

# **Building an Inclusive Information Society at the Local Level in Estonia**

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## **1. Introduction**

The development of information and communication technologies (ICT) has a significant impact on the public sector and citizen-state relations. It offers to the public sector additional possibilities to improve services and to involve citizens in decision-making.

Inclusion, in the context of information society and ICT can be understood at least in two ways. On the one hand, ICT can be an exclusion factor for certain groups in society and thereby inclusion or e-inclusion “aims at preventing the risk of digital exclusion, thus presupposing internet access and digital literacy” (Kettemann, 2008, p. 53). On the other hand, it also involves citizen participation, being more the issue of empowerment rather than access (eEurope Advisory Group, 2005, p. 5). In the Estonian public sector, e-inclusion is often „defined as the use of the opportunities offered by information and communication technologies in order to make exercising public authority more transparent, comprehensible and inclusive for the society” (Reinsalu, 2010a, p. 8).

The aim of this paper is to analyse the information society and e-government in Estonia, particularly at the local level. This paper gives an overview of and examines the information society framework in connection with the Estonia's local governments. In addition, recent initiatives and developments in the field of information society at the local level will be examined in the light of these same developments at the state level. The main focus of the analysis is on the aspect of inclusion, since it concerns using ICT to improve the possibilities of residents to follow and be involved in the exercising of public authority.

## **2. Information Society and Democracy**

Information society affects public administration and democracy in several ways. The ICT has often seen to offer a possibility for improving internal managerial efficiency, the quality of service delivery (Moon, 2002) and responsiveness to citizens (West, 2004, p. 16), but also for increasing political participation (Macintosh & Whyte, 2008). Some have argued that we should not see it only as a possibility to improve the service delivery, but as “a new form of governance of society, as it entails a new form of interaction among governments, citizens, the private sector, and community organizations” (Rodríguez Bolívar, Caba Pérez, & López Hernández, 2007, p. 144). Although “e-government can also be a tool to promote the positions of the government, discouraging political debate and discussion” (Jaeger, 2005, p. 704).

One of the simplest definitions of “e-government” is that it refers to the production and “delivery of government information and services online through Internet or other digital means” (West, 2004, p. 16). The goal of the e-government “is to create a more dynamic government with far greater citizen involvement” (Streib & Navarro, 2006, p. 288). Broadly speaking, e-government includes four major aspects: “(1) the establishment of a secure

government intranet and central database for more efficient and cooperative interaction among governmental agencies; (2) Web-based service delivery; (3) the application of e-commerce for more efficient government transaction activities, such as procurement and contract; and (4) digital democracy for more transparent accountability of government” (Moon, 2002, p. 245). It is important to ensure that e-democracy is additional to, complementary to, and interlinked with traditional democratic processes and participative mechanisms, so as to widen the choices available to the public for taking part in political processes (Reinsalu, 2010b, p. 10; Höchtl, Parycek, & Sachs, 2011, p. 42). E-democracy can be divided into e-voting and e-participation; while the former can be viewed as a technological problem (Macintosh, 2004); the latter is usually associated with some form of decision-making (Sæbø, Rose, & Flak, 2008, p. 402). E-participation requires that services are provided by the government and citizens are using these services (Höchtl, Parycek, & Sachs, 2011, p. 32).

West (2004, p. 17) has proposed “four general stages of e-government development that distinguish where different government agencies are on the road to transformation: (1) the billboard stage; (2) the partial-service-delivery stage; (3) the portal stage, with fully executable and integrated service delivery; and (4) interactive democracy with public outreach and accountability enhancing features”. Not all government websites go through these steps; plus they may undertake them in different order. Similar four or five stages models have also been proposed by several other authors (e.g. Layne & Lee, 2001; Charalabidis, Askounis, Gionis, Lampathaki, & Metaxiotis, 2006; Moon, 2002). In Moon’s five stage model (based on degree of technical sophistication and interaction with users) the highest stage is political participation, which “requires highly sophisticated security, encryption, and interactive technologies to support online political participation such as election and public forum” (Moon, 2002, p. 428).

### **3. Strategy Documents and Legal Framework**

In Estonia, e-democracy is a part of the Information Society Strategy. The first strategy document on information society was drafted in 1994 already and it was called “The Estonian Way to the Information Society”. The next strategy documents were “Principles of Estonian Information Policy” (1998) and “Principles of Estonian Information Policy 2004-2006” (2004). The former document set out for the first time the principles for the development of the information society in Estonia (Ministry of Economic Affairs and Communications, 2006, p. 5).

A document adopted in 2006, “Estonian Information Society Strategy 2013”, sets out 14 principles for the development of the information society. Among these principles is that “the development of the information society in Estonia is a strategic choice with public sector leading the way in pursuing its principles” (Ministry of Economic Affairs and Communications, 2006, p. 5). Until 2006, policies on information society have mainly focused “on the development of ICT infrastructure and the creation of systems necessary for implementing sectoral policies” (Ministry of Economic Affairs and Communications, 2006, p. 6). The “Estonian Information Society Strategy 2013” recognised the need to pay more attention to the citizen-centred and inclusive society. It stated that ICT is “an efficient tool for increased inclusion of citizens in public debates and decision-making processes” (p. 11), but it was also recognised that “Participation in the information society requires, on one hand, multi-channel access to digital information and, on the other hand, skills and willingness to use the opportunities created as well as motivation to actively participate in decision-making

processes” (p. 14). The implementation of the Strategy is based on annual Information Society Implementation Plans.

The Strategy for 2013 also contains some direct references to the local government. For example, it was expected that (Ministry of Economic Affairs and Communications, 2006, pp. 15, 19):

- Local governments will bring their websites into compliance with WAI quality criteria so as to ensure their accessibility for all, including people with special needs.
- Ministries and local governments will develop Internet-based environments for the inclusion of citizens and stakeholders in decision-making processes, in order to widen opportunities for participation in decision-making processes (e-democracy). Including the continual use of e-voting.
- There will be developed the necessary systems for increasing the efficiency of state and local government agencies, to improve the provision of e-services at local level and avoid multiple development of similar solutions by different local governments.

It was not until 2008 that the Local Government Information Society Strategy was approved and special attention was paid to the coordinated development of information society and e-democracy at the local government level. The objectives for the development of information society at the local government level were drafted by the e-Governance Academy, which is a non-governmental organisation and founded for the creation of and distribution of knowledge concerning e-governance, e-democracy and the development of civil society. The preparation of the Strategy also involved different ministries and local government associations. In 2008, about 10% of local governments had their own ICT or information society strategy (Estonian Ministry of the Interior, 2008, p. 10).

The Local Government Information Society Strategy assumed that the introduction of e-services will make public services offered by local governments available to all, which would make governance to be more efficient and decisions to be more transparent (Estonian Ministry of the Interior, 2008). In the Strategy were formulated five objectives:

- All local governments implement digital procedure — they have electronic records management system, digital signature, digital procedures, and that information between authorities will be shared via electronic document exchange centre.
- All local governments have Internet-based possibilities to engage residents in the management of the local life — e.g. they have access via website to the decision-making process, which includes having an overview of what is happening at the council’s session, being able to submit comments to the draft texts, and if need be, submit their own proposals for amendments to the drafts. All these operations would be done by using the ID-card.
- All civil servants of local municipalities will be aware of the possibilities to apply ICT tools in the information society.
- All local municipalities have established possibilities to use e-services.
- An organisation will be established to coordinate the development of the information society at the county level.

The legislation regulating the information society at the local level includes, for example, the following:

- Local Government Organisation Act (*Kohaliku omavalitsuse korralduse seadus*) — stipulates principles of local government, among which are the right of the residents to participate in the exercise of local government and the transparency of local government activities (Section 3). Council regulations and resolutions and minutes of council sessions (Section 23(5)), minutes of rural municipality and city government sessions and of meetings of council and government committees pursuant to the procedure provided for in the statutes of the rural municipality or city (Section 51(7)) have to be accessible to everyone. The Act was amended in 2010 and a provision was added, according to which the development plan, together with the budget strategy and minutes of the council and council’s committees meetings on the proceeding of the development plan, shall be published at the website of the municipality. The provision concerning the development plan is, at the moment, in this Act the only provision which contains a direct reference to the website.
- Public Information Act (*Avaliku teabe seadus*) — required local governments to have a proper website as of March 2002 and it also sets forth several responsibilities to the local governments in terms of disclosure and databases. For example, it requires a local government to disclose at its website economic statistics and forecasts, statutes of local government agencies and their structural units, formats of petitions and other documents submitted to local government agencies (and instructions for the completion thereof), research or analyses ordered by the local government agencies, etc.
- Digital Signatures Act (*Digitaalallkirja seadus*) — according to Section 4 of this Act, local government agencies “are required to provide access through the public data communication network to information concerning the possibilities and procedure for using digital signatures and digital seals in communication with such agencies and persons”.

#### 4. Estonia - a leading e-state?

According to the recent statistical data of Eurostat (2011), 57% of Estonian population aged between 16-74 used the Internet frequently in 2010, which is slightly higher than the European Union average (53%), but remarkably lower than in the Nordic countries (e.g. 72% in Finland and 76% in Sweden). It has been argued that Estonia has gained the image of an advanced e-state because of the results of formal quantitative measures (e.g. number of Internet users, number of computers, and number of Internet connections), but the activities which individuals perform within online environments have been secondary (Runnel, Pruulmann-Vengerfeldt, & Reinsalu, 2009).

“Estonia has the largest functioning public-key infrastructure in Europe, based on the use of electronic certificates maintained on the national identification (ID) card” (The Freedom House, 2011, p. 129). The ID-card can be used for authentication, issuing digital signatures, electronic voting, as well as many other functions. The e-services provided at the state level have been gathered to a portal eesti.ee, which functions as a point of single contact. In 2010, about 63% of Internet users had used at least one e-government service (Randver, 2010). One of the most successful e-services at the state level is the e-tax office. In 2011, 95.3% of people who had to file their income tax return, did it electronically (Estonian Tax and Customs Board, 2011).

In the democratic process, the best-known application is e-voting. Estonia was the first country in world to actually pass overall e-voting laws (Drechsler, 2004, p. 11). E-voting was first used for the local government elections in 2005 and for national elections in 2007. The number of people using this possibility is increasing with every elections. In 2005, at the local elections, 9,317 people decided to cast their vote by e-voting, yet at the parliamentary elections in 2011 the number was 140,486; this is 15,4% of the all eligible voters or 24,3% of the voters who decided to cast their vote (Estonian National Electoral Committee, 2011).

Although there have been at the national and international level several concerns about some aspects of e-voting, the raised concerns have not been considered, at least not publicly, to be serious enough to question e-voting in Estonia. The main concern is that the level of security is lower, compared to the regular voting, due to the possible insider attacks and computer viruses (Simons, 2010). Furthermore, voters have no possibility to verify whether their votes have been counted (Schryen & Rich, 2009) and there is a risk of intimidation and vote selling. There also are judicial barriers for redress. For example, in 2011, four e-voting related complaints were filed with the Supreme Court, but all these were dismissed on procedural grounds (e.g. the person's rights were not violated or the complaint was not filed within three days as of the resolution or act of the National Electoral Committee was performed)<sup>1</sup>.

E-Governance Academy described the situation of e-democracy in Estonia in 2010 by stating that the situation is excellent, but not hopeless (2010). Based on statistics, Estonia is doing well in terms of e-involvement and is far ahead of other countries with e-voting, but according to a survey in 2010, only 8% of the respondents had heard about the e-participation site [www.osale.ee](http://www.osale.ee) (E-Governance Academy, 2010), which was launched in 2007. [Osale.ee](http://www.osale.ee) is a successor to the portal TOM (*Täna Otsustan Mina* – Today I Decide). TOM was a public participation portal, used in 2001-2008, and “aimed at engaging citizens more directly with the legislative and policy-making processes, either by proposing new legislation or by suggesting amendments to existing laws” (Reinsalu, 2010b, p. 37). It has been considered to mark the beginning of e-democracy in Estonia (E-Governance Academy, 2007) and it allowed “citizens to discuss legislative proposals within a ten-day period following submission and to vote upon them” (Reinsalu, 2010b, p. 37). “The participatory website [Osale.ee](http://www.osale.ee) aggregates the legislative domains of all ministries and represents an attempt to consolidate different opinion seeking environments together under one roof” (Reinsalu, 2010b, p. 38). The portal TOM has been incorporated into [Osale.ee](http://www.osale.ee). [Osale.ee](http://www.osale.ee) allows citizens to present ideas and proposals to the government, to ask other people to support the ideas (by collecting supporting “signatures”), to give opinion on the draft legislation that is being prepared, and to perform searches among legislation and strategy documents.

The e-participation site [osale.ee](http://www.osale.ee) has 3764 users as of April 2011; the number of active users is probably smaller, based on previous experience with TOM. TOM usage statistics between 2001–2006 shows that within 6 years it had about 6000 users and about 1000 legislative ideas were proposed, but only 45% of the users had performed any action (e.g. voting, proposing an idea, submitting a comment) after signup (Tallo, et al., 2007). The same study indicated that the 10 most active users generated 25% of all ideas. Tallo *et al.* highlight that e-participation in the case of TOM was hampered by lack of publicity, but also by the small number of positive responses.

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<sup>1</sup> See for example the judgement of the Constitutional Review Chamber of the Supreme Court of Estonia of 21 March 2011 in case 3-4-1-4-11 (<http://www.riigikohus.ee/?id=11&tekst=RK/3-4-1-4-11>) and of 23 March 2011 in case 3-4-1-6-11 (<http://www.riigikohus.ee/?id=11&tekst=RK/3-4-1-6-11>).

There are also many different e-solutions in the public sector that have failed or were never implemented. Several IT-related projects have failed because of insufficient preparation. Weaknesses in the development of the state's information systems have also been due to the minimal participation of the users in the development process and a lack of cooperation between ministries and agencies (National Audit Office of Estonia, 2010).

Kristina Reinsalu (2009, pp. 40-43) has divided the development of e-democracy in Estonia into three phases. The first was representative or institutional democracy, when the technological basis was created for the next phases. The second phase was consumer Internet democracy, which can be described as a focus on the development of e-services. The third phase, which has not occurred in Estonia yet, is participatory Internet democracy. Reinsalu explains this delay with the fact that though citizens are in the consumer phase and start to move to the next phase, officials and politicians are still in the first phase. The public sector has developed the services, but it does not motivate citizens to use these and does not provide help and guidance.

Government's action programme for 2011-2015 includes an objective on information society to move focus from technology to the people. Related indicators are increased percentage of internet users among the population aged 16-74 and increased satisfaction of citizens and companies with state provided e-services. Planned, to this end, is to further develop e-services (both their quality and accessibility, e.g. by developing applications for smartphones), but also to increase the coordination of the field by appointing a person who will coordinate the state's IT-policy. One of the most ambitious Internet-related sub-objectives is to become a global example for Internet-related legislation.

## **5. Local e-Government – From Websites to e-decision-making**

Estonia has a one-tier local government system. There are 226 local government units, of which 33 are cities and 193 rural municipalities. As of January, 2011 the biggest is Tallinn with 411 903 inhabitants and the smallest is Piiressaare with 101 inhabitants. About two thirds of the municipalities have less than 3000 inhabitants. Despite the smallness of the country, the development of e-services at the local government level was predominantly uncoordinated until 2008. The National Audit Office concluded in 2006 that "the local authorities [had] not received sufficient support from the state in developing the information society" (2006, p. 1). A similar conclusion was reached also in 2007, when the National Audit Office (2007, p. 3) stated that if the state delegates responsibilities to the local governments, it should also provide the local governments with the relevant information systems to ensure even quality of the services.

### **5.1 Websites**

The simplest tool that local governments can use (and are obliged to use) to provide information and services over the Internet is the website. According to the Section 31(2) of the Public Information Act, the city and rural municipality governments were allowed to organise the maintenance of a joint web site on the basis of a contract. The National Audit Office performed an audit in 2006 on the support the state provided to local authorities in developing the information society. One of the conclusions was that "the local authorities find it difficult to fulfil the requirements provided for in acts regulating administration of websites and disclosure of information on websites" (National Audit Office of Estonia, 2006). In March 2008, all the 227 local municipalities had a functioning website, but there were some deficiencies regarding updating of the information, website's poor structure, a lack of a search

function covering its entire content, and difficult navigation (Estonian Ministry of the Interior, 2008, p. 9). Some examples of these problems can also be found today.

E-Governance Academy, who was involved in preparation of the audit report of the National Audit Office in 2006, studied local government websites also in 2009. They found that, compared to 2006, there had been considerable progress in the introduction of comprehensive site maps and search engines, but at the same time the number of certain interactive web tools had decreased. For instance, the number of guestbooks (from 18% to 9%) and forums (in 2009, only 12% of the rural municipalities and 21% of the cities had a forum on their websites; the percentages used to be 25% and 33% respectively) had decreased (E-Governance Academy, 2009). A reason behind this trend was due to forum comments that were often personally offensive and the quality of discussions were poor, though there were also forums with “fruitful debates” (Reinsalu, 2010a, pp. 8-9). While some municipalities have closed the forums, others (for example, Tartu) simply removed the possibility to comment on others’ questions, because there was too much slandering (Reinsalu, 2006).

An audit conducted by the National Audit Office on access to the information in local governments found “that the composition of data in document registers does often not comply with the requirements set by law and that finding the required document from the document register [on the website] may prove to be very time-consuming” (National Audit Office of Estonia, 2009). It is worth mentioning that the sample audited consisted of 15 municipalities and four different document register software were identified among the municipalities.

## **5.2 Coordinated Projects**

Following the Local Government Information Society Strategy of 2008, the Estonian Ministry of Interior initiated projects for service portal for local authorities, as well as data security, records management, procedural environment for electronic documents, local councils’ e-decision making process, and spatial planning. Of these projects only two have reached the testing phase (the service portal and council’s information system). For example, the project on records management, which aimed to transition from paper to paperless management through the new system of records management, faced several problems in 2009 (mainly related to the public procurement procedure) and has been postponed (Estonian Ministry of the Interior, 2011).

The service portal project (KOVTP) includes standardised structure for local government websites. It should facilitate the website management for the municipalities, but still leave them some possibilities to tailor their website according to their needs. It also should transform traditional website into a service portal. The pilot project is complete and the service was made available to other municipalities in March, 2011. By the end of March around 40 municipalities had demonstrated interest to put the solution into use. The service portal should improve e-inclusion, because several functionalities have been added compared to current websites, including services that require authentication with the ID-card.

The Government of the Republic has used the Information System of Government Sessions (called e-Cabinet) since 2000. It helps to save paper, but also time, because the length of the sessions has decreased from 4-5 hours to 30-90 minutes. In addition, all the documents and positions are available to all participants in real time (Government Office, n.d.). A similar solution has also been recently developed for local municipalities. A project called VOLIS was launched in 2009, which is an information system for local councils and governments. The project directly contributes to the second objective of the Local Government Information

Society Strategy. The initial idea of the information system was generated among four counties, when they defined which information systems should be developed for local governments. The aim was to develop an application for local councils and governments, to integrate e-governance, participatory democracy, and records management (Pook, 2010). VOLIS covers all the procedures of the council. For example, it offers a possibility for council members to attend the council session virtually and also to vote. It also offers opportunities for citizens to follow the council session from their computers at home, read the documents of the session and launch initiatives. The latter is about proposing issues to the council to discuss or adopt and collecting supporting signatures for this proposal in VOLIS. As based on Section 32 of the Local Government Organisation Act, “Not less than one per cent of the residents of a rural municipality or city with the right to vote ... have the right to initiate the passage, amendment or repeal of legislation of the rural municipality or city council or government concerning local issues; such initiatives shall be debated not later than within three months”, it would facilitate acquiring the support of the one percent of the residents with the right to vote, as the link to the initiative can be shared via e-mail or social networking sites. In a later phase there will also be activated a possibility to give feedback to the draft (legislation) and to add comments, which both require identification with the ID-card (H. Pook, personal communication, April 11, 2011). Identification with the ID-card should avoid or at least reduce the problem of offensive comments and irrelevant comments, which is an inherent problem of forums. According to Pook (2011), the distinctiveness of the solution lies in the possibility for the council members to vote over the Internet using the functionality of the ID-card.

The software is not promoted among citizens and made available to them until it is sure that the local governments are ready to involve people. It is one of the precautions taken to mitigate the risk of failure of the project. Additionally, not all municipalities will start using the software at the same time, but when they are ready and want to do it. Municipalities can choose whether they use the full possibilities or only some of the functions of the software. For example they can use it only at the city government or council level and even then selectively (H. Pook, personal communication, April 11, 2011).

There are bottlenecks for the effective implementation of the system. One, which is already apparent, is that some local municipalities do not have people who would be capable to make sure that all the required documents would be available via VOLIS and in time. Moreover, not all council members are computer literate and financial resources of municipalities are limited.

VOLIS and the service portal (KOVTP) are interrelated and municipalities themselves can decide whether and when they will start using the solutions. Taking up these solutions requires that local governments have the people who are capable to handle the systems, but it also requires (additional) financial resources as the VOLIS and KOVTP both are based on a monthly fee and there are additional costs that incur at the very first stage (e.g. training). Some municipalities have already considered the VOLIS and KOVTP to be too expensive for them due to lack of financial resources. The following year should show whether these two projects will be the next success stories or the lessons to learn from in e-government.

## **6. Conclusion**

Estonia has several success stories to share with other countries in terms of e-government, but in practice the quality and user-friendliness of e-services is very heterogeneous and the level



of e-government development at the state level is clearly higher than at the local level. With the Public Information Act, the first stage of the e-government became mandatory for local governments by year 2002. Even some years later, several of them had problems to provide the required information on their websites.

Now, in a coordinated way, the state tries to help local governments to move towards a more inclusive information society and to offer citizens more tools for e-participation. Some municipalities in Estonia already offer possibilities to follow the council session online or to watch the recordings of the council session later, but it is more an exception than a rule. Coordinated development of the e-services not only enables developing more sophisticated solutions with fewer resources, but contributes also to technical interoperability of different solutions. It could be assumed that people should be more interested in participating in the decision making on the local level issues than state level, but the question still remains whether the proposed solutions (e.g. VOLIS) will be made attractive enough for citizens that they would be motivated to use the possibilities offered, whether their input would be constructive, and whether municipalities are able to create and sustain the dialogue.

There is still a lot to do to improve the security of the e-services, but also to raise citizens' awareness of the possibilities and tools they can use to participate in the decision making at the local government level. The e-services which enable them to participate in the decision-making (or in e-participation in general) have not been very successful in Estonia. A case study of Tartu, the second biggest city in Estonia, demonstrated that motivating people to use e-democracy services is much harder than ensuring access and services (Reinsalu, 2008). One main motivator behind the success of the e-tax office is a possibility to save time. In contrast, for e-participation there is no legal requirement to participate, participation assumes investing time and any positive results are not always visible, thereby it requires more efforts from the public sector to raise the motivation of the citizens.

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