External User Inclusion in Public e-Service Development: Exploring the Current Practice in Sweden

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Abstract. For the last decade e-government research has underlined the importance of an external user perspective in public e-service development and there have been numerous attempts to provide guidance and directions for government agencies in this matter. Individual research studies show little progress in this matter, but a more generalisable picture of the current state of external user inclusion is missing. The aim of this paper is to provide a better and more generalisable understanding of Swedish government agencies' current practice of external user inclusion in public e-service development. In order to do so, we have interviewed Swedish government agencies regarding their perceptions on external user inclusion. Our findings show mixed results regarding attitudes towards and current practice of external user inclusion. It is clear that organisational size and previous experience of public e-service development matter. At the same time challenges such as a general lack of resurces and a lack of time are seen as general barriers, regardless of agency level and size.

Keywords: E-government, Public e-service development, External user inclusion, Government agencies, County Councils, Municipalities

1   Introduction

Public e-service, i.e. government's provision of electronic service to inhabitants of the society, such as citizens and business organisations, is a central and vital component in e-government programs, digital agendas, and policies worldwide. When introducing public e-services, governments' main priorities have been to enhance internal efficiency in terms of automating internal, manual processes and any user considerations have been left out [1, 2]. As a consequence, most public e-service development projects have been characterised by an inside out perspective in where external user considerations have been given little attention [3]. At best, external user considerations have been guessed or assumed by public e-service developers instead of thoroughly analysed [4]. As a direct consequence, several public e-service

initiatives have failed since the external users, e.g. the citizens, have preferred other existing and more traditional service channels, such as phone, mail or physical visits, simply because they do not see the point in using the electronic variants. However, in e-government research [e.g. 4, 5] as well as in government steering documents and digitalisation plans and agendas [e.g. 6, 7], the importance of an increased attention towards external users in public e-service development is emphasised. The common belief is that such an increased attention towards e.g. citizens enhance the probability for successful public e-service development and deployment [8]. However, despite these efforts little seems to happen in practice: public e-services are still being developed mainly from an internal perspective favouring inter-organisational values and goals over user oriented goals [e.g. 9, 10, 11]. Though, being valuable contributions, it is clear that most reports on external user inclusion in public e-service development are based in individual case studies which hardly ever lead to any generalisable findings [12]. At the same time, as concluded by Bannister and Connolly [13], the amount of valid case studies within the e-government research field are significant. What is missing is a more general and generalisable understanding of external user inclusion in public e-service development. As a first step, we have chosen to address a Swedish development context. Hence, the aim of this paper is to provide a better and more general understanding of Swedish government agencies' current practice of external user inclusion in public e-service development. In doing so we add new findings to the e-government research field when highlighting to what extent external users are included in public e-service development in Sweden, agencies' future directions within this matter, and underlying motives for their choice of direction.

The paper is structured as follows. In the following section we present related research whereas we in the third section outline our research design. Section four presents our analysis for each government agency level respectively. The paper is ended by results and conclusions in where research implications and suggestions for future research are discussed.

2   Related research

The need for external user influences in public e-service development is a valuable and much needed component that enhance the probability for successful public e-service development and deployment [8], or as Jones, Hackney and Irani [14p. 150] put it: "*key to the success of any e-government deployment is the citizen*". External user inclusion in public e-service development is discussed in different terms in e-government research. Lindblad-Gidlund [15] discusses it in terms of citizen driven development whereas Olphert and Damodaran [16] use the concept of citizen participation. Another commonly used term in e-government research is user participation [e.g. 17, 18] where the users, most often referred to as the citizens, should be playing an active role in the public e-service development process in terms of highlighting needs and experienced problems that can be eased or solved via public e-services. Worth highlighting is that external user inclusion should not be mistaken

for e-participation. E-participation is related, but different concept where citizens take part in democratic processes regarding e.g. political decisions and policy making [19] whereas user participation focuses on representing external user interests in public e-service development [5].

As highlighted in the introduction it seems that despite numerous research efforts where the importance of external user inclusion are highlighted, little progress is to be found in practice. Illustrating examples are found mainly in Scandinavian research studies of user participation where the possibility to take an independent position has been seen as natural elements in research since the 1970s [20, 21].

Scandurra, Holgersson, Lindh and Myreteg [9] report findings from a case study on the development process of online electronic health records. They found that external user inclusion during the development process was limited to a few poorly documented focus group meetings with patient organisations with no real impact on the development process. Axelsson, Melin and Lindgren [10] have analysed the development process of anonymous exams at a Swedish university. The findings presented conclude that external user inclusion can be characterised as a mix between informal and formal user representation in where different user groups were included to different degrees in the development process. In another case study of the development process of electronic driving license applications, Axelsson and Melin [11] conclude that no real external user considerations were made during the development process which in turn also implied that user impact in the development of public e-service was more or less absent.

One notable exception is provided by Lindblad-Gidlund [22] who presents a practitioners' perspective of external user centredness in public e-service development within one Swedish government. In the study, several practitioners are interviewed regarding their experiences of and attitudes towards external user inclusion in public e-service development which provides a general picture within one government. However, the results provided by Lindblad-Gidlund [22] are hard to generalise. What is missing is a more general overview of government agencies' attitudes towards and

3 Research design

This study is based on semi structured interviews [23] with Swedish government agencies in their role as public e-service providers. In Sweden, government agencies are classified into three levels: 1) national, 2) regional, and 3) local [24]. In order to identify general patterns highlighting potential similarities and differences, all government agency levels were included in the interview study. In total, 24 interviews were conducted, distributed over 6 municipalities representing local government agencies, 6 county councils representing regional government agencies, and 7 government authorities representing national government agencies.

The size of the agencies varied. As an example, the number of residents for the municipalities interviewed were between 5.000 and 140.000 whereas the county councils were of similar size. For government authorities, there were major differences in size in terms of the number of employees, ranging from less than 500 to

more than 10.000. The respondents at each agency were selected based on their current involvement and overall insights into public e-service development projects and had work titles such as project manager, CIO, and business developer. In some agencies, more than one suitable respondent were identified, but in most cases one respondent per government agency was interviewed. As stated, the interviews were semi structured, i.e. a fixed interview guide was used as a template for all interviews but with the option to ask clarifying questions whenever needed.

The interview guide contained a basic set of questions covering the topics: 1) the government agency´s viewpoint and current provision of public e-services, 2) the government agency´s general view of external user inclusion in public e-service development, 3) how external user inclusion currently is practiced within the government agency, and 4) challenges and potential problems based on experiences of external user inclusion in public e-service development projects. The interviews were carried out either face-to-face or via telephone and lasted about 30 to 45 minutes each and were thereafter transcribed. The analysis was conducted row by row from the transcribed interviews in order to identify answers to the basic set of topics on which the interviews were based. The main goal with the interviews was to obtain rich and qualitative data on public e-service providers' attitudes towards and experiences of external user inclusion in public e-service development projects. The study is based on a qualitative and interpretive research approach [23, 25, 26], since the main interest lies in understanding and explaining government agencies' attitudes towards and experiences of external user inclusion in their role as public e-service providers. This means that the main focus of this study is to explore Swedish government agencies' current situation in order to understand the current practice in public e-service development with respect to if and how external users are included in public e-service development projects.

4 Analysis

The analysis of the empirical data reveals major differences both between and within different government agency levels. In the following sections we will present our findings for each government agency level respectively. It should be noted that all citations from the empirical data (interviews) have been translated from Swedish.

4.1 Government authorities

When analysing the empirical data from government authorities, is becomes clear that external user inclusion in public e-service development is seen as an important component in order to provide good public e-services: "*It is the core of the development process, to meet the needs of the users. It is the linchpin to deliver something good which generate value. In order to meet our customers' needs and processes we need to have user participation*". It seems clear that government authorities have realised the importance of including needs and perspectives from the main user group of public e-services, which is illustrated by the following quote: "*The*

main target group for us are genealogists and our goal is to serve them properly. We know quite a lot about this target user group and many of our employees are researchers themselves".

When it comes to how external user inclusion is present in public e-service development, the level of maturity varies. Some government authorities have fixed routines for how external user interest should be included in public e-service development whereas others have no such formal process. The most common approach is to collect opinions, comments and complaints via customer services. One illustrating example of such a routine is shown in the following quote: "*We get quite a lot of information through something called the official mailbox. There are very many comments. There were many comments when we started in 2002 regarding the possibility to declare taxes electronically online. In the declaration period, we received about 150 comments per day. It was ordinary people on the street who submitted their views on how to think*". Other government authorities have more or less fixed networks of external users, mostly in terms of business organisations, who can be contacted on short notice in order for fast responses in different matters related to public e-service development, or as the following quote illustrate: "*We collect our focus groups from different regional channels and meet them close to their home field*". As it seems, government authorities where the main user group are business organisations, seem to have a better and more efficient dialogue if compared to government authorities where citizens are the main target user group.

When it comes to limiting conditions and potential challenges hindering external user inclusion, government authorities have similar experiences. One often mentioned drawback of external user inclusion is a fear of disappointed users where high user expectations cannot be met: "*That's what is usually discussed, when you sit and prototype and try to design something, when there is a disappointment among the users when the result is not in line with the expectations*". Another commonly discussed challenge is time in terms of impatient users who want quick results which cannot be delivered simply because the reality is far too complex, as the following quote illustrate: "*It's problematic when I meet young entrepreneurs who want everything to go so fast and be so easy. It can be a problem since the tax legislation is not that easy, especially VAT is complicated and cannot be simplified. It is difficult to get these people to realise that sometimes you cannot just answer yes or no without requiring a little more than that*". Time is also discussed in relation to competence, i.e. the ability to put needs and ideas into practice and present design suggestions quickly in order to keep the external users interested in being included: "*A prerequisite is that you can quickly create prototypes that can be discussed and then quickly begin a realisation of it to design and deliver something a few months after that. It must go fast, it cannot be as it is today where it takes a year to do a teeny thing, we would not make it, they [the users] would be mad at us. You are completely useless, they would think*".

4.2   County councils

During the analysis of the empirical data from county councils the general attitude towards external user inclusion is positive. County councils agree upon that there is a need for a more nuanced picture of needs and expectations from external users in public e-service development, but at the same time clarity and consistency regarding how such work should be carried out is perceived to be missing, or as the following quotes highlight: "*I would like to include representatives of various user groups in the development process, such as through focus groups. Today there is often very little focus on the person who will finally use the service*", and "*I have not seen a nationwide methodology that should be applied in e-service development. There is too little support to get to the different end users in a good well thought through manner*".

On a general level, external user inclusion in public e-service development within county councils is present in various forms, often in terms of involving different patient groups in the development process. Often, such efforts have been focusing on appearance and user interaction whereas needs and functionality have been given less attention, as highlighted in the following quote: "*The patient organisations involved include rheumatism, visually impaired, etc. We have also tested the system on citizens who have not used the service before and gathered comments we tried to consider*". In larger public e-service initiatives, it is in most cases politicians who decide what to initiate without taking into account if there is any expressed need from the expected users, i.e. the citizens. The following two quotes provide illustrative examples of this situation: "*I have a good example, we have developed a price comparison service in dentistry and the service was very complicated. When asking questions to people it becomes clear that they really do not want it, they are not interested. They say they would rather compare the quality and other criteria than those we [the politicians] have set. No one wanted to be involved, either residents or dentists, but it was still politically decided that it [the e-service] would be developed*", and "*In most cases it is not needs from patients but other sources which initiates development. For example, the app we talked about, it was the politicians who decided that it would be developed. This was no good solution and I think that the citizens got no value out of it*".

When analysing challenges and limiting conditions for external user inclusion it becomes clear that time and a general lack of resources are the main delimiters for increased inclusion of e.g. patients. As the following quotes highlight, lack of time is a problem since development work often is carried out as projects and time to delivery of individual project goals is often limited, which in turn implies that basic identification of external users' needs cannot be prioritised: "*I think we would have been working in another way if we had more time. Since the project is an EU project which is limited to three years we have to keep up the pace. We have decided that we will start with a basic version of the system that we launch and then we can always go back and improve it when we get new input*". Also, resources in general is highlighted as a barrier towards increased external user inclusion: "*We would like to have a larger panel that could have tested but we have not, we have not had the time or resources to work with larger groups*". Also, ability and willingness to participate is seen as a

challenge that hinders external user inclusion, i.e. limited knowledge of the healthcare domain and little engagement in health care services per se may hinder external user inclusion initiatives, as exemplified in the following quote: "*The knowledge is limited to know what to ask for...It is generally really hard to get people who want to participate*".

4.3 Municipalities

When analysing the empirical data from municipalities, it is clear that size of the organisations and number of inhabitans matters. In general, larger municipalities exhibit a larger number of deployed public e-services which at the same time can be considered as more mature. When plotted on the four stage maturity model provided by Layne and Lee [27], it is clear that e-services provided by smaller municipalities often end up as catalogue services whereas e-services provided by larger municipalities to a larger extent end up as transaction and in some cases as vertically integrated e-services. When analysing the empirical data, it becomes apparent that smaller municipalities with very limited resources exhibit a somewhat negative attitude towards public e-services per se. Such municipalities experience no pressure from citizens to offer service electronically and the usage frequency of existing e-services is in many cases sparse. The following quotes serve as illustrating examples: "*We see ourselves no winnings at all to provide e-services, simply because there are no demands. We know this since we talk with representatives at different administrations and they say that there are no citizens who are requesting e-services. There are no savings with e-services, just cost increases alone*" and "*If you for example consider the application for alcohol permits, we maybe have four errands per year. To develop an e-service for this is simply not worth-while*". Instead, the main driver for public e-service development is considered to be based mainly on political agendas, as highlighted in the following quote: "*There is no explicit agenda for developing public e-services. The decisions taken politically are probably based on a desire to be a part of a trend. 10-15 years ago, all municipalities should have IT-strategies which have never been read or followed, it is simple a part of the trend*". This situation is also reflected in how external user inclusion is viewed by small municipalities, or as one respondent puts it: "*I don't believe in the idea*". However, other small municipalities are at a general level positive towards external user inclusion, but when it comes to actually implementing it they are sceptic, as the following quotes illustrate: "*To have users as a part of the development process would have been terrific, but how do you do it?*", and "*We have not yet had the opportunity to have the users in the development process but I think it would be a great idea to test it...although it seems hard to actually realise it, but it has been discussed*".

When analysing the empirical data from larger municipalities another picture emerges. There is a higher general interest towards transforming manual services into e-services since there is a belief that such transformations will reduce the administrative burden that most administrative units perceive, or as one respondent puts it: "*The reason to why they want to digitise more is that you simply want to do*

things more effectively and easier to access centrally". However, the degree of which external users are included in e-service development is still very limited, as exemplified by the following quotes: "*That [external user inclusion] is something that we work too little with. It feels a bit awkward to ask users what they want. We have been a bit cowardly there and instead passed it on the administrations that have better knowledge of the citizens and also receive a lot of feedback from citizens*", "*We don't ask, instead we test what works and what doesn't. If it works it works*", and "*We have not yet had the opportunity to include the users in the development....as it is today, it is the administrations' needs that steer and what they think the citizens need*". However, there is one exception. One of the larger municipalities states that they are developing a process description for how external users should be included in public e-service development projects. However, this is not yet in operation but the basic idea is that development initiatives should be based on citizen inputs. Thereafter, the remaining part of the development process will be managed internally. Potential external user inclusion in the actual development process is not yet investigated, or as the respondent state: "*We have not thought much about whether users should be involved in the development process. We have no plan at present but we are not completely uninterested*".

When analysing limiting conditions and potential challenges hindering external user inclusion, the municipalities' arguments are rather similar. A general theme is a lack of resources which in most cases refers to economy and time available. For smaller municipalities this comes as no surprise; at the moment they seem to be struggling with just put any services online. However, also large municipalities experience the same basic problems, i.e. including external users is too expensive, or as the following quotes state: "*Time and money obviously limit how you can work towards citizens*", and "*Actually it is a question of resources, to cope with doing it [external user inclusion] alongside everything else. We are not enough people to be able to cope with it*". Other challenges highlighted are how included external users would be representative for other ones as well as a fear of disappointing included external users, as one respondent puts it: "*It must of course be done properly, it must be fair [external user representation]. If you bring in citizens to participate and then an e-service is developed that doesn't meet the initial expectations...I don't think that is very good*".

5   Results and conclusions

The aim of this paper was to provide a better and more generalisable understanding of Swedish government agencies' current practice of external user inclusion in public e-service development. As shown in the analysis, organizational size matters when it comes to perspectives and real life experiences of external user inclusion in public e-service development.

Government authorities in general exhibit a more open attitude towards external user inclusion if compared to county councils and municipalities. This is not surprising as public authorities per se are more experienced in developing e-services

as well as having larger resources, which in turn means that they have more experience of both successes as well as failures. When it comes to municipalities and county councils with less experiences of public e-service development, a more negative attitude is found. Public e-service development in general and external user inclusion in particular is instead seen as yet another directive that is laid upon already burdened systems developers who are trying their best to just get something online in order to appease politicians and decision makers. As highlighted by Holgersson, Alenljung and Söderström [28], most municipalities, especially the smaller ones, experience a different reality if compared to larger, more experienced government agencies in terms of available resources (e.g. financial, competence) as well as the number of e-services that must be developed. As pointed out by Bernhard [29], municipalities is the agency level that has the closest relation to the citizens on the street-level in where a wide range of services are provided, if compared to government authorities that can focus on just a few nationwide services with a larger volume of users and a different scale in many dimensions. The somewhat sceptic attitude towards external user inclusion within foremost municipalities, but also in county councils, may also depend on a possibly multi-dimensional, gap between administrations and public e-service developers. In municipalities, it is usually the internal IT department that is responsible for public e-service development projects, but at the same time it is the administrations that will use e-services as a means to provide service to e.g. citizens. Obviously, the interest to make better adjustments to an invisible user is limited for IT departments already burdened with other work duties (e.g. making the daily IT environment) where public e-services are just another task laid upon everything else.

We have identified that the current practice of external user inclusion follows more or less the same pattern as attitudes towards external user inclusion. As revealed in the analysis, government authorities are more experienced in developing public e-services and also possess a larger amount of resources in terms of e.g. financial resources, competence and time. Moreover, in most cases, government authorities already have existing work procedures for how to include an external user perspective in public e-service development, and so do county councils to some extent. The level of formality for how external users are included in public e-service development by municipalities is significantly lower, not at least when it comes to smaller municipalities. However, it is important to address what external user inclusion really means in practice. As discussed in the related works section, user participation has been put through in e-government research as a means to assure that external needs are included in public e-service development [18]. In user participation, users, e.g. citizens in this case, should be actively involved during the development process [30]. As found in the empirical data, none of the interviewed government agencies at any level exhibits such an approach towards external users. Instead, external users are often included very early and in some cases also late in the development process, but not as active agents during the development process.

Challenges and limiting conditions are more or less the same for all levels of government agencies independent of size. A lack of time as well as a lack of resources is seen as a hinder for external user inclusion. An important aspect

highlighted is a lack of knowledge for how to include external users. It seems like each agency at any level is more or less isolated from other agencies' experiences. It is also clear that previous attempts to provide guidance and more concrete advice for how to include external users [e.g. 31, 32] seem to be too context independent and homogenous. As shown in the analysis, the reality is much more complex and the conditions for developing public e-services vary greatly. Based on the analysis made, it comes as no surprise that such general directives seem to have little impact since the underlying preconditions are so different.

One interesting observation found is a contradiction between the common belief that public e-service initiatives in most cases are initiated as means to enhance internal efficiency by e.g. reducing the number of service errands handled manually by civil servants [see e.g. 1, 2, 33]. As it appears, far from every government agency has internal efficiency and reduced manual handling of service errands at the top of the agenda when initiating public e-service development projects. Instead, political agendas as well as a genuine strive for better service provisioning without any internal winnings per se seem, to be important drivers in many agencies. As pointed out by Rose, Persson, Heeager and Irani [34], the public sector has deep-rooted value traditions which are very hard to change. However, it seems like there may be a new public e-service ethos evolving within government agencies and we believe there is an ample opportunity for more research to explore these findings further.

The findings presented in this paper add new insights to the e-government research field by providing a more general and generalisable understanding of external user inclusion in public e-service development. However, the research presented addresses a Swedish development context and the conclusions are therefore difficult to generalise outside Sweden. Hence, we call for further research within this area also in other development contexts in order to obtain more generalisable results.

References

1. Asgarkhani, M.: The effectiveness of e-Service in Local Government: A Case Study. Electric journal of e-government 3, 157-166 (2005)
2. Anthopoulos, L.G., Siozos, P.S., Tsoukas, I.A.: Applying participatory design and collaboration in digital public services for discivering and re-designing e-Government services. Government Information Quarterly 24, 353-376 (2007)
3. Millard, J.: Government 1.5 - Is the bottle half full or half empty? European Journal of ePractice 9, 1-16 (2010)
4. Axelsson, K., Melin, U., Lindgren, I.: Exploring the importance of citizen participation and involvement in e-government projects - practice, incentives and organization. Transforming Government: People, Process and Policy 4, 299-321 (2010)
5. Karlsson, F., Holgersson, J., Söderström, E., Hedström, K.: Exploring user participation approaches in public e-service development. Government Information Quarterly 29, 158-168 (2012)
6. OECD: Focus on Citizens-Public Engagement for Better Policy and Services. (2009)

7. European eGovernment Action Plan: The European eGovernment Action Plan 2011-2015 Harnessing ICT to promote smart, sustainable & innovative Government. Brussels (2011-2015)
8. Holgersson, J., Karlsson, F.: Public e-service development: understanding citizens' conditions for participation. Government Information Quarterly 31, 396-410 (2014)
9. Scandurra, I., Holgersson, J., Lindh, T., Myreteg, G.: Development of novel eHealth services for citizen use – Current system engineering vs. best practice in HCI. In: Kotzé, P. (ed.) Interact 2013, vol. 8118. Lecture Notes in Computer Science Volume South Africa (2013)
10. Axelsson, K., Melin, U., Lindgren, I.: Public e-services for agency efficiency and citizen benefit — Findings from a stakeholder centered analysis. Government Information Quarterly 30, 10-22 (2013)
11. Axelsson, K., Melin, U.: Six Key Lessons for E-government Projects. In: Scholl, H.J., Janssen, M., Traunmüller, R., Wimmer, M.A. (eds.) EGOV 2009, pp. 93-103, Linz, Austria (2009)
12. Larsson, H., Grönlund, Å.: Future-oriented eGovernance: The sustainability concept in eGov research, and ways forward. Government Information Quarterly 31, 137-149 (2014)
13. Bannister, F., Connolly, R.: The great theory hunt: Does e-government really have a problem? Government Information Quarterly 32, 1-11 (2015)
14. Jones, S., Hackney, R., Irani, Z.: Towards e-government transformation: conceptualising "citizen engagement". Transforming Government: People, Process and Policy 1, 145-152 (2007)
15. Lindblad-Gidlund, K.: One for All, All for One - Performing Citizen Driven Development of Public E-services. In: ePart. Springer Verlag (Year)
16. Olphert, W., Damodaran, L.: Citizen Participation and engagement in the Design of e-Government Services: The Missing Link in Effective ICT Design and Delivery. Journal of the Association for Information Systems 8, 491-507 (2007)
17. Folkerd, C., Spinelli, G.: User exclusion and fragmented requirements capture in publicly-funded IS projects. Transforming Government: People, Process and Policy 3, 32-49 (2009)
18. Verne, G., Braaten, I.: Participation for the unengaged. Proceedings of the 13th Participatory Design Conference: Short Papers, Industry Cases, Workshop Descriptions, Doctoral Consortium papers, and Keynote abstracts - Volume 2, pp. 1-4. ACM, Windhoek, Namibia (2014)
19. Sæbø, Ø., Flak, L.S., Sein, M.K.: Understanding the dynamics in e-Participation initiatives: Looking through the genre and stakeholder lenses. Government Information Quarterly 28, 416-425 (2011)
20. Marti, P., Bannon, L.J.: Exploring User-Centred Design in Practice: Some Caveats. Knowledge, Technology & Policy 22, 7-15 (2009)
21. Bjerknes, G., Bratteteig, T.: User Participation and Democracy. A discussion of Scandinavian Research on Systems Development. Scandinavian Journal of Information Systems 7, 73-98 (1995)

22. Lindblad-Gidlund, K.: Designing for all and no one - practitioners understandings of citizen driven development of public e-services. Proceedings of the 12th Participatory Design Conference: Research Papers - Volume 1, pp. 11-19. ACM, Roskilde, Denmark (2012)
23. Patton, M.Q.: Qualitative research & evaluation methods. Sage, London (2002)
24. Government Offices: How Sweden is governed. In: offices, G. (ed.), Stockholm (2014)
25. Braa, K., Vidgen, R.T.: Interpretation, intervention, and reduction in the organizational laboratory: a framework for in-context information system research. Accounting, Management, and Information Technologies 9, (1999)
26. Walsham, G.: Interpretive case studies in IS research: nature and method. European Journal of Information Systems 4, 74-81 (1995)
27. Layne, K., Lee, J.: Developing fully functional E-government: A four stage model. Government Information Quarterly 18, 122-136 (2001)
28. Holgersson, J., Alenljung, B., Söderström, E.: User participation at a discount - Exploring the use and reuse of personas in public e-service development. ECIS 2015. AIS, Münster (2015)
29. Bernhard, I.: Local e-Government in Sweden - Municipal Contact Center implementation with focus on Citizens and Public Administrators. The Journal of Community Informatics 10, (2014)
30. Cavaye, A., L, M: User participation is systems development revisited. Information and Management 28, 311-323 (1995)
31. The Swedish delegation for eGovernment: Vägledning för behovsdriven utveckling. In: e-delegationen, S. (ed.), (2012)
32. Holgersson, J.: User participation in public e-service development - guidelines for including external users. School of informatics, vol. PhD. University of Skövde, Skövde (2014)
33. Ilshammar, L., Bjurström, A., Grönlund, Å.: Public E-services in Sweden: Old Wine in New Bottles. Scandinavian Journal of Information Systems 17, 11-40 (2005)
34. Rose, J., Persson, J.S., Heeager, L.T., Irani, Z.: Managing e-Government: value positions and relationships. Information Systems Journal 25, 531-571 (2015)