# Online Services of Municipal Websites

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# ONLINE SERVICES OF MUNICIPAL WEBSITES

**Abstract**
As time changes, people change and the way they do changes as well. Local governments have to keep up with the age where internet already became a very common place to search for information and to use online services. As local governments have to provide several services it is necessary to shift to e-services that can be used online through the website of the municipality. There is a huge difference in online presence of local governments. In this article online services are analysed by type and by users with showing specific examples and ideas for cities with lower level of online activity.
KEYWORDS: municipality, city, website, online, service

**JEL codes:** D830, H830, L860, R500

## Introduction

Internet penetration increased dramatically worldwide in the past years, and still more and more people connect to the internet and use online services. Internet World Stats (2010) shows 58.2% internet coverage in Europe as there are 482 millions of users in this region. With the increasing usage of different online services by citizens there is a need to get up-to-date information and use local government services online through municipal websites.

The goal of the research is to define those services which should be offered on municipal websites. Furthermore this paper will show city governments ideas how to develop their website to help spreading the information society. The author is a member of the City Council of Pécs and has good insight and high interest on the topic.

The method of the research was online research by reviewing municipal websites and analyzing website specifications of different cities. The research was taken in three phases. At the first phase, several city websites were reviewed and categorized by the level of services they provide for citizens. The author reviewed English and Hungarian language websites and specifications where they were available. Websites not offering enough services were not considered to be part of this research. At the second phase eight modern websites were chosen to participate in the deep research. These cities were chosen by the fact that they care about their online presence, plan and manage their municipal websites well. The final websites participating in the second phase of this research became the websites of Amsterdam, Albuquerque, Dallas, Derby, Hollywood, Madison, Memphis, Oceanside and Pécs. Online services were analysed and categorised. At the third phase of the research the online services offered were compared to each other and best practices were defined. This is where the main goal of the research was reached.

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## 1. Acceptance of online services

When a new service is introduced the accepting it usually needs time. People may deny the new methods and become paranoiac, both resulting in not using the new methods (Robert, Racine 2001). The informatics revolution started decades ago, first it was used only in the back office, later in the front office as well. Since from the 1990s personal computers moved into homes and connected to the internet, and nowadays many people tend to use it for everyday work and entertainment as well. As seen in Figure 1 this trend shows that personal computers and the World Wide Web became the fastest spread technologies ever, faster than television, telephone and other important technologies (Decision Processes International 2000 in Robert, Racine 2001: 3). Internet already became a special virtual place where people search for information, use online services and connect to each other. Life is changing and local governments can not neglect this trend.

*Figure 1.* **New Technology Adoption Trends Years to Reach 10 Million Customers**
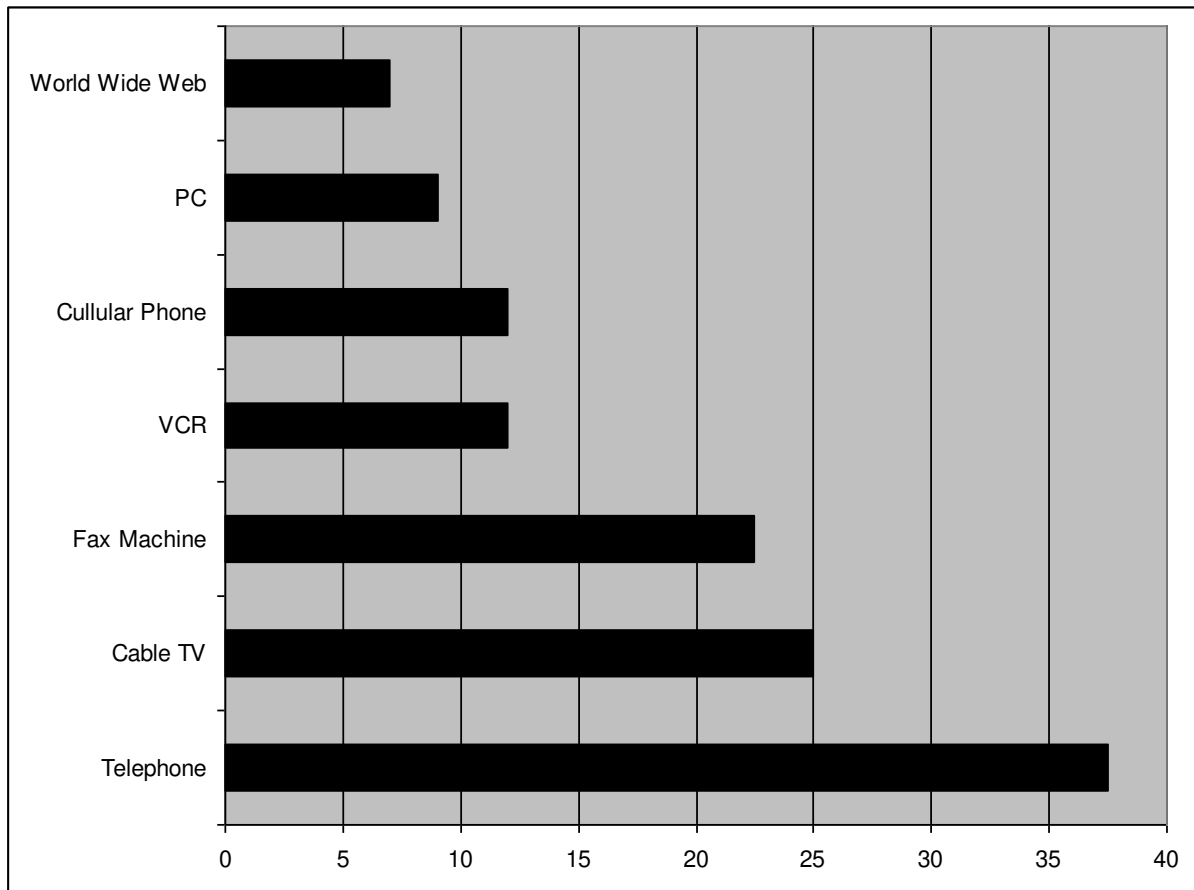


*Source: Decision Processes International 2000 in Robert-Racine 2001: 3.*

## 2. City branding

City branding became an important issue in the previous decades even if there is only a little literature yet (Tayebi 2006: 2). As most of the production facilities go Far East because of cheaper wages causing cheaper production, most Western cities face a problem of declining manufacturing and often high unemployment rates. As Jonas and Wilson (1999: 45) argues 'to be seen as industrial is to be associated with the old, the polluted, the out of date'. In the developed world only the service sector is increasing, containing tourism, which is one

of the highest developing sectors worldwide. City governments want economic development, and tourism is a good way to achieve this. Cities have to gain as many tourist as they can. If more tourists come to visit a city the city government will receive more money from local taxes because tourist spend their money there. It even increases employment rates and further generates new investments. A keen competition between cities are happening nowadays to be promoted and ranked the best places to live, invest and visit (Borja, Castells 1997). Successful cities are building the image of city of tomorrow. This makes sense of city branding.

City branding is an established image of the city, which may mean some common design for city marketing activities or to name the city by something which is important for the place. For example the city council of Pécs, European Capital of Culture 2010 branded the city as 'the city of culture' in 2011 to be able to continue the cultural programs. As most tourists look information on the internet, city branding is very important in case of the online presence of the city.

Brand defines colours, typography and photography on the municipal website which affects the visual look of the website. This is all important, but the services offered online are at least as important as this.

## 3. Common services of municipal websites

Municipal services can be divided into two groups: services that should be provided compulsory by law and services undertaken by courtesy. In different countries the compulsory services can be different because of diverse law systems. However, most of these services are common worldwide.

Most of the current municipal websites offer several online functions to assist completing their services. The author analysed several city websites of the world and found the following common online services and features.

### 3.1 Knowledgebase

The goal is to capture the knowledge of the city council so people can find answers to their questions through the internet. The knowledge is codified in this case, which has the advantage that anyone can read it, without having to phone a service centre and find somebody who can provide the particular information needed. This is mainly done online by publishing articles. The website of Amsterdam has a knowledgebase with 3000 questions and answers (Kana 2008: 2). A searchable knowledgebase is preferable. Search in the database should be easy to use by even inexperienced users. Using a decision tree or other checklist is preferably to organize the data next to ordinary keyword searching methods. It is also particularly important for citizen to be able to get information on public decisions of the city council. Most cities use an online searchable database to provide this information.

### 3.2 Calendars

Program calendars help the citizens and tourists to know when there will be interesting programs in the city. This is usually pretty simple, website visitors can browse in the calendar and search for particular events. Pécs, European Capital of Culture 2010 introduced an online calendar for city programs on its iranypecs.hu website.

### 3.3 Online forms

Probably the most time consuming service for the citizens is to go to the local government office to have some administrative work done, for example to get licences and permits or submit different forms on papers. These papers have to be digitalized after

submission, which needs further work of municipality employees. Many cities already discovered that it can be done in different way to make the process faster and cheaper. Municipal websites can be used to submit forms and documents electronically. The website of the city of Albuquerque allows submitting approximately 50 forms online (Cisco Systems 2006: 2). Using this kind of services online is much cheaper for the local government and for the customers; furthermore it is more comfortable to use as well.

*3.4 Subscription services*

The municipal website can provide periodic information in e-mail. Newsletter is a one-way communication method which is very cost effective. This is a modern way to inform citizens about important information happening in the city. City of Memphis uses this kind of communication; citizens have to sign up to receive the newsletter of the municipality (Memphis 2011: 1). Citizens of the city of Oceanside can choose which information they want to receive (Oceanside 2010: 5). However, in both cases citizens need e-mail addresses to be able to receive this kind of communication, which is a drawback for elderly people who may not have e-mail addresses.

*3.5 Map*

Although Google Maps with worldwide coverage is one of the most common used online maps nowadays, many municipal websites contains online maps. Some maps are based on Google Maps mentioned above. Services are different, some of them only show streets; others show places of interest as well.

*3.6 Web poll*

In many cases a citizen poll may be necessary. This can be done through telephone or ordinary mail, but is costs a lot. A cost effective way to make polls is to use the municipal website. Only a small application is needed which can be administrated easily, the results can be seen real-time.

*3.7 Webcam*

A very common function nowadays is to put one or more webcams in the city and citizens can view the picture of it. It can be used to see the current weather or it may be just for fun. City of Memphis put webcams to motor vehicle inspection stations which allows citizens to determine wait times through the picture of the webcam.

The author found that the website of the City of Dallas may be used as a benchmark for other websites regarding common services. It offered most of the services for the citizens in a convenient way (see Figure 2).

## 4. Further services

Though most of the municipal websites already offer many of the common services described above, time changes, and visitors demand more information and features. Websites are constantly developed, and new online services introduced. Here are some ideas that are used already by some cities to enrich their online presence.

*4.1 Interactive gallery*

It is very hard to search for old photographs when it is needed. An online photo archive gallery helps to solve this problem. The government uploads old photos and photos of current events to help citizens find the appropriate photo they need. The city of Hollywood

already uploaded 4000 archive photos in its online gallery which took two years to collect and scan (Gold 2002). The collection continuously expands.

*Figure 2.* **Website of City of Dallas showing a high level of integration of services**



*Source: Dallas (2011)*

*4.2 Online payment*

Traditionally pays could be paid only through Postal Service or bank transfer. As people begin trusting online payment methods they use their credit card more and more often to buy things online and pay for services. The same method can be used to pay bills online as well. Currently only a few local governments allow doing this, and only for services of government own companies. The most common service to be paid online is the water consumption. In many cases citizens can view their monthly consumption as well. City of Hollywood implemented this system in 2002 with great success (Barletta 2002). City of Dallas also allows paying like parking or red light passing fines through its website (Dallas 2011). City of Derby (UK) even allows making sport centre bookings through on of its websites (Derby 2007: 7).

*4.3 Social networking*

Facebook and other social networks are very widespread nowadays. Among the top 20 sites on the web by number of page views there are three social networking sites: Facebook, Twitter, LinkedIn (Alexa 2011). City websites should keep up with the developments. Websites should be able to provide capability of social media tools to deliver information to the citizens who can also share this information with their friends on social media sites. Many companies already created their Facebook profiles as part of their online marketing activity. They can share information between fans which is a very fast and cost-efficient way to promote events, etc. Cities should also use this opportunity to inform their citizens. City of Derby (UK) already has the opportunity to follow the latest council news on Twitter (Derby 2011).

## 5. Visitor's needs

Websites are for visitors. This is often neglected, but a good website is designed in a way that visitors can easily use it and want to return later.

Improving municipal portals to be more user-friendly can be done in different ways (Dallas 2006, 5):
- Improve the usability, including new services.
- Improve the navigation, the user's ability to find items of interest.
- Improve communications between the local government and the citizens.
- Improve attractiveness, make better design of the website which should be somehow connected to city branding as well.

During all improvements customers have to be placed in the centre. Organizing the website into departments does not mean a lot for most of the users who do not care about departments.

After showing the wide amount of possible services of municipal websites, we should clear who visits these websites and which services they may use.

According to City of Madison (2006: 20), visitors can be categorized in the following way:
1. Citizens of the city of all ages.
2. Taxpaying users of city services.
3. Professionals, such as architects and storeowners, complying with city regulations.
4. Investors and the international business community.
5. Those looking to do business with the city.
6. City/county/state employees.

7. Professionals looking for data they need to carry out their jobs.
8. Students and academics researching government activities.
9. Tourists and potential tourists.
10. Members of the press.
11. Government officials and their staffs.
12. People looking to relocate their home or business.
13. Worldwide Web surfers.

If we want to know which services are used by which type of visitors a matrix should be created which is show on Table 1.

*Table 1.* **Online services used by different type of visitors of municipal websites**

|  | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Knowledgebase | X | X | X | X | X | X | X | X |  | X | X | X | X |
| Calendars | X | X | X |  |  | X |  | X | X | X |  | X | X |
| Online forms | X | X | X |  |  | X | X |  |  |  |  | X |  |
| Subscription services | X | X | X |  |  | X |  |  |  | X | X | X |  |
| Map | X | X |  | X |  |  |  | X | X |  |  | X | X |
| Web poll | X | X |  |  |  |  |  |  |  |  |  |  | X |
| Webcam | X | X |  | X |  |  |  |  | X |  |  | X | X |
| Interactive gallery | X | X |  |  |  |  |  | X | X | X |  |  | X |
| Online payment | X | X |  |  |  |  |  |  |  |  |  |  |  |
| Social networking | X | X |  |  |  | X |  |  | X |  |  |  | X |

*Source: Own research based on City of Madison (2006)*

Regarding the integration of services two different strategies can be identified. First is to have separate websites for a group of municipal services, targeting one or more of the above user groups. Second way is to have one common website where all services are integrated. There is no one best way, but many cities try to integrate all services into one website. For example city of Dallas integrated most of its services into one website, dallascityhall.com. Based on a survey of 170 government websites the site is organised by topics not by departments like in case of Phoenix, Miami and Vancouver (Dallas 2006: 8). This allows easy operation even for inexperienced users. On the other side city of Derby (UK) chose a different way. It has several different websites organised by topic (Derby 2007: 6). A combined way is used by city of Pécs where there is one main portal with three sub portals for different target groups: citizens, officials and tourists (Pécs 2011). Furthermore there is a special other portal to feature programs in the city.

**Conclusion**

The goal of the research was to distinguish different online services and find the best practices available. Several services and solutions were shown in this paper. It can be concluded that many local governments do not care enough of its online presence. The author recommends that city councils should clearly define their services and choose ways to put them online to save costs and time in the future. Such decisions should be based on written analysis where the goals and the methods used are connected together. An online strategy

should be prepared where visions, goals and aspirations are described in relationship with other municipal strategies and an implementation action plan.

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## ONLINE SERVICES OF MUNICIPAL WEBSITES

### Summary

A three phase research was taken by the author to define the possible online services of city governments. The goal of the research was to define those services which should be offered on municipal websites and provide best practices that city governments can follow.

After reviewing several municipal websites eight of them were chosen for detailed analysis. Online services were collected and analysed by target groups. Seven common services were defined. The common services identified are: knowledgebase, calendars, online forms, subscription services, map, web poll and webcam. Some websites offered extra services. Three of these further services were identified: interactive gallery, online payment and social networking.

Thirteen different user groups were distinguished and analysed by which online municipal services they may use. Municipal websites should care about all user groups, but different user groups have different needs for online services.

Regarding the integration of the online municipal services two different strategies was identified. Some of the cities operate separate websites for a group of municipal services, targeting one or more of the user groups. The other method is to have one common website where all services are integrated. Sometimes the website is divided into several subsites for different user groups. There is no one best way, but we can conclude that many cities try to integrate all services into one website.

Though most municipal websites offer some kind of online services most of them could improve the way they do it. Some city governments plan and define the needs and exact ways how their website should operate. The author recommends city governments to follow this way. Proper preparation, pre-research of possible user needs, benchmarking other municipal websites, planning and specify the website can dramatically increase the operation and user-friendliness of the municipal website. An online strategy should be prepared where visions, goals and aspirations are described in relationship with other municipal strategies and an implementation action plan.

A good municipal website not only helps the citizens but also saves time and money for them. It can eliminate most personal office routines by giving the opportunity to manage most things online. This also saves money for the city government. It can reduce the need for personal customer service allowing lower personnel costs or allowing employees to work on more important issues. This research can give ideas for city governments how to develop their website gaining most of the advances and help spreading the information society.

KEYWORDS: municipality, city, website, online, service

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