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# The Digital, Strategic and Citizen-Centric Project 'Genvej' – introducing ICT in Gentofte Kommune

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**Abstract.** E-government, or online digital self-service solutions, is being used increasingly by governments and local authorities worldwide. When used properly as a part of a clear strategy in the entire organization it is an effective tool that helps authorities connect with their citizens and offer better service at reduced costs. In this paper we share and reflect on some experiences from the implementation of *Genvej* - a strategic and digital citizen-centric project in the municipality of Gentofte.

**Keywords:** E-government, digitalization, public administration, municipality, citizen-centric, self-service

## 1 Introduction

This paper will examine and explain how the development and implementation of the digital, strategic and citizen-centric service '*Genvej*' helped the municipality of Gentofte deliver even more transparent, cost-effective, valued, relevant and personalized service to the citizens at a time, when most of the public sector was still trying to understand the theoretical possibilities of information and communication technologies.

Given the length of the paper, this should not be regarded as the complete and comprehensive story of *Genvej* including the entire lifespan of the project or the numerous twists and turns we have had to make during the years. It is however meant as a short introduction written in a retrospective view aiming to reflect on some of the knowledge and experiences we found particularly useful.

The municipality of Gentofte is located north of the Danish capital Copenhagen. The municipality covers 26 km<sup>2</sup> and has approximately 74.000 inhabitants distributed in 33.000 households. This makes Gentofte the 18th largest municipality in Denmark measured in number of inhabitants<sup>1</sup>. The municipality is considered a very wealthy area, and in average the citizens have a very high income compared to Denmark in general<sup>2</sup>. The high income combined with a high level of education and easy access

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<sup>1</sup> All statistics can be found on our website:

<http://www.gentofte.dk/da/Om-kommunen/Gentofte-i-tal/Statistikker>.

<sup>2</sup> Based on an analysis from "Arbejdernes Erhvervsråd":

<http://www.blboligen.dk/artikelarkiv/2012/oktober/dobbelt-saa-hoeje-indkomster-i-de-rigeste-kommuner>.

to the internet makes Gentofte very receptive to new digital solutions.

Gentofte kept its status as a single municipality after the reform, but for the local politicians and administration it was clear that a new strategy was needed. A strategy in which the development, adaptation and introduction of new information and communication technologies would be vital in helping Gentofte deliver even better service to its citizens at lower costs. In Gentofte, the “Citizen Service Center” had existed as an analogue face-to-face service center helping citizens with their needs since 1996, but the digital evolution and an increasing number of self-service solutions meant an opportunity to offer a new form of service. It was also clear that there was a need to collect more services across the municipality instead of spreading them further in order to make a more efficient administration.

The digital maturity in Denmark at the time got a massive lift, as commercial companies such as banks and airline companies introduced numerous online systems, which meant that the customers could do a lot of their business from home, using their computers without going to the bank or calling the airline companies. Furthermore since the beginning of 2001 ‘the Digital Signature’ had been developed, which meant that citizens were able to send and receive secure emails from companies and some authorities.

This new way of communicating and delivering service meant a demand for something similar within the public sector. The politicians and directors in Gentofte recognized the need and began looking for suitable solutions. At first the municipality engaged in collaboration with other municipalities in an attempt to create one common single digital entrance. In 2005/2006 after a lot of talks and negotiations with other municipalities it was clear that not all of the municipalities had the resources and infrastructure needed to back a project like *Genvej*. It was therefore decided that Gentofte should continue by itself in order to fulfill the ambitions and strategy rolled out by its directors, and in February 2007 the first version of *Genvej* was launched.

## **2    *Genvej* – a Citizen Centric Project**

*Genvej* is a direct digital portal that offers personalized information and self-service options for the citizens. As a citizen you only have to login to one system that presents you with numerous possibilities for self-service. *Genvej* compiles and collates this information, so the citizens only see what is relevant to them. By showing the citizens the same information - gathered from a lot of public systems and databases - that previously only have been accessible to employees, *Genvej* makes the communication transparent and thereby enhance the service towards the citizens, offering them a wide range of tailored digital possibilities.

*Genvej* is also a strategic project that combines better citizen service with internal efficiency by moving the citizens from service to self-service, but still with focus on a high level of service to the citizens. With *Genvej* we wanted a fundamental change in our approach towards citizen service. Services and information should be available 24-7-365, and we wanted to explore the many possibilities that the newest online technology and digitized services had to offer. Since its launch the project has reduced the budget with several million DKK and we

have seen a decrease in the number of face-to-face interactions at our citizen service center.

## 2.1 What can you do in *Genvej*?

As mentioned above one of the key elements in *Genvej* is the fact that it knows you. By using advanced web services and multiple database integrations we are able to show the citizens only what is relevant to them. All access to *Genvej* is protected behind the common public PKI-system, NemID. Citizens can only access *Genvej* with their personal NemID and they can only get NemID by showing sufficient ID. Some of the services in *Genvej* are generic and available to all citizens like access to the local plan for the area where you live, the temperature and water quality of the beach nearest to your home<sup>3</sup>, or the ability to report vermin or send a secure email to the municipality or other authorities. But because *Genvej* draws information from many different services, systems and databases we are able to differentiate which services the citizens can see or use, when they are logged on. Because the system knows your personal information and details you will not be prompted for your social security number, address or family relations etc., when you interact with the services. Once you are securely logged on to the system you can communicate quickly and conveniently with both the municipality and many other public institutions.

The variations as to what you can do in *Genvej* are many and under constant development, but here are a few examples:

- If you are a Danish citizen you will be able to apply for a new Danish passport online. If you are a foreign citizen this option will not be available to you.
- If you are a homeowner you will be able to order extra bin bags, report uncollected rubbish, read your water meter or view and pay your property tax. If you live in a rented flat you will of course be able to report uncollected rubbish, but since you do not own your home, you do not have to pay property tax, and this service will not feature in your *Genvej*.
- If you have a child you will be provided with a direct path to information from your child's day-care center, school or school dentist. You can see the weekly activity schedule for your child's day-care center, so you know when a trip to the forest is planned and you have to remember to pack raingear. You can also view photos of your child from the day-care center and write messages to the staff. If you do not have a child, all of this will not be shown in your *Genvej*.
- When you get your first child or move to the municipality with children, you will get access to our digital day-care allocation. This provides an overview of the day-care provision in the municipality. Using the same principles as

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<sup>3</sup> The municipality is located very close to the sea.

online flight booking, you can search for and book available places for your child based on criteria such as start date, distance from your home and opening hours. If you already have a child in day-care the system will know this and offer your next child a place in the same institution.

These examples of relevant personalized digitized citizen services shows how the strategy has penetrated a wide range of the services we offer to the citizens and also the amount of control and insight we have handed over to the citizens. Providing this citizen-centric portal has had implications for three different groups in the municipality.

The politicians and policy-makers are now able to continue their strategy about delivering high quality service to the citizens at a lower cost and at the same time offering the citizens an open and honest insight into the information being collected from them and what it is used for. For the organization/administration that has the responsibility of implementing the policies and strategy, *Genvej* meant a new way of thinking about the services we deliver to the citizens. What can fit into the portal and how can we make use of this digital infrastructure in a way that presents the citizens with better options than we had before. Finally there are the citizens themselves, the users of *Genvej*, who has a role to play in the development of the digital services. Presented with a new approach towards services and new self-service options they must be sure to build awareness and understanding of the relationship between their rights and their obligations. All of this takes time but a consistent focus and dialogue helps to ensure that everyone embraces the possibilities and continue to add further value for both the citizens and municipality.

### **3 Going Mobile – having *Genvej* with you on the Road**

After the implementation and first experiences with *Genvej* on a computer we received a lot of wishes from the public regarding access from their mobile devices. As smartphones and tablets became widely available in the 21st century, mobility became central. Spurred on by the private sector it was now possible to do almost everything on the go, including shopping, banking, booking tickets, and finding the nearest restaurant. In Gentofte we wanted to embrace the new technology and bring our services closer to the citizens by using these new devices and decided to launch an application (app). The app launched in May 2012 and two years later we have almost 6.000 active installations on mobile devices. The format or mindset of apps motivates the citizens to seek direct communication and quick and easy access to our self-service solutions. In order to successfully implement a mobile version of *Genvej* we were faced with a number of challenges including content, physical size of the devices and security.

#### **3.1 Security**

One of our greatest concerns was security. It was vital for us and the success of the app that privacy and security was handled safely given the amount of personal information the app gave access to. On computers we use the common secure

login NemID but since this login uses a Java client which does not work on mobile devices we had to find another form of login. The solution was a combination of a username and password along with a unique activation code which you could only get from the computer version of *Genvej* with your personal NemID.

### **3.2 Content**

A lot of the content and solutions in *Genvej* depended on integrations and web services that worked well on traditional computers and standard browsers but when you tried using them on a mobile device the user experience was very different. Besides the physical challenge of the screen size and the number of different mobile browsers, we had to redesign a lot of the solutions in order to make them function on mobile devices. This was expensive so we decided to focus on some of the content most suited for mobility and then gradually add more functionality in time.

We focused on our day-care solutions because this was an area that was very popular and at the same time a service that would benefit a lot from being available on the go. With the app parents were able to view the latest diaries, activities and photos from their children's institutions, report illness, arrange play-dates and change the person that collects the child. The functionality was very well received and we continue to develop and implement new features in constant dialog with the day-care institutions and parents. In 2013 we launched a mobile version of our digital day-care allocation service which gave parents the possibility to book a place to their child using a mobile device.

### **3.3 Agile Development**

In our experience it is necessary that we keep developing and implementing new features to our mobile solution. The future of technology is moving towards complete mobility and in order to have a fully citizen-centric digitized solution it is crucial that we have a strategy that leads towards implementing a full mobile solution that will ensure that citizens are connected on the go no matter where they are, and that their personal information is kept secure from other potentially prying eyes. To exist on numerous platforms is also important because the old saying of one size fits all does not apply to the ever changing modern technology and lifestyle. As a municipality with a clear digital strategy we are keenly focused on exploiting digital possibilities to provide optimal services and actively involve citizens living in the municipality. It is also important for us that we exist on numerous channels to prevent us from alienating any citizens and ensuring equal access to our services.

## **4 Best Practices – what have we learned?**

When used properly we have found our digital portal a very effective tool that helps us connect with our citizens and develop a good relationship with them. In order to succeed in providing a citizen-centric platform it is important that the solution delivers real value to the citizens including relevant and personalized

services. What follows are a list of some of the most successful practices we have experienced from our work with *Genvej*.

#### **4.1 Know the Citizen**

It is absolutely essential that you know and understand the citizens. You are only able to provide the best possible service to the citizens if you have a solid understanding of their needs. This knowledge can be achieved by informal or formal methods. The informal method includes what employees in the municipality, especially in the citizen service center, where we have our self-service area, learn from their day-to-day interactions with the citizens while the formal method is based around interviews and other surveys.

In *Genvej* the citizens has a feed-back opportunity which they use very often to send us comments on various solutions, submit wishes for new development, or give constructive feed-back. Whether you gain knowledge of citizens by informal or formal ways, engaging the citizen and encouraging dialogue is crucial in learning more about each and every one of them, and what they need in terms of services.

Relevance is also very important. *Genvej* doesn't just give all citizens access to every service and information available in the municipality. Each citizen is only presented to services that are relevant to him/her. This means that if you are a homeowner you can find your property tax card, and if you are a parent you will be able to access our day-care provision and so on and so forth. In a time where information and commercials are being pushed to the public very aggressive it is essential that municipalities and other government administrations stay focused on their areas and deliver relevant and tight services to the citizens when they need them.

#### **4.2 Create Citizen Empowerment via Digital Access**

In this day and age the standards and possibilities regarding technology are under constant change, development, and challenge from the commercial world. As a result citizens have grown accustomed to instant access to services and goods with the click of a button. This has created a citizen who no longer wants to stand in line or wait on hold in the phone when they need a service. A digital portal such as *Genvej* empowers the citizens to take more control over their own lives and needs, satiating the need for immediate response and control over their environment.

Transparency is also very important in this process because digital solutions – when implemented correctly – can deliver a valuable insight to the citizens which they did not have before. Through the use of our digital day-care allocation for example, it is possible to search for a place in real time from the comfort of your home. Earlier you had to contact the municipality who would look for available places within a system you could not access and allocate a place for you. Now you are able to view all available places yourself and can make a choice that suits your needs.

#### **4.3 Provide Consistency in Service Delivery**

Using *Genvej* we have become able to provide a constant high level of quality when

delivering services to the citizens. With far less chance of human error, consistency of service is far higher. When all the processes are automated and all requests, forms and information are sent electronically, information transfer will be immediate and reply times will be constant with no loss of information during transit.

#### **4.4 Increase the Level of Interoperability in Services**

With portals like *Genvej* we are able to increase the interoperability of service delivery to the citizens. When we developed *Genvej* many self-service solutions were organized as isolated island systems, where the citizens would login and access one or just a few services or information related to one specific service. Then the citizens had to log of this system and login to other systems to do other things. With *Genvej* we looked beyond this island organization in order to enhance the user experience and the use of digital services by presenting the citizens with all the options even though she/he only entered *Genvej* to do a single errand.

Using common solutions like NemID with single sign on to other services and integrated web services and databases, the citizens do not have to supply the same basic information more than one time. This reduces costs and enables a lot of basic tasks to be centralized and in time this will help to improve the quality of service experienced by the citizens. The citizens do not have to know which department handles which services. To them it is irrelevant and with the help of digital portals as *Genvej*, integration between authorities is handled more efficient and convenient. As digitization continues to evolve the need for further interoperability becomes even more essential.

#### **4.5 Support long term Sustainability**

Perhaps a bit overlooked but we have found that the implementation of digital portals such as *Genvej* supports long term sustainability. As more efficient services are available online to the citizens, there is no wasteful use of paper and no need of physically transport when you contact the municipality.

### **5 Impact on the Surrounding Society**

We believe that *Genvej* contributed to mature the public sector and change the access to a number of services within the welfare society in Denmark because it showed just how quick and convenient online services from the municipality and other Danish authorities can be reached. By developing *Genvej* the municipality was willing to run a big risk on its own and has ended up with a service that is growing and changing as new technology and self-service solutions evolve.

With *Genvej* we offered our citizens real personalization almost a year and a half before others - for instance “min side” on Borger.dk - and we showed what can be achieved when a digital platform compiles and collates personal and relevant information and services.



If we look at the statistics is it also evident that *Genvej* offers value to the citizens. From January 1, 2014, until March 1, 2014, we had 7820 different citizens, who used their NemID to logon to the portal. In the same period we had 11.537 citizens, who showed in person at our citizen service center. Moving the citizens from service to self-service is a huge task but with *Genvej* we believe this transformation is moving in the right direction as the numbers of citizens who use our digital self-services continue to grow.

Easy and convenient citizen access combined with an organization that is truly customer focused is the key to successful digitized citizen service. This involves ensuring that citizens have access to the platform on multiple channels, and that they can still get help with and access the services via traditional methods, if they wish to do so. It is also important that both the front-office and the back-office are aware of this strategy and have a deep understanding of the citizens using the platform in order to continue the development and deliver effective digital solutions now and in the future.