A study of how Swedish agencies are working with eService accessibility for elderly people
Abstract

A part of the eGovernment agenda is to provide enhanced service for all citizens. The ones that less frequently use the agencies’ eServices are elderly people and one of the explanations is because they are less familiar with IT than the younger generation. The elderly are increasing in the society and it is important for eGovernment to give them the same service as other people. This study is elucidating the question of agencies of eService accessibility for the elderly citizens. The study used a qualitative method by interviewing four large Swedish agencies, who shared how they were working with eService accessibility. The findings of the study are that the agencies all had guidelines they were following for eService accessibility in general but no guidelines for eService accessibility specific for the elderly. The agencies had also no particular contact with the elderly. However, the agencies were all constantly working on improving their eService accessibility for all people.

Keywords

1. Introduction

Electronic Government (eGovernment) originates in e-business and eCommerce in the private sector (Moon, 2002). eGovernment is the use of information communication technologies (ICT) to provide businesses and citizens with services and opportunity to interact with the Government through electronic media such as internet, email, fax and Electronic Data Exchange (EDI) (Almarabeh & AbuAli, 2010).

eGovernment resources are available through internet and provides information from the agencies to the citizens. This information is e.g. healthcare, registration, education, taxation and social services (Becker, 2005). A part of eGovernment is eServices. eServices can be defined as a provision of service over electronic networks, e.g. the internet (Rust & Kannan, 2002).

The US Government introduced the term eGovernment in the 1990s. However, it was not until the 2000s that the eGovernment had its breakthrough when the US government announced series of new eGovernment initiatives (Moon, 2002). In Sweden, eGovernment also had its breakthrough in the 2000s. For example, it became possible to declare income electronically at the Swedish Tax Agency in 2002 (24-timmarsdelegationen, 2005a).

Today Swedish eGovernment is among the most developed in the world. However, in 2009 there were still many agencies demanding a clearer management, financing and coordination of e-Government projects. Another concern was the lack of people using the eServices that the agencies provided. Therefore the E-delegation was appointed to strengthen the management of eGovernment. The E-delegation are also working on achieving the aim of eGovernment being as simple and available for as many people as possible to exercise their rights and fulfill their obligations participating in Government service. (E-delegationen, 2009)

The elderly is drastically increasing in society (Niehaves, 2011). According to Phang, Sutanto, Li and Kankanhalli (2005), the elderly can have a hard time assimilating IT-applications. Therefore it is important that eGovernment services encompass the elderly people in the society (Phang et al., 2006).
1.1 Problem

A major part of the agenda for eGovernment is to provide improved service for the citizens (Phang, Sutanto, Li, Kankanhalli 2005). Elderly people that were born 65-70 years ago did not grow up with personal computers and they probably have less familiarity with IT compared to a younger generation (Phang et al. 2006). So to serve the elderly citizens with eGovernment it is required to know how they behave and which factors that influence their acceptance of information technology (IT) (Phang et al. 2006).

In this study elderly people is defined as 75-85, based on Handisam (The Agency for Disability Coordination). The people that are 75-85 are in the same statistic group as people with disabilities (Handisam, 2013). This report will therefore also recognize people with disabilities.

1.2 Aim and Research Question

The purpose of the study is to elucidate the question of accessibility of eServices for the elderly in society and to investigate how four large Swedish agencies work with the accessibility of eServices for the elderly. Based on that, the following research question is formulated:

*How do Swedish agencies work with eService accessibility for elderly people in the society?*

By paying attention to this, the study can contribute to new strategic decisions for eService accessibility.
2. Literature review

2.1 General guidelines for public eServices in Sweden

The E-delegation is a committee in Sweden under the Ministry of Industry. Its task is to push forward the e-development in the public sector (E-delegationen, 2014a). The E-delegation should invent and, if necessary, develop guidelines for web sites and eServices as well as reports for eGovernment (E-delegationen, 2015a). The guidelines, which are controlled by the Swedish Government include e.g. guidelines for Web Development services which in turn comprise eServices. (The guidelines with priority for eServices are listed in Appendix 1.)

In 2013 the E-delegation did a follow-up on the agencies work on eGovernment to contribute to a comprehensive overview. The report was based on a questionnaire that the E-delegation sent out to state agencies, which 80% i.e. 137 of agencies answered the survey. The report showed for example that two thirds of the agencies almost never measure the user's perception of the eService. (E-delegationen, 2013)

The report also stated that nearly half of the agencies are planning to deploy new eService during 2013-2014. The majority of the agencies in the survey stated that they prioritized eGovernment work in a very high or fairly high degree, which is an increase compared to the year 2011. This indicates that eGovernment has climbed a lot higher on agencies agendas just the last years. In contrast only half of the agencies have strategy plans for their eGovernment development. Two thirds of the agencies know of the guidance and guidelines provided by the E-delegation. (E-delegationen, 2013)

The report also shows that the agencies have increased their interaction in the development of eServices, and a higher number of service during the last years for individuals and businesses. This has led to more efficient work processes and better information quality. The obstacles that have been found is that nearly half of the agencies think that the financing is too low. Laws and regulations are also considered as an obstacle for every fourth agency. Lastly the report state that a very low number of agencies are working with generating information description for external use. However, nearly half of the agencies are working to develop technical services for external access to agencies information. (E-delegationen, 2013)
2.2 eGovernment accessibility and usability

Both accessibility and usability for eGovernment are important and it is essential that all people have equal opportunity to benefit from online public services. Unfortunately, this is not the case. It has been shown that websites are 3 times more usable for people without disabilities than for people that are blind or has low vision. However, Internet in general has been a great benefit for people with disabilities. One example of this is that they can find information directly from the source online without leaving their house. (Huang, 2002)

According to Mattson (2010) it is a major challenge to introduce eServices to a group of citizens with limited ability and desire to use electronic devices, such as mobile phones and computers. People's actual use and the ability to utilize Internet-based service systems vary greatly, even if it is largely a generational issue. Some people with disabilities may have difficulties in using such systems, while others can be given expanded opportunities by communicating through the Internet (Mattson, 2010). Elderly people belong to the groups in the society whose actual use, and ability to exploit such services, is lowest and according to Niehaves (2011) these groups are constantly growing. Therefore, eServices cannot replace the traditional communication methods but it can be a good complement if it is accessible for this group of citizens (Mattson, 2010).

However if a service should be usable and accessible, it is important that it has a universal design that is suitable for all people, with or without disabilities. Though accessibility often refers to people with disabilities, it is also beneficial with service accessibility for people without disabilities. Web and eService accessibility for all people are becoming more important today since other devices than the computer can reach the web, such as mobile phones and tablets. The work with web- and eService accessibility is still focusing on people with disabilities, but in ways that are beneficial for all people. (Henry, Abou-Zahra & Brewer, 2014)
2.2.1 Accessibility Guidelines

The E-delegation (2015b) has guidelines for eGovernment and claims that the web, if designed correctly, provides a great opportunity to provide information and services without discriminating users. A correct way to design websites and eServices is according to the E-delegation to start with their first and most important guideline, which is the four basic principles of WCAG 2.0 AA (See Appendix 2).

Under these four principles there are 12 more sub-principles. WCAG 2.0 comes originally from the World Wide Web Consortium’s (W3C) Web Accessibility Initiative (WAI). They were set out to provide an international standard defining Web content accessibility for people with disabilities. In the 2000s they provided the guidelines WCAG 2.0 (Reid & Snow-Weaver, 2008).

According to W3C & WAI (2012) WCAG is for those who need a standard for web accessibility and it is developed in cooperation with individuals and organizations in the world. Their goal is to share united standards for Web Content Accessibility that meets the needs of individuals, organizations, and Governments Internationally.

Handisam (the Agency for Disability Policy Coordination) is requested by the Ministry of Industry to further develop and prioritize their earlier proposal structure for the follow-up of eAccessibility. The main purpose of the follow-up is to speed the progress towards a society where everyone can participate on equal terms. The report of Handisam presents a plan for how eAccessibility must be followed up. The monitoring should be done with the help of three tracks: statistics covering persons with disabilities and persons between 75-85 years, better measurement of the accessibility of websites, and panel surveys to capture user feedback. (Handisam, 2013)
2.3 Conceptual framework

Based on the literature review a conceptual framework has been developed to investigate how Swedish agencies are working with eService accessibility. It consists of four different parts; *Accessibility, Approaches and Responsibility, Target group contact, and eService accessibility in the future*. All the parts are consistently used in the literature regarding eService accessibility and will be compared to the informant’s answers. If all the categories are answered the study will be able to answer how the agencies are working with eService accessibility for elderly people. A table is presented below that explains each part of the framework, and each parts connection to the literature review (section 2).

<table>
<thead>
<tr>
<th><strong>Accessibility</strong></th>
<th>The part about accessibility is about the definition of accessibility. How accessibility is described and understood should reflect how it is approached. This part compares chapter 2.2, with the answers from the informants.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Approaches and Responsibility</strong></td>
<td>The part investigates how the agencies actually are working with eService accessibility, with the focus on elderly people. If the guidelines presented in 2.1 and 2.2.1 are followed and if they follow any other guidelines. This part is also about follow-ups on guidelines, goal and barriers.</td>
</tr>
<tr>
<td><strong>Target group contact</strong></td>
<td>The part about target group contact addresses with contact the agencies have with the target group elderly citizens. This part is connected and is compared to the literature in chapter 2.2.</td>
</tr>
<tr>
<td><strong>eService accessibility in the future</strong></td>
<td>The part about eService accessibility in the future I will inform myself of the agencies plans and visions to be able to see where they are heading with their eServices. According to section 1 and 2, the eService accessibility has improved a lot in the last 15 years, it is therefore important to investigate the agencies plans for the future.</td>
</tr>
</tbody>
</table>
3. Methodology

3.1 Qualitative Method

This study is investigating how Swedish agencies work with eService accessibility for elderly people in the society. I have chosen a qualitative method with semi-structured interviews, in which the interviews were carried out in physical meetings. A qualitative method is chosen because it give the research a more deeper information collection with a more detailed picture of the agencies work with eService accessibility. How the agencies work with their eService accessibility is then compared with the literature review (sect. 2).

The interviews had open-ended questions, which mean that the respondents could freely formulate their answers, and supplementary questions could be asked to get further description or explanation of a question or area (Kumar, Aaker & Day, 1999). Furthermore, the interviews were executed individually so the interviewee could be relaxed to talk freely. By using open-ended questions I obtained important side comments, valuable insights and explanations that might be difficult to capture with only closed questions (Kumar, Aaker & Day, 1999).

The interviews were 20-35 minutes long; the time length varied because some of the agencies answered more concrete to the questions than others, and some needed more supplementary questions to get a better description or clarification of a question.

3.2 Selection of agencies and informants

I have chosen to interview four large Swedish agencies for this study, because they have most contact with citizens. Thus it is more critical for them to have good accessibility of their eServices. The ones that are interviewed in respective agency are either working with and/or responsible for their agency’s eServices. They have titles like IT-manager, business developer and system architect with assignments like information management, strategic development, eService affairs, and eService development. One informant wanted to be anonymous, therefore only the agency is presented and not the informant for each. The agencies participating are The Swedish Pension agency, the Swedish Police, The City of Stockholm, and the Swedish Tax agency. (See Appendix 3 for a presentation of the agencies that participated in the study)

3.3 Method for Data Collection

The method chosen for recording of the interviews was audio recording, which according to Jacobsen (2002) is the most complete form of registration. I chose this method to gather as much information as possible from the interviews, without missing some words.
The audio recording of the interviews was made through a smartphone and a voice recorder application was downloaded. To use audio recording helps the interviewer to concentrate on the subject, according to Kvale (2007), as it is not required to take notes meanwhile. However, it is important that the recording is without too much interference and that the recording is audible. This was solved as all of the informants offered me to keep the interviews in a secluded environment without background noise.

3.4 Analysis of collected data

In my analysis, I used three different steps: coding condensation and interpretation. Coding means marking one or more keywords in a paragraph of text in order to enable the identification of a statement. I then summarized the point of the various statements in order to easier orient myself between the statements and compare the different informants' answers. Condensation means transforming sentences into shorter formulations, e.g. when the informants repeat themselves or diverge from the subject. In these cases I tried to extract out the really important part of what the informant was saying. Lastly, interpretation means to give context to the statement. This has been a substantial part of my data analysis to create a coherent text that is as close to the content of the interviews as possible. For example, if the informant did not finish a sentence, I had to try to interpret what he/she was saying. (Kvale, 2007)

3.5 Critique of methodological choice

I conducted four interviews at various agencies but to investigate how Swedish agencies work with the accessibility of their eServices, a larger number of interviews are needed. There is always a risk that other informants would have given another version (Jacobsen, 2002). However, large agencies were chosen because I believe that they serve as a model to other agencies. I therefore think that the agencies chosen for this study reflect the work of other agencies and it gave my interviews a greater value.

3.6 Research Ethics

The empirical part is based on interviews conducted with voluntary informants, which according to Jacobsen (2002) is one of the basic conditions. If the results of the interview should be optimal, informants should receive information about what material that are going to be used and for what purpose. However, it is important to balance how much information the informant will receive. Accordingly, if the informant gets too much information about the study, the informant may adapt his/her responses. This may mean that a distorted picture of reality is presented. (Jacobsen, 2002)
3.7 Interview Guide

The questions for the interviews are based on the conceptual framework in section 2. The interviews are structured in the four different parts of the framework: accessibility, approaches and responsibility, target group contact, and eService accessibility in the future. Questions about the background were also asked to display the informant's work title and assignments. This is an important question because I wanted to get an idea of what kind of work the informants perform and how it is linked to eService accessibility in his/her agency. It is also important to get an overall picture of the informant and his/her area of knowledge of the subject. One of the informants wanted to be anonymous, so no detailed description of the informant's title and general tasks at his/her agency will be recognized in the result.

The interviews are a bit different for every agency since the interviews were semi-structured and supplementary questions occurred if it was needed, more questions came up after the first interview, and one agency shared material about their work in advance. However, the basic questions are the same. To see the questions for the interviews, see appendix 4.

The part about accessibility shows how the informants describe accessibility and what they mean with it, i.e. their own interpretation. This is an important question because accessibility is a big part of what the study examines and a part of how the research question will be answered. How the informants understand accessibility is probably related to how they approach it in their work with eService accessibility.

The part about approaches investigates how the agencies actually work with eService accessibility, especially for the elderly citizens; the concrete work, if they follow any guidelines, have follow-ups on the guidelines, goals, and barriers. This part is the most important in my interviews because it almost directly answers my research question.

The part about target group contact addresses if, and how, the agencies have contact with different groups of customers, especially the target group elderly citizens - how the agencies know their demands, and if their demands are affecting the agencies design of their eServices.

Finally, by asking about eService accessibility in the future I want to take part of the agencies plans and visions to be able to see where they are heading with their eServices. As any other area in the ICT world the question of accessibility will also be developed and new approaches to get better web- and eService accessibility will come.
4. Results

This chapter is structured in four parts taken up in the interview guide in chapter 3, which in turn is based on the conceptual framework in chapter 2. The four parts are Accessibility, Approaches, Target group contact, and eService accessibility in the future.

4.1 Accessibility

The informants were asked what accessibility means to them and relatively similar interpretations of the concept were obtained. The majority of the informants pointed out that the concept of accessibility is very wide. The Swedish Tax Agency (TA), mentions that many people probably connect accessibility exclusively to persons with disabilities. TA also states that they are thinking broader on the concept, namely that services shall be accessible anytime, anywhere, from any device, and for everyone no matter who you are.

The City of Stockholm (CS) thinks accessibility can be split into two categories: physical accessibility and useful accessibility. With physical accessibility, CS means ability to access a system or website from a browser, while useful accessibility means that people with different types of disability shall be able to use the system and, if it’s a service, be able to assimilate the information. According to CS, eServices necessarily need to be accessible for everyone; some eServices are simply not used by all groups of people.

From The Swedish Pensions Agency’s (PA) perspective, accessibility is about the opportunity to make services and communication accessible for all target groups and all users’ needs. The Swedish Police (SP) had a similar view of the concept as the other agencies and means that accessibility is about a user-friendly system for the user to assimilate. Additionally, the information is understandable for the target group that the eService addresses. SP means that every eService is not for all people, and that each eService should be customized to the specific target groups’ needs. CS agrees that some eServices are simply not used by all target groups. Thus, the eService does not have to be usable for the ones that do not need the service. CS, however, emphasizes that it is not always easy to know which people that need a specific service.
4.2 Approaches

4.2.1 Guidelines for eServices accessibility

TA and PS are following the E-delegation’s guidelines for eServices and its web guidelines for accessibility, which also aim to eServices. From these guidelines, TA and PS also designed their own guides for developing eServices and accessibility. TA’s purpose with these guides, which is under development, is to streamline eService development, so that the work is done in the same way, user-centric and agile. PS guidelines are at the moment under audit since they reorganized the whole agency and become the new police agency this year, 2015.

PA is also following the guidelines the E-delegation provides. PA also has its own action plan for information and communication with objectives that they want to achieve for better accessibility. They also have non-functional requirements for usability and accessibility of their web and eServices. The action plan and the requirements are modeled from the guidelines provided by the E-delegation and the report “Tear down the barriers” by Handisam, which provides guidelines and checklists.

Even CS follows the E-delegation’s guidelines in their development of eServices and accessibility. However, their work differs from other agencies, since the operation of their platforms and eServices are handled by Volvo IT, which is mandated to follow the guidelines provided to the letter. Unlike the other agencies, CS has not designed its own guidelines.

4.2.2 Follow-up to guidelines

PA has worked with various specialist consultant companies, such as Funka, to do surveys of areas of improvement. Now, however, PA has a large development project. Their website and services must be adapted to become accessible on different platforms. PA believes that the adaptation of the website and eServices to different platforms makes it a more dynamic layout of these, which increases the accessibility. PA is also working to replace their existing content management system (CMS) to a more flexible system and more adapted to their needs.

TA is in the beginning of the implementation of their guide for eService development, so they haven’t had a follow-up to that. Otherwise, beside the implementation of the new guides, TA is working regularly with follow-ups to their website and eServices. The development phase in PS is more of an organizational kind since, as mentioned earlier, the police is a new agency from 2015. Because of the big organizational change most of the guidelines for eServices and accessibility are under revision. That work is a form of follow-up, because PS is testing and verifying all their eServices in order to follow the guidelines they formed from the E-delegation.
Unlike other agencies that participated in this study, CS offer a larger number of eServices. This large number makes it difficult to do a follow-up. However, CS emphasizes that follow-ups are made periodically. CS also points out that when Volvo IT is doing their tests on CS's eService, they are very accurate and ensure that no guideline is overlooked.

Furthermore, all of the agencies collaborate with other agencies to get better eServices, and to increase the eService accessibility.

4.2.3 Objectives and berries

The overall objectives for the eService guidelines for all agencies are to have accessible websites and eServices where everybody has the opportunity to do his/her errands. PA adds that it is also important that their different customer groups increases. PA also points out that message and communication reach all citizens. PA is therefore educating the web editors to write in a pedagogical and simple language. The remaining agencies also think this is important and explain that they constantly check the language so it is understandable, easy to read and correct. The majority of the agencies are also providing Text to Speech (TTS) for users with vision loss, text in different languages, and the opportunity to enlarge or shrink the text on the website. CS also mentions the importance of having a good flow of text with the same font and colors.

SP had a measurable objective that they shared: they want to increase the use of their eService for “Making a report” from 14% 2012 to 25% 2015. This figure may seem low but SP points out that all crimes cannot be reported through an eService, like serious crimes and crimes reported on the site. Therefore SP’s goal is to increase the use of the eService “Making a report” for lighter crimes, like mobile and key theft. To achieve this goal, SP will increase the possibility to report more types of easy crimes on their eService, like shoplifting and insurance fraud. SP explains that increasing the eService “Making a report” is not only an advantage for the people, but also an advantage for themselves as they can release resources from their contact center that today are taking 60% of all reports from the citizens.

Both CS and PA also address that agencies’ goals much depends on what the Government puts its focus and press on. CS means that different Governments have different pressure on the accessibility for people with disabilities, a Government pressure for better accessibility would promote the agencies work. PA explains that for a political controlled agency it is important to follow the commission from the Government. PA points out that if their commission is changed, their goals also change. Other barriers that PA addresses is economy and management. Accordingly, if the people on the floor do not get the money and confidence by management when developing an eService, then this can be a huge barrier in the work of developing accessible eServices. TA also thinks that laws can be a hindrance, TA mentions for example the cockie law, that TA thinks can be hard to interpret and manage right.
4.3 Target group contact

All of the agencies are striving to have regular contact with different groups in the society. This is made by different methods like surveys, interviews with different groups in all ages, meetings with disability organizations, opinions from different social medias, and user tests. The feedback these groups give affects the agencies design and updates of their eServices.

SP has a more general approach of their contact with different groups in the society and is doing surveys and interviews on what the public in general think of SP’s accessibility. SP points out that these surveys include eServices, but they focus on the whole organization. However, SP thinks they probably will have surveys that only focus on eServices accessibility in the future. CS receives feedback from different disability organizations to improve their eServices accessibility. CS also has a dialog with “Funka” which is working with accessibility for information, web, and IT.

PM focus on having contact with different citizens and in addition to the methods mentioned in the beginning they use sifo-surveys and are present in different galleries to get the public's opinion. PM points out, like the other agencies, that it is most important to get opinions from all groups in society and not just one particular group. All of the surveys on eServices accessibility are on the agencies' websites. However, both TA and PM are also testing their eServices on test groups in different ages to see if they are good enough and accessible before they launch a new eService.

4.4 eService accessibility in the future

SP explains that they have a major investment to develop more eServices. For the future it is critical to develop these for a broad target group. Also CS thinks that they will get more and better eServices, for all people. Furthermore, it will be more niched eServices in the future, which will mean that different types of disabled people will get greater opportunities to use aids that CS provide on their website.

PA will work more with the view and graphics, and to be better to visualize their message on the website. This work will be done by shorter texts, more modern design and flexible user interface. Both PA and TA will in the future be integrated with other agencies, which will lead to integrated eServices. That will make it possible for the agencies to see the peoples’ different life events, which will make it easier to assist and help the citizens with their errands. TA explains that this eService integration will make the accessibility much better.
5. Discussion and analysis

How the agencies described the concept accessibility was very similar: the opportunity to make services accessible for all people in society. However, some of the interpretations of the concept were different in parts. Half of the participating agencies linked accessibility directly to persons with disabilities while the other half had a broader understanding of the concept including all people with or without disabilities. To have usable and accessible eServices, a universal design fitting all people is important, especially now when other devices than the computer can reach the web (Henry, Abou-Zahra & Brewer, 2014).

However, it is important to also have a focus on people with disabilities to get the best eService accessibility (Mattson, 2010). Even the agencies that had a broader view of accessibility mentioned that they work with their eService accessibility focusing on people having a disability.

The E-delegation’s (2015b), mission from the Government is to develop guidelines for websites and eServices. All of the agencies followed the guidelines provided by the E-delegation even if the majority of the agencies also had their own guidelines developed with the help of user tests or checklists provided by Handisam.

None of the agencies have specific guidelines on how they work with their eServices for the elderly in society. However, the E-delegation does not provide guidelines for eService accessibility for specifically elderly. Handisam, on the other hand, provides a checklist for a follow-up of eAccessibility guidelines, that include elderly between 75 and 85 years old (Handisam, 2013). However, these are only guidelines, which means that the agencies don’t have to follow them to the letter. Even if the agencies may have their own guidelines, none of them have special guidelines for the elderly. The majority of the agencies merge elderly together with people with disabilities. In addition, although they are in the same statistic group, they still may have different needs.

All agencies continuously perform work to improve their eServices. This work is done by following up on their guidelines. However, the majority of the agencies say that they are in a development phase of their webpages and eServices, which makes the follow-up of guidelines fall behind. However, the agencies that are doing these development projects, mean that these improvements are making their websites and eServices more accessible for all people. For example, they will be adapted to be accessible through various platforms, such as mobile phones, tablets and TV screens.

When the E-delegation did a follow-up on the agencies work on eGovernment 2013, nearly half of the agencies thought that the financing they got for eGovernment was too low (E-delegationen, 2013). In this study only one of the agencies thought financing was a barrier for them. Half of the agencies thought that laws and regulations was an obstacle for them, which is the same as in the report from the E-delegation (2013). One agency also pointed out that the management could be an obstacle; because they decide what the money shall be spent on.
All the agencies have regular contact with the citizens through different surveys and meetings to better their eServices, but none of the agencies meet elderly citizens specifically. When the majority of the agencies make user tests on their eServices it is different people that are testing their service. However, this indicates that the agencies have some contact with elderly as they are represented in these groups and also that the agencies, as stated earlier, direct to all people in the society.
6. Conclusion

In the beginning of this paper I formulated the research question:

*How do Swedish agencies work with eService accessibility for elderly people in the society?*

Throughout the study, I found that all informants described accessibility in a similar way. The majority of the agencies described accessibility as a possibility to make services accessible for all people, so that everybody can benefit from the service. This description is also in line with what the newer research is stating, namely that it is not just about thinking accessibility for one specific group of people, but for all people.

The agencies’ interpretation of accessibility also explains why none of the agencies have specific guidelines for eService accessibility for elderly people. However, all of the agencies followed guidelines from the E-delegation for eServices accessibility and merged these guidelines with their own developed guidelines based on user tests. Except guidelines provided from the E-delegation the majority also followed guidelines provided directly from Handisam. None of the agencies felt a compulsion to follow the guidelines to the letter. The majority of the agencies followed the guidelines that had the best fit and were applicable for their eService.

The agencies have more contact with elderly people when they preform user tests of the eServices, because these tests include people in all target groups. The user tests affect the outcome of the eService, so elderly have some impact on the agencies development of eService and its accessibility. Still, agencies’ focus on eServices is that they shall be accessible for all people, and not just for elderly or people with disabilities.

The agencies are carrying out follow-ups on their eServices in order to verify that they meet the accessibility guidelines. These follow-ups are carried out through surveys, interviews and tests with different users, and the feedback they get from the users are used to improve the eService. The agencies also collaborate with each other by sharing tips and tricks to improve the usability and accessibility of their eServices.

The agencies will probably in the future be more integrated with each other and because of that it will be easier to do errands on the agencies’ eServices. The information will be shared easier between the agencies, which will make it easier to for all the people to use eServices. However, none of the agencies have any plan to work with eService accessibility specific for elderly in the future.

The limitation of the study has been to investigate the Swedish agencies particular work with eService accessibility for elderly people and not used any viewpoint directly from elderly people. For future research it would be interesting to do a survey study of the elderly’s needs regarding eService accessibility, so the Swedish agencies can get access to this information to improve their eServices.
7. Appendix

Appendix 1: E-delegation’s guidelines for eServices

The priority is how important these guidelines are, 1 is the highest priority and 5 the lowest. For eServices there was no guideline with priority 1. (E-delegationen, 2015b - Retrieved the 1 of April 2015. The translation is mine.)

- **Provide clear feedback in eServices (Prio 2):** by common automated functions for communication like messages, examinations, receipts and acknowledgments of receipt.

- **Use an encrypted connection for eServices (Prio 2):** Use an encrypted connection, HTTPS, to all web-based eServices to minimize the risk that users’ information intercept.

- **Provide eServices names from the user’s perspective (Prio 3):** The focus should be on what the user wants to achieve, when naming an eService, so that it is easy for the user to find the right service.

- **Integrate external services so that they blend in (Prio 3):** This is to improve the user experience and accessibility of the website. Services developed and operated externally are becoming more common. Even services that are developed internally are often developed in separate systems, and are distinct from the website. It is therefore important to integrate these services so that the user does not experience that they are independent and that they do not look noticeably different. The services should have the same graphical design language and follow the same interaction patterns as the site in general.

- **Determine if the eService requires electronic ID and signing (Prio 3):** If the web services handle personal information, users have to identify themselves and sign with an electronic ID. It is important to take a decision on that before deciding how the flow through the eService should look like.

- **Provide eServices on a web address that you control (Prio 3):** Make it easier for users to control the organization behind the service, for example display information about certificates.

- **Be clear about the conditions to be able to use the eService (Prio 4):** The users shall not have to interrupt a process because they do not have prepared the information that is required to complete the process. It is important to be clear about which information the service require.

- **Bread crumbs or link paths in eServices (Prio 4):** Often is link paths used to navigate on the site.
Appendix 2: Four basic principles of WCAG 2.0 AA

The E-delegation’s (2015b) first guideline; the four basic principles of WCAG 2.0 AA (The translation is mine):

- Perceptible - Information and components of a user interface must be presented to users in ways they can perceive.
- Manageable - Components of a user interface and navigation must be manageable.
- Understandable - Information and handling of user interface must be understandable.
- Robust - Content must be robust enough to be interpreted reliably by a wide range of different user agents, including assistive devices.
Appendix 3: Presentation of informants

The Swedish Pensions Agency

The Swedish Pensions Agency has in mission is to help citizens understand, predict and influence their pension. They do this by providing information about the public retirement and provide eServices linked to that. The Pension agency is primarily directed to pension savers and pensioners. (Pensionsmyndigheten, 2015)

The City of Stockholm

The City of Stockholm is a municipal agency, which is controlled by elected politicians and is organized in city departments, companies and foundations. The City of Stockholm has employees in for example the city’s schools, nursing homes, and the swimming baths. The City of Stockholm is therefore responsible for all institutions in the municipal, which generates over 190 eServices. (Stockholm stad, 2015)

The Swedish Tax Agency

The Swedish Tax Agency's main tasks are to collect taxes, manage population registration, record inventories and being creditors to the State. The politicians in parliament, municipalities and county councils decide what and how much taxes we should have. The work of collecting taxes is handled however by the Tax agency, which has offices across the country. The eServices the Tax Agency provide are for example change of address notification and income tax declaration. (Skatteverket, 2015)

The Swedish Police

The Swedish Police has recently become one national agency. Before they were divided into 21 agencies, National Police Board and the States Laboratory of Forensic Science. The police get new missions from the Government every year, but their goal in general is to work so that fewer people breaking laws, more crimes shall be solved, people should feel safe, police should be more visible, and that confidence for the police should be nurtured and strengthened. Their largest eService is “Making a report”, where people can report crimes, like various types of stealing. (Polisen, 2015)
Appendix 4: Interview questions

1. What is your job title and responsibility of (The name of the agency)?

2. Tell me about your work tasks.

3. What means accessibility for you?

4. Do you have any policy, strategy or guidelines for how you work with your eServices for the elderly (75+) in the society?
   4.1 Describe the policy/strategy. What is the purpose of it?
   4.2 How do you follow the policy in practice? Describe the concrete work.
   4.3 Do you have a follow up of this policy/strategy?
   4.4 Do you see any obstacles to reach your goals with this policy/strategy?

5. Do you have any contact with the target group?
   5.1 In what way?
   5.2 How do you know what their needs are?
   5.3 Has it influenced the design of your eServices?

6. How do you think the accessibility of your e-services will look like in the future?

7. Who is responsible that the eServices become accessible to the elderly?
8. References


http://www.edelegationen.se/Publikationer/Vagledningar/ - Retrieved the 9 of April 2015


Pensionsmyndigheten (2015): [https://secure.pensionsmyndigheten.se/MerOmMyndigheten.html](https://secure.pensionsmyndigheten.se/MerOmMyndigheten.html) -Retrieved the 20 of May 2015.


