Rising Expectations – Public Institutions Facing a New Reality in a Digital Era

Daniel JANONIUS LOWGREN, Sweden

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SUMMARY

Public institutions face new expectations every day, as citizens, companies and elected representatives expect them to improve their services and streamline processes by adopting new technologies.

Information and communication technology (ICT) bring new possibilities for public institutions, while at the same time ICT can improve the possibilities of citizens to exercise influence on these institutions dramatically. The objective of this paper is to show, through two examples from the land administration and surveying field of Sweden, how new digital applications can give rise to expectations that change the relationship between citizens and government.

The first example concern transparency in property transformation procedures performed by cadastral authorities. When the diary page of this procedure is made available to stakeholders in real time, the influence of property owners is strengthened considerably as they are given the opportunity to challenge the authority in new ways. The second example describes how geospatial data and specifically cadastral information can be accessed through new channels and how cadastral authorities must meet new expectations concerning data quality. Although there are some significant differences between the examples, they both point at an important shift in expectations and the balance of power between actors.

Digital technology bring tremendous opportunities, and public institutions will be expected to make use of them to deliver the best services possible. This is true in the field of study as well as in other parts of government, in Sweden and internationally. For these institutions, it is only to equip themselves to face this challenge.

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1. INTRODUCTION

Public institutions face new expectations every day, as citizens, companies and elected representatives expect them to improve their services and streamline processes by adopting new technologies. While the development of new technologies makes improvements possible, institutions may struggle to keep their innovation level in pace with the speed of rising expectations.

The purpose of this paper is to present two examples of how information and communication technology (ICT) are changing the conditions for public institutions due to growing expectations from citizens. In the long run these expectations, and whether the institutions manage to meet these expectations, should have great significance for both their ability to serve their purpose and in extent, the legitimacy of the institutions basically.

One could argue that new technology changes the relationship and the balance of power between citizens and government fundamentally. ICTs can dramatically improve the possibilities of citizens to influence public institutions, both directly (through e.g. improved transparency and means for action) and indirectly (through the pressure stemming from growing expectations).

The context chosen for the following examples is the land administration and surveying field of Sweden. Nevertheless, several observations made should be relevant also for public institutions in other contexts as well, in Sweden and internationally.

With land administration, I refer to public processes to identify and record the land and the ownership of the same (property). In most countries with a functioning and transparent system of land ownership and well-working real estate markets, public institutions has a significant role both through legal and organizational arrangements. A well-developed land title registry system is essential to a smooth functioning market economy, as it makes it possible to acquire, own and dispose of immovable property. In addition to the security of land ownership, a land title registry also enables property to be mortgaged, allowing for investment and economic growth. By extension, the security held in real property is a pillar of the whole credit system and in extension the modern market economy. The importance of these institutions was shown by Hernando de Soto (2000) in the book *The Mystery of Capital: Why Capitalism Triumphs in the West and fails everywhere else.*

In addition to new ICT giving rise to rising expectations of citizens, organizational theories like New Public Management (NPM) may also have contributed to a view of the citizen-state relationship regarding the citizen as a "customer" and the state as a "supplier" of public services. It is reasonable to assume that technology and ideology may have combined effects on the

expectations mentioned. In this paper though, I intend to focus on effects and policy implications of technological progress.

The remaining sections of this paper is structured as follows: the following section, Section 2 provides a short literature review to give a theoretical background to the topic of the paper. Next, Section 3 provides two examples to give support to the idea that ICT have a fundamental impact on expectations that public institutions must meet in order to remain legitimate. In one example, the change in expectations happens almost overnight, while the second shows an almost invisible change that takes place over a very long time. Finally, Section 4 contains a discussion.

2. BACKGROUND

E-government is a concept that aims to capture and describe how information and communications technology (ICT) change the conditions for how public institutions function. The World Bank has defined e-government as follows:

"E-Government" refers to the use by government agencies of information technologies […] that have the ability to transform relations with citizens, businesses, and other arms of government. These technologies can serve a variety of different ends: better delivery of government services to citizens, improved interactions with business and industry, citizen empowerment through access to information, or more efficient government management. The resulting benefits can be less corruption, increased transparency, greater convenience, revenue growth, and/or cost reductions. […]"

Within the broad concept of e-government a variety of sub-categories exist, such as e-democracy, e-service provisioning, e-management and e-governance to name a few. Categories can differ and concepts can be filled with different meanings, all depending on context.

In many contexts, the emphasis in the discussion is the opportunities that ICT provides for public institutions to improve their existing service provision to citizens, or to streamline existing processes. This is of course an important part of e-government, but equally or even more interesting is how technology is fundamentally transforming the public sector and how technology changes the relationship between the citizen and the state. My claim is that new technology allows for rising expectations of citizens, and that these expectations can be a powerful force for change in the role of government.

Reddick (2014) examined what factors determine citizens' choice of communication channels when communicating with public institutions. Digital communication channels (defined as websites and email contacts) are of great importance when the purpose of the contact is primarily devoted to information seeking, while traditional contact channels (phone, personal visits and regular mail) continues to play a major role when the user has a specific issue to deal with. Thus traditional and digital channels complement each other and it is important for an institution to understand the differences in order to deliver a good service and thus respond to citizens' expectations.

The role of social media was not examined by Reddick, but can be expected to be of significant importance for the topic of this paper. We have yet to see how social media will transform public institutions in the long term.

Furthermore, Van Ryzin (2004) attempted to measure how citizens' expectations affect their actual experiences of the quality of public services, by applying an *expectancy disconfirmation theory* developed by Oliver. The model is primarily developed for and used to measure customer satisfaction in the private services sector. It is based on first trying to quantify a customer's initial expectation of a service and then to estimate what impact expectations has on the final experience when the service is delivered. The difference between the expectations and the perceived performance is called a *disconfirmation gap* and can be either positive or negative, which basically means that the experience can either exceed expectations or fail to meet them.

Van Ryzin shows than the initial expectations can have even bigger impact on the final satisfaction level of the user, than the actual perceived performance level of the service provided. Although the conclusion at first can appear somewhat surprising, it is not difficult to recognize that emotional affects such as disappointment, or the feeling of pleasant surprise, can linger long.

The studies mentioned above points at the importance of understanding what effects the use and design of e-services can have. For public institutions in the digital age, it should be of great importance to first convey what you do in a good way, and thus produce the right expectations, and then also to live up to these expectations in an equally good way. An illustration of this challenge follows in the examples below.

3. EXAMPLES

To illustrate how ICT can change the conditions for public institutions due to growing expectations, here are two examples drawn from the land management and surveying field of Sweden. The most important institution in this context is the Lantmäteriet, the Swedish mapping, cadastral and land registration authority, although the issues raised below is essentially the same for the municipal cadastral authorities.

3.1 The diary page of property formation procedures

Permanent ownership of land in Sweden complies with the ownership of one or more properties. The boundaries of properties make up a grid that covers the entire surface area of Sweden, that is – a full covering land cadastre. Changes in the division into property units are achieved through a property formation procedure (a *förrättning*), a process that is regulated in the Real Property Formation Act (FBL) and the Real Property Formation Proclamation (FBK). A property formation procedure must be applied for by a qualified stakeholder, and the procedure is accomplished by a public cadastral authority (a municipal such in major cities, otherwise by Lantmäteriet, the Swedish mapping, cadastral and land registration authority).

FBL stipulates that at least two documents are produced in the property formation procedure. The first document is the protocol (FBL 4 ch. 16 §) where the property formation order amongst others

and the motives for these orders are noted. The second document is the diary page (FBK § 13), where it is noted when the procedure was applied for, what actions are taken, what documents are filed or produced as well as the date for the final orders.

According to the author of this paper, the diary page had for a long time been used sparingly. That is, until a few years ago, generally very few things was noted at all in the diary. At best, the diary page could for some procedures serve as a table of contents to the cadastral dossier, but apart from that the diary page seldom held much information.

An illustration of this is that the diary page up until recently often was omitted in the copy of the dossier, which after the procedure was sent to stakeholders. This was common practice in Lantmäteriet as well as in many municipal cadastral authorities, probably because the officials thought the document was of limited interest for anyone outside the authority.

In 2013 Lantmäteriet launched an e-service called *Mina fastighetstjänster*, "My real property services". The service gives a property owner access to an overview of their own properties as well as direct insight into ongoing property formation procedures affecting these properties.

The service retrieves information directly from the processing system of the authority and presents this information in an easily understandable way for the user. The diary page has come to have a prominent role as it is presented as a case summary for the user of the service. As the diary page of the service is updated in real time, it gives the property owner the opportunity to "supervise" how processing proceeds.

The importance of this new insight can hardly be overestimated. From the perspective of power between citizens and government, my opinion is that the citizen's influence is strengthened considerably, especially since the "information advantage" of the authority is reduced. In addition to insight, the information also enables the property owner to challenge the authority during the process in a completely new way.

An anecdote from a procedure meeting in 2015 may serve to illustrate the new role of the diary page. The authority had a time before the meeting received a written request from a stakeholder and made a note in the diary page. The note could be interpreted as if the authority found the request reasonable. The final assessment however, is made in the announcement of the formal order. At the meeting the cadastral surveyor (responsible for the process) informed the participants what request had been made and took a rather cautious position towards the request. The cadastral surveyor was then immediately questioned by a participant who said he had looked into *Mina fastighetstjänster* and asked why the official had changed her mind. The surveyor however managed to calm the wrought-up participant, reassuring him that no final position had yet been taken on the issue.

The anecdote illustrates how the diary page, which has been compulsory in the procedure for at least 45 years (since FBL came into effect, before that counterparts of today's diary page existed in the then applicable legislation), has come to have a new importance almost overnight. What was previously regarded as an internal concern of the authority has now become a means of

transparency for stakeholders. The balance of power between citizens and government have changed, and as a result new expectations rise, in a mutually and continually reinforcing process.

The phenomenon described above does not necessarily concern only the institution involved, since expectations of citizens can spread into other fields of government as well. A post on the microblog Twitter can serve to illustrate this final argument (posted by AndersRamang, 2015-06-26 17:10, my translation):

The service @lantmateriet provides which give online access to documents / diary is great. When will we see the equivalent of @Domstolsverket (the Swedish courts)?

3.2 Property boundaries on the website hitta.se

The example above illustrates how one small component of a public process, a up-hitherto almost unused diary page, with the help of ICT can transform into a vital instrument for the citizen as a key stakeholder.

Example number two has some similarities with the first one when it comes to forming expectations, but in contrast to the former example, this is about a development that has taken place gradually over a very long time. Henman (2010) argue that *e-government*, even if the concept is novel, describes a phenomenon that is not at all new. Rather, the development of digital technology followed hand in hand with the development of society and the public institutions ever since the invention of computer technology in the 1950s. To go to the beginning of example number two, we need to back even another hundred years, to a time of great land reforms in Sweden.

Before industrialization, when people lived of the earth, the tradition in Sweden was for most landowning families to pass on their holdings in equal parts to each son of the next generation. The properties where usually split in a way so that each heir got their share of every single parcel of land, with the consequence that the properties with time became more and more shattered. With collective farming within the village, that was not necessarily a problem. But with improved larger-scale agricultural techniques, a decreasing mortality and a growing population, this meant that for each generation it became increasingly difficult to feed of a family from an ever shrinking portion of land.

Around the 1700s ideas began to spread in some circles about land reform to increase agricultural productivity. Reforms such as *solskifte* and *storskifte* was carried out in some parts of the country, in order to create more coherent agricultural units. But it was not until the mid-1800s, with a crying need which expressed itself in starvation and migration, and a functioning central government with the means to carry out reforms that the conditions were in place to enter the era of *laga skifte*. This reform came to reshape almost the whole of Sweden, improving conditions for agricultural productivity by redistribution of land to create viable property units, while at the same time shattering villages through relocations of farms from the former village centers.

During this period, which lasted roughly from the mid-1800s to the early 1900s, the country was pretty much in detail measured village by village. Land was classed and redistributed and maps of the land was produced with an accuracy that is still impressive. The maps from *laga skifte* is a cultural treasure of rank and are still often the starting point even today when a cadastral surveyor is about to investigate who is the owner of a certain part of land.

An economic map is a map that shows land use and ownership of properties. The first public economic maps in Sweden was made available during the late part of this land reform era, as the information was now available in the necessary quantity and quality. These maps were pretty much a patchwork of the village maps produced in the land reform procedure (*laga skiftes-kartor*). These individual pieces, which often had been produced with great accuracy, was tweaked together to fit a scale that did not allow for much details. Especially not when it comes to property borders, since most effort and detail was given to land use, infrastructure and such.

During the late 1900s the national land title registry database was established, using at the time modern database techniques. As new technology was developed the analogue economic maps was digitalized and came to form a part of the registry in the 1990s. As this work was labor intensive and the main purpose of the digital maps was basic guidance, the techniques used to produce them further reduced accuracy in its details. Since then the quality of the map has been gradually improved, as new data is added when property formation procedures are undertaken, but the quality of the information still varies greatly.

This is not necessarily a problem, since according to Swedish land code it is primarily the physical boundary marks on the ground that determines property borders. But if you are unaware of the variations in data quality, the risk of misinterpreting information in the digital maps is obvious when you consider that one millimeter in an analogue map of scale 1:10000 equals 10 meters in reality.

In 2014 the company Hitta.se, which provides a catalogue service of phone numbers and addresses, launched a new online service called *Find your property border*. The service is available on www.hitta.se/kartan and presents property borders collected from the national land registry map against the backdrop of an areal photo (more accurately an orthophoto). As the service is free and does not present any obvious reservations concerning quality, it has become popular among property owners wanting information about their or their neighbors' property boundaries.

Not surprisingly, it is common to see in the maps property boundaries that appear to go for example straight through buildings or in the middle of a street. When the user turns to the source of the data with their concerns, which is the cadastral authority, they usually expect to get a quick and precise answer about the location of the property border. They do not in general expect to hear that the position of the property border in the national land title registry map can differ up to tens of meters compared to reality. When cadastral authorities are to live up to the soaring expectations of citizens in a situation like this, they clearly have the cards stacked against them.

The example shows a development that has taken place over a very long time, where data from the authorities "suddenly" becomes available through digital channels. In this case the data is produced

by the cadastral authorities, but the information is bought and provided to citizens by a private company. Expectations of what capacities cadastral authorities hold are formed in a process beyond the control of the authority, in a way which bears some resemblance with the Twitter-post in the previous example.

4. DISCUSSION

The purpose of this paper was to present some examples of how ICT are changing the conditions for public institutions, as they allow expectations from citizens to rise constantly as a result of technological innovation. Lacking better alternatives, the term *e-government* has been called the *24 hour government* in Swedish, capturing the essence of expectations in a digital era.

e-government is a phenomenon that changes the relationship between the citizen and the state and questions of ITC hold real political implications when the role of public institutions are redefined. Van Ryzin (2004) showed that initial expectations are of great importance when citizens are to assess the quality of public services. Authorities must manage to live up to these expectations in order to be perceived as well-functioning and legitimate.

Digital technology provides citizens with new opportunities to exercise their rights. A sensational example from 2014 was the municipality of Kalmar in Sweden who, after receiving critique from a public citizen ombudsman, had to hire a civil servant whose only job would be to answer a single person who day after day requested large amounts of documents electronically, in accordance with the constitutional right of public transparency. Even though the example is extreme, it resembles my first example above where existing legislation combined with new technological tools can be of great importance for the abilities and opportunities of citizens, in their dealings with government. New means of transparency makes it possible to supervise public processes, and also challenge authorities in new ways.

Within land surveying, technological innovations has always been an integral part of the development. Surveying techniques underwent a tremendous development during the last century. With global navigation systems it is possible without much effort to measure objects and areas with centimeter precision that previously required weeks of work efforts. This of course led to rising expectations on cadastral authorities to provide efficient public service with high quality. My second example shows how new applications using existing data reshapes expectations beyond the control of the original producer of the data. Public institutions must keep up with the development if they do not want to be perceived as outdated or even obsolete.

Parallel to the technical side of land surveying, an interesting question is whether we are facing an equally formidable revolution in other fields of surveying and land administration as digital innovation progress steadily in decision making processes. In this context, it is difficult to ignore the discussion that emerged recently on the automation of jobs and how it is possible for computers to perform more and more tasks that previously required human intervention. Within certain fields of government, such as for example tax and social security, automated decision making is well established.

It is reasonable to believe that digitalization will transform most parts of government and land administration should be no exception. Digital technology brings great opportunities, and both citizens and elected representatives will expect that public institutions make use of them to deliver the best public services possible. For the authorities, it is only to equip themselves to face this challenge.

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BIOGRAPHICAL NOTES

Daniel Janonius Löwgren works as manager and cadastral surveyor at Lantmäteriet, the Swedish mapping, cadastral and land registration authority. He graduated with a master degree in land administration from The Royal Institute of Technology (KTH) in Stockholm, Sweden in 2010. Daniel is also the chairman of the northern region of Samhällsbyggarna, the Swedish member association of FIG.

CONTACTS

Daniel Janonius Löwgren
Lantmäteriet, the Swedish mapping, cadastral and land registration authority
Axtorpsvägen 11
Umeå
SWEDEN
Tel. +4672-270 53 88
Email: dlowgren@live.se