential to improve the possibilities for citizens to become involved in the design and development of local public e-Services and e-Participation to obtain citizen empowerment. The paper also presents ideas for further research in the area.

Introduction

Electronic government, or e-Government and its many synonyms, has been on the international agenda for several years. The e-Government field emerged in the late 1990s as a context within which different practitioners shared experiences and since then governments at all levels have launched e-Government projects in order to, among other things, provide electronic information and services to citizens, businesses, and other stakeholders through the Internet or other digital means.

During recent years e-Participation has gained more and more importance in striving towards the visions of an e-Society. Macintosh (2006) claims that e-

Participation supports “*information retrieval, top-down engagement or bottom-up empowerment*”. According to Rose et al. (2007, p. 3) e-Participation refers to “*ICT-supported participation in processes involved in government and governance*”. These processes may concern, among other things, service delivery. Grönlund (2006a; 2006b) claims that e-Participation comprises a social arena where citizens interact and that they have to learn to interact on this arena, i.e. to e-Participate.

There is a need for increased user involvement and participation in e-Government (Brown and Schelin, 2005; Ekelin, 2003; 2007; EU, 2006a, 2006b; Makolm, 2006), and e.g. Torres et al. (2005) claims that one challenge for governments is to identify user needs and to design e-Services according to the identified target users. More research on methods and tools for enabling citizens to be involved in the design and development of public e-Services, and to commit to bottom-up empowerment, to e-Participate, is necessary. By taking a point of departure in third generation design approaches, and the theory of Social Systems Design (Banathy, 1996), the aim is to create potential for citizens to e-Participate, i.e. to be involved and participate in the design and development of local public e-Services. In this paper findings from research on user driven design and development of local public e-Services are presented.

Research in the Area and Research focus

Research on public e-Services focused on governments on the national level from the beginning. However, there has been a shift in focus towards local e-Government and several research projects (see e.g. Beynon-Davies and Martin, 2004; Chen and Gant 2001; Ho, 2002; Holden et al., 2003; Janssen and Wagenaar, 2004; Kaliontzoglou et al., 2005; Kaylor et al., 2001; Kreizman, 2002; Moon, 2002; Moon and Norris, 2005; Paris, 2006; Socitm & IDEa, 2002; 2004; and Torres et al., 2005) have focused on local e-Government issues.

From the beginning, research was mainly guided by the governments and their prerequisites for development, e.g. to rationalise and modernise governmental administration (Grönlund, 2001; Kearns et al., 2002; Traunmüller, 2004; Wimmer et al. 2006;), and increased effectiveness, efficiency, and information quality (Danziger and Andersen, 2002). Other prerequisites for development were cost-efficiency (Pieterse and van Dijk, 2006), transparency and responsibility of public governments (Kraemer and King, 2003), the improved interaction mechanism, and in turn better governance tools (Grant and Chau, 2005; Grönlund and Horan, 2005). The focus was also on the technology rather than on social context.

However, citizen demands have been identified as a critical success factor (Basu, 2004; Committee on Governmental Affairs, 2001; Gent, 2003; Hazlett and Hill, 2003; Wang, 2002; Zhou, 2004), and during recent years there has been a

shift from governmental focus to a focus on citizens. There have been several research projects that focus on citizens (see e.g. Carter and Bélanger, 2004a; 2004b; 2005; Kanstrup et al, 2006; Reddick, 2005; and Thomas and Streib, 2003). However, the research conducted mostly concerns the use and adoption of public e-Services. At present time the citizen-centric approach (Accenture, 2002) comprises the dominant discourse in e-Government and the need for greater user participation and involvement in the design and development process has been emphasised in recent years (Brown and Schelin, 2005; Ekelin, 2003; 2007; EU, 2006a, 2006b; Makolm, 2006). Accordingly, there are visions, as well as practical efforts to increase citizen involvement in the development process of public e-Services.

However, at the present time, citizens mostly take an active part in defining, representing, and steering the development process by, for example providing feedback on services provided that were developed and produced at someone else's initiative. According to Janssen (2006), the most frequently adopted user involvement in the development of e-Services is user representation in project teams. Thus, there are not many opportunities for citizens to take part in planning and decision-making processes and there are few methods developed for these purposes. Jaeger (1999) points out that when users themselves are not directly involved in the development process, the designers and producers have to design the technology on the basis of their own hypotheses about users.

However, a number of studies of public e-Services have been conducted to determine which services citizens actually need and desire (see e.g. BISER, 2003; Cook, 2002; Gareis, 2004; SIBIS, 2003; and Sleeman, 2004). These studies conclude that, in most cases, governments do not, to a great extent, provide public e-Services that are needed and desired by users. Consequently, there is a gap between government supply of public e-Services and citizen needs, requirements, and desires. Consequently, the need for user involvement in the development of public e-Services has been emphasised by researchers as well as practitioners. In other words, there is a need for the development of methods for citizen involvement in the design and development of local public e-Services.

During recent years electronically supported participation, or e-Participation, has gained more and more importance within e-Government and the development of the visionary information society and e-Society. According to Macintosh (2006) e-Participation means using information and communication technologies to involve citizens in democratic decision-making, including policy making. However, e-Participation is also seen as a wider concept including e-Service development and delivery (Ekelin, 2007; Macintosh, 2006; Rose et al., 2007), and according to Grönlund (2006b) e-Participation in the social arena is the key to success, both for individuals and for government organisations and this is the key to good e-Service design. Accordingly, there is a need to increase the citizen

potential to e-Participate and to be involved and participate in the design and development of local public e-Services.

E-Participation, User Involvement and User Empowerment

E-Participation is a rather new research domain within e-Government which may concern the involvement of practitioners, citizens and politicians in electronic public administration, service delivery, policy-making and decision-making. E-Participation has been described by Macintosh (2006) as *“ICT-supported participation in processes involved in government and governance. Processes may concern administration, service delivery, decision-making, and policy-making”*.

Macintosh (2004) characterises e-Participation as consisting of three main processes; *e-enabling*, *e-engagement* and *e-empowering* and she describes tools for e-Participation as the use of information and communication technologies in order to support *“information retrieval, top-down engagement or bottom-up empowerment”*. Ekelin (2007) claims that e-Participation is about both the governmental rationalisation, and different activities of developing online tools for increased participation as well as traditional exercises within the area of e-Democracy. According to Ekelin (2007), an important part of developing e-Participation is the design and development of e-Services, and e-Participation must be *“seen and understood as an official arrangement including the means and acts of governing ourselves and others”*. In this paper the concept of e-Participation comprises citizen involvement and participation in the design and development of local public e-Services.

During the years, there have been different approaches to user involvement in systems design. In the area of information systems, one of the perhaps best known concepts originating from the Scandinavian school is that of participatory design, meaning that design is neither done for, or by, the users, but with the users (Ehn and Kyng, 1987). In participatory design (Ehn, 1993; Floyd et. al, 1989; Nygaard, 1979) the stakeholders of a system are committed through the generation of a reciprocal relationship. According to Kyng (1991) the cooperative design process constitutes a milieu facilitating mutual learning among stakeholders.

As a next step in the research on systems design, the third generation design approaches were developed, i.e. the ‘designing within’ approaches. These design approaches are guided by the open, complex, indeterminate, and self-organising nature of human systems. One of these approaches is the Social Systems Design approach (Banathy, 1996). According to Banathy (1996), three interacting and integrated ideas create the requirements for the approach of Social Systems Design and a designing system, i.e. the user-designer, the designing community,

and the design culture. Banathy (1996) argues that it is the users, the people in the system who are the experts when designing systems, i.e. systems have to be designed by those who are served by the system, who serve the system, and who are affected by it, i.e. the system stakeholders. Social Systems Design is a relatively new intellectual technology that can add value to society and enables us to develop our social systems in accordance with the realities of the information and knowledge age. Social Systems Design is directed towards what systems 'ought to be'.

Citizen empowerment is central to the area of e-Government. The concept of empowerment is multidimensional and has been used in different contexts and has been differently formulated (see e.g. Beer, 1972; 1974; Jackson, 2003; Kaufmann et al., 2004; Kelly, 1998; and Stern et al., 2005). Alsop et al. (2006, s.1) claim that empowerment is "...the process of increasing the capacity of individuals or groups to make choices and to transform those choices into desired actions and outcomes". Banathy (2004, p. 207) claims that, "even if people fully develop their potential, they cannot give direction to their lives, they cannot forge their destiny, they cannot take charge of their future – unless they also develop competence in taking part directly and authentically in the design of the systems, organisations, and communities in which they live and work. This is what self-empowerment is about".

According to Banathy (1996), Social Systems Design enables us to create a truly participative democracy and it empowers people to direct their progress, to identify their need for change and to translate their ideal vision of the society into a conceivable reality. In the research discussed here, one of the main objectives is to find ways of empowering citizens in the development of future e-Government, especially local public e-Services.

Towards Citizen driven design and development of Local Public e-Services, e-Participation and Citizen Empowerment

Citizen involvement in the design and development of local public e-Services is important, and research conducted (Löfstedt, 2007a; 2007b; 2007c; 2008) show that the different groups of citizens have different needs and requirements for e-Services depending on their life situation. Consequently, it is unfeasible to regard citizens as a homogenous group of users and it is important to involve users of different categories in the design and development process.

Enhanced citizen involvement and participation can be attained and achieved in several ways. In research conducted (Löfstedt, 2007b; 2007c; 2008) it is found that concepts and ideas of Social Systems Design can contribute to citizen

involvement and participation in the design and development of local public e-Services. It is for example possible to, with rather simple means, conduct seminars with different categories of users. User seminars can create potential to identify user needs and desires and to identify differences between different categories of users. User involvement also entails possibilities to identify so called 'unknown' needs, i.e. needs that have not been identified by the government before, and that the interplay between the participants entails synergy effects. However, this mode of procedure only allows user representatives to be involved and participate and the seminars are bound in time and space. In the ideal world of Social Systems Design, all users are involved in design, and hence this method does not fulfil the vision of engaging all users in the design and development process.

However, Wikitegrity (Holmberg, 2007) could create potential for implementing the ideas of the user-designer and the designing community in Social Systems Design into the design and development of local public e-Services. User participation and involvement via the Internet create potential to virtually involve citizens spread over a vast area with various skills and competences in the design and development process. Hence, Wikitegrity and citizen discussions via the Internet can possibly pave the way for a first step to include all users, and create potential for citizens to participate and engage wherever they are and whenever they want to.

However, the method applied in Wikitegrity, i.e. Team Syntegrity, would better suit discussions focused on one specific issue, i.e. the discussions in the infonet should be concerned with topics of one clearly-defined issue. If so, the discussions would be able to enrich each other. However, in discussions in line with Wikitegrity, it is hard to provide the effects of convergence. However, one advantage of the use of the method in this context is that all discussions are written down and can be read at a later time. Nevertheless, it is feasible to conduct citizen discussions on the Internet on municipality issues, and in the ideal case continuous and ongoing sessions would be a natural input to local government decision preparation. To fulfil the desire for a continuous discussion where citizens can discuss topics independent of time, a free discussion forum steered by the citizens would be needed as a complement to discussion forums using Wikitegrity.

When it comes to media for the discussions, the MediaWiki entails advantages because of its latitude, which can entail that more citizens can participate in spontaneous and rich discussions. MediaWiki can contribute to the fulfilment of the idea of design steered by users. However, the media should be adjusted to the specific situation to suit the idea of forums for discussions, both free discussion forums as well as discussions in line with Wikitegrity. As an alternative, another medium which supports free discussion forums could be used. However, citizen potential to steer the discussions must be complied with.

It is possible to create potential for the user-designer in the design and development of local public e-Services. However, there are obstacles to fully realising the idea of the 'designing within' approach, e.g. the lack of motivation and interest among users, the digital divide, and technical factors in the development of local public e-Services as well as the political system.

A shift in focus from the 'expert designing with users' approach to the 'user designing with experts' approach would be feasible and worthwhile.

Furthermore, there is potential to create some kind of a designing community. In the seminar groups the users were divided into different groups and these groups shared common interests. The citizens involved in design and development by means of Wikitegrity can fulfil the requirements of a designing community to some degree. In the infonet the participants are able to develop a commitment to each other and they have a shared vision and purpose. Furthermore, each participant has the opportunity to make their voice heard and each participant is equally valuable. However, one obstacle to overcome is the lack of motivation and interest in participating among citizens. However, in the research study conducted, findings indicate that citizens, who participated in the study where the concepts of Wikitegrity were tested, expressed a desire to participate in discussions on municipal issues. These findings can strengthen the arguments for an implementation of ideas from the third generation design approach.

Wikitegrity provides potential to create discussion forums and virtual communities where citizens, politicians and other stakeholders can interact and participate. E-Participation is, among other things, about acting on a social arena and participating in e-Service development and delivery, and concepts and ideas of Social Systems Design can contribute to creating good conditions for such arenas.

It is possible to engage and involve citizens in local government issues on their own conditions. If citizens are allowed to participate and be involved, to e-Participate, they have the potential to empower themselves, to identify their own needs for change and to direct the progress of local e-Government. Today, there are discussion forums open for citizens in some local governments in Sweden. However, Wikitegrity and Social Systems Design can create potential for an arena where discussions are steered and directed by citizens and where citizens can be involved and participate on their own conditions and enhance the potential for empowerment in local e-Government and in the design and development process of local public e-Services. If the vision of a designing community is attained and there is a design culture developed, citizen participation in line with the ideas in Social Systems Design as facilitated by Wikitegrity could entail enhanced willingness among citizens to participate and be engaged in these issues. Furthermore, Wikitegrity discussions create synergy effects as the discussions and the participants enrich each other.

As mentioned above, a design culture is one idea in the approach of Social Systems Design. Such culture must, in a first stage, be developed during the development process. However, this is not tested so far and remains an issue for further research.

Finally, ideas of Social Systems Design are assessed as feasible and these ideas, where applicable, can contribute to user involvement and participation in the design and development of local public e-Services, and can form a foundation for the development of methods that include user participation and involvement and this should enhance citizen empowerment in the design and development process.

However, design by everyone according to Banathy (1996) must in some way be adopted into our current governmental system of representative democracy. This, however, is a major issue for further research in the area.

Closing Remarks

The results of the research presented in this paper indicate and point out some possible ways for citizens to participate and be involved in the design and development of local public e-Services. In the research concepts of the Third generation design approach and Social Systems Design were the point of departure to create potential for increased citizen involvement and participation. In the ideal world of Social Systems Design, all users are involved in design, there must be a designing community, and people must adopt a design culture. These ideas are far from being fully met and with the political system in mind, it would be hard to fully implement them. Furthermore, at the local level of government, at least in Sweden, democratically elected politicians make the decisions, and different civil servants prepare and carry out these decisions. The ordinary citizen has a rather weak position in this system and citizens are able to have some impact in the local level of government through general elections and the political parties. With this in mind and also the experienced unwillingness of citizens to participate, the ideas of Social Systems Design would be hard to fully realise. However, results of the research conducted have shown that concepts and ideas of Social Systems Design can contribute to enhanced citizen involvement and participation in the design and development process of local public e-Services and for citizen potential to e-Participate and achieve empowerment. However, there has to be further research on these issues.

Further research

The research conducted was an attempt to contribute to the need for citizen involvement and participation in the design and development of local public e-Services. However, the research presented constitutes a first step towards citizen

involvement and participation according to ideas of Social Systems Design, by testing some new ideas for citizen potential to be involved and participate. Consequently, there is a need to go further and continue the research and the development process.

- This research comprises two initial tests of an application of Social Systems Design on local public e-Services. As the third generation design approach and Social Systems Design is assessed as promising in contributing to citizen involvement and participation in the design and development of local public e-Services, there should be further research and tests conducted of methods and modes of procedure to applying these ideas and to creating a better foundation for further development of methods.
- Within Wikitegrity the participants are co-operating in different groups discussing different issues. Further research on virtual teams, methods and tools, should be interesting to further develop the opportunities for citizens to virtually be involved in design and development of local public e-Services.
- Banathy (1996) claims that to be able to be involved in design, the stakeholders of a system need to acquire knowledge about design, i.e. to develop, what he calls, a design culture. A design culture can enable the citizen to better act on the social arena, i.e. to be involved in the design and development of local public e-Services that are desired and needed by the citizens, and to e-Participate. The citizens have to acquire knowledge about design to be able to better empower themselves individually and collectively. Furthermore, to further increase the citizens' willingness to be involved in design and development, the development of a design culture is deemed as important and consequently, this is interesting for further research.
- Interest in participation and involvement in the design and development process of public e-Services is meagre among citizens. Efforts to increase citizen willingness to participate are required. Citizen awareness of the potential to affect development and citizen empowerment could create potential for establishing citizen interest and enthusiasm. Empowerment is deemed as essential when creating potential for citizen involvement and participation in the design and development of local public e-Services. More research is required concerning this on the individual level as well as on the group/team and organisational level. Furthermore, more research is needed on possibilities for citizen empowerment and e-Empowerment.

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