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# Ethical web design

An audit of municipality websites in Europe

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## **Sammanfattning**

Alla kommuner har en webbplats. Jag undersökte webbplatserna för 24 städer i 6 EU-länder när det gäller deras etiska design. Denna studie visade att det finns webbplatser som enbart tillhandahåller kontaktinformation, medan andra är mer detaljerade med avancerad teknik som möjliggör öppenhet och delaktighet. Studien visade också att det inte finns någon etisk kod eller lagstiftning från EU eller medlemsländerna som reglerar utformningen eller innehållet i en kommun webbplats, så långt som deras etiska aspekt är berörd. Vad regleras av EU och de länder där de studerade kommunens webbplats hör, är förekomsten och användningen av cookies i kommunala webbplatser. Studien fann att på grund av bristande kontroll, den etiska designen av webbplatsen beror främst på de lokala myndigheternas intresse och initiativ. Även för cookies där lagar finns, är medborgarna inte tillräckligt informerade.

## **Abstract**

All municipalities have a website. This thesis examined the websites of 24 towns in 6 EU member countries in terms of their ethical design. This study found that there are websites that are in the stage of providing contact information only, while other are more detailed with advanced techniques allowing openness and participation. The study found also that there is no code of ethics or EU / country laws that regulate the design or content of a municipality website, as far as their ethical aspect is concerned. What is regulated by the EU and the countries of the municipalities studied in this thesis, is the existence and use of cookies in municipality websites. The study found that due to lack of control, the websites' ethical design mainly depends on the local authorities' interest and initiative. Even for cookies where laws exist, citizens are not informed correctly.

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# 1. Introduction

Web technology is a potential channel through which municipalities can contact the citizens and provide information and services. Jil-Garcia (2013) argues that having a website is not enough, the quality of the website content and the services offered are crucial for how many people will want to visit and use the site. Users should feel that they can benefit from the content and its services in order to make them want to return to the site. Through the website municipalities can create participation and interest in the activities that are offered. Watson et al. (1988) coined the term “attractors” which an organization can use as to maximize the attractiveness of a site (i.e. “town hall, news feed, archive, customer service center”). Zheng and Jiang (2011) argue that to gain from the benefits of internet technology, organizations must first be willing to accept, adopt and internalize these new technologies.

The Internet is described by Afuah and Tucci (2002) as a low cost, universal mediating technology, which acts as a network externality creator, a distribution channel, and a time moderator, used by people in all their everyday activities. Vikram (2007) argues that the web matures and people, as users of the web, learn more about user behavior and demand a much greater degree of personalization and control. The UK Cabinet Office’s Digital Efficiency Report (2012) indicates that “today 82% of adults in the UK are online. Completing transactions online such as shopping and banking has become second nature because online services tend to be quicker, more convenient and cheaper to use.” The UK Cabinet Office (2012) argues that transactions online can be 20 times cheaper than by phone, 30 times cheaper than by post and 50 times cheaper than face-to-face transactions.

The EU Directive 95/46/EC (OJ, 1995) on the protection of individuals with regard to the processing of personal data and on the free movement of such data (Data Protection Directive) indicates the right to respect for private and family life, home and correspondence. Furthermore citizens should expect fair response, information credibility and protection of personal data from the sites they are visiting. Today, internet users better understand how easy it is to manipulate a website visitor’s personal data and how difficult it is to stop this from happening. Their growing knowledge about the many possibilities of unauthorized use of their personal behavior on the internet (website visiting, shopping habits, personal discussions in social networks etc.), has led to a demand for ethical respect from websites. The United Nations (UN), the European Union (EU), governments, professional bodies, as well as public and private organizations have in the past few years increased their efforts for ethical behavior while using Information Computer Technology (ICT).

All the above initiatives for ethical behavior, which will be explained later in more detail, are mainly concerned with the organizations’ or companies’ internal employment policies. Ethical issues with respect to the users (visitors) of the websites are not yet well defined. Harris (2010) notes the absence of guidelines for ethical behavior towards either Web designer’s clients or the users of the developed Web pages.

The aim of this thesis is to study the ethical issues of web design, focusing on the ethicality of the design of municipality websites. I argue that an ethical designed municipality website includes website content quality, openness, transparency in decision making and citizen participation tools. *Ethics* in municipality web design can include simple design techniques such as the possibility for a visitor to adjust the font size of the text according the visitor’s personal needs, backstage technologies such as the manipulation of cookies and protection of visitor’s personal data, and evidence about the accuracy, credibility and currency of the information published on the website. *Accuracy* refers to the degree to which a Web site is free from errors, whether the information can be verified offline, and the reliability of the information on the site Metzger (2007). The Directive and the Data Protection Act 1998 (NA, 1998) in Britain, defines *personal data*: “‘Personal data’ is defined in Article 2 of the Directive by reference to whether information relates to an identified or identifiable individual.” The

Swedish Personal Data Act, PTS (2003), defines personal data as follows: “All kinds of information that directly or indirectly may be referable to a natural person who is alive”. Information *credibility* as defined by Metzger (2007) refers to the believability of some information and/or its source, adding that a long history of research finds that credibility is a concept with two primary dimensions: expertise and trustworthiness. Metzger (2007) also notes that *currency* refers to whether the information is up to date.

## 2. Background

### 2.1 Previous research

The present-day Internet was developed in 1989 with the invention of the World Wide Web and a hyper-text language (HTML), at the European Organization for Nuclear Research (CERN, 2015) in Geneva, Switzerland. Not much publicity was given to the event and only a few scientists realized the power of this new invention according to Noris (2001). Through packet-switching networks selected computers were connected and built the early version of the internet that linked scientists to specific destinations. As noted by Schmitt and Robertson (2015) the launch of a graphic user interface by Mosaic, the first client browser software, a few years later, helped to popularize the Internet technology. With the size and capacity of this technology increasing every year, a wider audience realized the internet’s potential for transforming peoples’ private life and work.

The investment in internet technology that followed was extensive. Realizing its benefits, the public sector as well as private companies, especially in the industrialized world, started investing in the Internet. The United Nations and the World Bank Group displayed concern for the countries lacking technological investment, pointing out that this would have negative effect on their position in the global marketplace (World Bank, 2011). The spectacular rise of electronic mail, internet services, and telecommunications offers exceptional opportunities to access instant information, reach new markets and generate social capital, is indicated by the World Bank (2011). The United Nations (2010) addressed global leaders at the World Summit for Social Development in 1995, in Copenhagen, where poverty eradication was described as an ethical, political and economic imperative, and identified it as one of the three pillars of social development.

Municipalities have also understood the benefits of the internet and their potential as an aid in their effort to contact and provide services to their citizens. By giving practical examples and providing case studies of the Internet’s properties as described by Afuah and Tucci (2002) this thesis will explain how municipalities and citizens can benefit from the use of the Internet. I argue that internet technology with its properties can assist municipalities and their citizens in the following ways:

*Internet as a mediating technology:* The Internet is a mediating technology that interconnects interdependent parties. As Afuah and Tucci (2002) describes, there are four types of interconnection; business-to-business (B2B), business-to-consumer (B2C), consumer-to-consumer (C2C), or consumer-to-business (C2B). In the case of municipalities B is the municipality which produces and delivers information and services and C is the citizen who receives and uses the information and services offered. The Internet’s interactivity has unique advantages over other media such as the TV or newspapers. Utilizing this internet’s advantage, municipalities and citizens can interact, ask and answer questions in real time. Most importantly, anyone connected to the Internet can broadcast information to anyone.

*Internet’s universality:* refers to the Internet’s ability to both enlarge and shrink the world. The Internet, according to Afuah and Tucci (2002) enlarges the world because anyone in any location can

reach anyone's services or products around the world. Similarly, municipalities can reach all their citizens regardless of the distance, and citizens can reach the municipality's services from their home or work. Internet shrinks the world as citizens do not need to visit the municipality in order to be served, and the authority does not need to visit the citizen's residence to provide services.

*Internet as network externality creator:* Citizens can communicate with each other regarding similar suggestions or problems or they can look up many of the topics they are interested in on the municipality's website. The citizen's ability to participate or subscribe to the website makes the municipality network more valuable. According to Afuah and Tucci (2002) the more people are connected to a network within the Internet, the more valuable that network is.

*Internet as a distribution channel:* Afuah and Tucci (2002) describes internet as a distribution channel. Rao (1999) notes that internet has emerged as a powerful new channel for distribution, rendering many intermediaries obsolete. I argue that utilizing this property, the municipality can use the Internet as a distribution channel for services that are concerned mainly with information, such as statistics, application forms, tickets, video or music from the town's library, services and e- payments. Citizens can use the municipality website to search and receive information, or to communicate, and send applications.

*Internet as a time moderator:* The Internet's ability to shrink and enlarge time is its fifth characteristic according to Afuah and Tucci (2002). Through the Internet citizens can find information regarding services, or activities offered by the municipality. This information can reach the citizen instantaneously; and thus shrinks time. On the other hand, online services are offered 24 hours a day, 7 days a week enlarging the time for a citizen who might want to use them.

*Internet as information asymmetry shrinker:* Afuah and Tucci (2002) explain that information asymmetry exists when one party to a transaction has information that another party does not—information that is important to the transaction. The site that has the information has an advantage. In the case of municipalities if the municipality had this advantage, with the Internet this advantage is reduced. The Internet is a huge source of information and some of these information asymmetries are easily obtainable from the Web. The same exists for municipalities when they collect information about their citizens i.e. for taxing purposes.

*Internet as a provider of infinite virtual capacity* (Afuah and Tucci (2002): Using the technology's processing speed, storage capacity and networking, the Internet offers citizens the feeling that it has infinite virtual capacity to serve them. Municipality websites can therefore reduce waiting queues; provide better service; increase citizens' satisfaction and their interaction with the municipality. The municipality, on the other hand, can collect and process more data; offer personalized service and; increase the service credibility.

*Internet as a low cost standard:* The Internet is standards based on a protocol and it is open to everyone. Through their websites, municipalities have an excellent opportunity to communicate with a large number of internet users (citizens) at low cost. Citizens on the other hand, can communicate through the websites at a lower cost than through post, telephone calls or personal visits, according to the UK Cabinet Office (2012).

The analysis of the Internet's properties above demonstrates that websites can be an advantage for a municipality in the effort to serve the citizens.

I argue that an additional internet technology advantage is the possibility of an organization's internet offers to add an ethical image on its website functionality with less effort and cost, through ethical web design. According to Molich (2008), ethical web design shows respect to the website's visitors who in turn will show their satisfaction by visiting the website more often, just as a satisfied customer

regularly visits a shop. On the other hand not being able to find specific information, and not knowing what something means or how personal data will be used, can be enough to affect a visitor's attitude towards a website, Molich (2008) continues. The expectations a visitor has from a website are not different from visiting the municipality's offices. During a personal visit to the municipality, the visitor expects to be served in a pleasant environment, with integrity, decency, in an efficient and quick manner. This is what a visitor expects from a website too. According to Molich (2008) an office manager should be fired if any of the above was missing. However, this does not seem to apply to websites: there are many problems on websites, Molich continues, like hidden information about the collection of personal data or the search giving unnecessary or bad results.

I argue that ethical design includes certain attitudes which have to be found on a municipality website. The website information must be available to all citizens, while the owners and the person responsible for the website must be easy to contact. The information must be easy to find, current, accurate and decent. The website must avoid hidden techniques that can damage the citizens' trust to the website. It must inform the citizens that it follows legislation about the access, storage or manipulation of personal data. The website must include access to municipality services (e-services and e-payments). It must welcome the citizen to participate to the community and to give his/her opinion. It must prove that decisions which affect the citizens' life are not being taken behind closed doors but are open for control and participation.

## ***2.2. Research question***

This thesis studies the websites of 24 European cities from 6 different countries members of the European Union. The main research question of the thesis is: Are municipalities in the EU taking into consideration ethical aspects when designing their websites? A sub question that this thesis will try to answer is: Are there laws or directions, from the EU or local governments, on how personal data should be handled and what rights the citizens have using the internet? Another sub-second question is: Are municipalities following laws and directives regarding ethical design of municipality websites? In the evaluation, the thesis will try to find out if there are EU or country laws indicating how a website should be designed in order to fulfill certain ethical requirements. This evaluation will show possible problems that may exist because of the absence of a code of ethics in the ethical design of municipality websites. The thesis will suggest which steps have to be followed in order to introduce a code of ethics in the design of municipality websites. The code of ethics will help different stakeholders in the design of municipality websites.

This thesis studies the websites of 24 European towns in 6 different countries members of the EU. I choose to study the websites of 4 towns from each of Sweden, Finland, UK, Spain, France and Cyprus choosing one of the countries bigger and three of its medium or smaller in population towns. As a method to evaluate the ethical design of the selected websites I selected to compare each website manually against a list of evaluation questions which I have formulated. The study of the websites is done twice and in two different chronological periods in order to avoid mistakes. The evaluation questions are first studied separately for each municipality, then by country and last by number of inhabitants.

Bigger towns are healthier economically than smaller towns. Towns which serve as "strong economic engines" are common in the 500.000 – 1 million inhabitants range according to a European Commission (2007) report. They receive more income from taxes, from business activities and the sale of services. Four of the selected towns in this study (Barcelona, Marseille, Goteborg and Manchester) are in this range. I therefore expect the websites of these bigger towns to show better results than the websites of smaller towns. Smaller towns are more financially dependent on external sources (the EU

or the government) and are therefore more dependent on initiatives such as the ethical design of websites. The capitals of the countries were omitted (except of Nicosia the capital of Cyprus because the country has only 4 cities) as they were considered privileged as capitals.

In Sweden and Finland I expect to find the best results as far as the ethical design is concerned. The two countries have the highest GDP according to Eurostat's report (2014b) out of the six countries in this study. The worst findings I expect will come from the Cypriot cities. I am unsure how the websites of towns of big European countries such as the UK, France and Spain respond to ethical design.

### 3. Theory

The term 'ethics' is related to the Greek word 'Ethos', equivalent to Latin 'mores'. As noted by Honeycutt (2004) the word ethos was used by Aristotle when he referred to the speaker's character as he or she appears to the audience explaining that if a speaker has good sense, good moral character, and goodwill, we are inclined to believe what that speaker says. Oxford Dictionary defines Ethics as moral principles that govern a person's behavior or the conducting of an activity. Floridi (2008) describes Information Ethics as the study of the moral issues arising from availability, accessibility and accuracy of informational resources independently of their format, kind and physical support. Quinn (2013) explains ethics as the philosophical study of morality, a rational examination into people's moral beliefs and behavior. According to Quinn (2013), "A society is an association of people organized under a system of rules designed to advance the good of its members over time. Cooperation among individuals helps promote the common good. Every society has rules of conduct describing what people ought and ought not to do in various situations. We call these rules morality".

Floridi (2006) refers to Walter Maner who in the mid-1970s coined that computer ethics refer to the field of research that studies ethical problems *aggravated, transformed or created by computer technology*". Floridi (2006) continues by noting that it later became clear that what matters is not the specific technology (computers, mobiles, ICTs in general) but the raw material manipulated by it: the data or information. In late 1990s, several researchers started working on "information ethics (IE)" Floridi explains.

According to Froehlich (2004), that the expression "information ethics" was introduced in the 1980s in Library and Information Science, then in Business and Management studies, and only later joined by Information Technologies studies. Froehlich (2004) names Hauptman (who started the Journal of Information Ethics in 1992) and Kostrewski as some major authors in this field.

Ethics is not connected only with computer technology. An ethical issue is said to arise whenever one party in pursuit of its goals engages in behavior that materially affects the ability of another party to pursue its goals. According to Harris (2009) when the effect of an action is helpful—good, right, just—we say the behavior is praiseworthy or exemplary. When, however, the effect is harmful—bad, wrong, unjust—the behavior is unethical.

Many of the key problems and concepts of ethics go back to the time of the Ancient Greece to the Greek philosopher Socrates and the origins of Western Philosophy, according to CMU (2002), when the City of Athens was the center of the world's intellectual life. During the 5th Century BC, known as the "Golden Age of Pericles", Socrates (469 - 399 BC) was the first philosopher to focus specifically on the area of Values (the problems of God, the Good and the Beautiful). CMU (2002) notes that



Socrates was the first to argue the importance for a moral agent to gain as much valuable information as the circumstances require in order doing the right thing (Socrates to Crito). Plato (429-347 BCE) who was Socrates' greatest follower, accepted the key Socratic beliefs in the objectivity of goodness and in the link between knowing what is good and doing it, CMU (2002) continues. From Plato's Dialogue (380 BC) Euthyphro, we can find examples of Socrates's thoughts regarding ethics, such as the relation of religion to ethics. Aristotles (384–322 BCE) in Nicomachean Ethics, written 350 B.C., says that "Every art and every inquiry, and similarly every action and pursuit, is thought to aim at some good; and for this reason the good has rightly been declared to be that at which all things aim."

According to the Internet Encyclopedia of Philosophy (IEP), by the middle of the Fourth Century, when the Roman world emerged to gain domination over all the Mediterranean certain philosophies of life took prominence. Two of them, Epicureanism and Stoicism, left lasting marks on the Western Tradition. For both schools, "ethics" focused on achieving "well-being" or "happiness" and both saw that the character of one's existence depended on a proper attitude toward the world as a whole.

In all cultures, philosophers and religions have proposed many ethical theories according to Quinn (2013). Ethical theories that are based on reasoning from facts or commonly accepted values are helping us today to give logical reasons why a position or argument is correct. Quinn (2013) continues by saying that by explaining the chain of reasoning that led you to your conclusion is more likely to convince the audience that the position is correct.

Singer (2015) also notes that references to ethics are found in all cultures. The earliest surviving writings that might be taken as ethics textbooks are a series of lists of precepts to be learned by boys of the ruling class of Egypt, prepared in approximately 3,000 B.C., where several passages recommend more broadly based ideals of conduct, such as the following: rulers should treat their people justly and judge impartially between their subjects; those who have bread should share it with the hungry; one should not laugh at the blind or at dwarfs. According to Singer (2015), in the oldest of the Indian writings, the Vedas, ethics is an integral aspect of philosophical and religious speculation about the nature of reality. These writings date from approximately 1500 to 1200 BCE. In ancient China, Singer (2015) continues, the moral philosopher Laozi (6th century B.C.) is best known for his ideas about the Dao. The Dao is based on the traditional Chinese virtues of simplicity and sincerity; living in a simple and honest manner, being true to oneself, and avoiding the distractions of ordinary living.

According to Quinn (2013), every society has rules of conduct describing what people ought and ought not to do in various situations. These rules are called morality, Quinn (2013). Floridi (2006) has created a list, in a chronological grouping of the types of ethical problems we meet while using information technology.

- First, according to Floridi (2006), the problems of privacy, accuracy, intellectual property (and access), viruses (vandalism) were the ethical problems that appeared in the 1970-80s.

- (Internet) availability, accessibility and accuracy; piracy; digital divide; safety, reliability and trustworthiness of complex systems; hacking (vandalism); freedom of expression and censorship; pornography, monitoring and surveillance were the ethical problems met in the 1990s, describes Floridi (2006).

- Security and secrecy; propaganda; identity theft in the 2000s, was the third grouping described by Floridi (2006).

- Military, health-related, social, political and religious interpretations (as well as anthropological and psychological) came more recently according to Floridi's chronological list.

Information technology is the main key player in today's society. The Internet's characteristics (Afuah and Tucci, 2002) as described above and its impact on e-commerce's 5C-S (coordination, commerce, community, content and communication) has helped aspects of the society that have been slower to adapt to new technologies, to build websites as an additional tool to their citizens for social and economic development, to deliver public services, operational efficiencies and active citizen engagement. Among these latter slow to adapt new technologies are government departments and local authorities, according to the UK Cabinet Office's Digital Efficiency Report (2012).

The United Nations (UN), the European Union (EU), governments, professional bodies, public and private organizations have recently increased their efforts for ethical behavior while using Information Computer Technology (ICT). The United Nations Ethics Office (UN, 2015) has as a target to offer

- Confidential ethics advice
- Ethics awareness and education
- Protection against retaliation for reporting misconduct
- Financial disclosure programme
- Promotion of coherence and common ethics standards across the UN family
- Build trust internally and externally;
- Increase awareness of key ethical issues;
- Stimulate and legitimize ethical dialogue;
- Build consensus around vital issues;

Private companies like Atlas Copco (Atlas Copco, 2014), Nokia (Nokia, 2011), Ericsson (Ericsson, 2015), Alfa Laval (Alfa Laval, 2014), Volvo Group (Volvo, no date), Mercedes-Benz (Mercedes, 2015) and General Motors (GM, 2014) are some of the established companies that have their internal code of ethics published either on their websites or printed in booklets. These companies describe their strong commitment to the highest standards of ethical conduct and full compliance with all applicable national or international laws.

It is important to point out that the initiatives for ethical behavior mentioned above (UN's and private companies') are concerned with the organizations' or companies' internal policy for their employees. Ethical issues regarding the use of websites with respect to the users (visitors) of the websites are not yet well defined. Harris (2010) calls this "absence of guidelines for ethical behavior" and Floridi (2006) calls this "policy vacuum". Technological changes, argues Floridi (2006), have outpaced ethical developments, bringing about unanticipated problems that have caused a "policy vacuum" filled by Computer Ethics (CE).

Visiting the above companies' websites, only four of the companies are informing the visitor (with well-displayed pop ups) about cookies and how these are used by the company. I have chosen to mention cookies because informing about cookies on websites, is what one of the questions I have in my list for studying ethical design in municipality websites. In the example I have by purpose chosen big, well established, international, well-known customer-oriented private companies to show that even in the private sector where good behavior has a direct relation with good business and profit, the need of ethical behavior is not felt as a must.

Ethical principles for various professions are described in their own sets of guidelines or codes. Harris (2009) suggests that a set of ethics guidelines for web design should be consistent with established ethical guidelines for software engineering namely, the ACM-IEEE (2015) Joint Software Engineering Code of Ethics, JSECOE. *The purpose of the JSECOE* is to document the ethical and professional

responsibilities and obligations of software engineers according to IEEE Computer Society (1997). The ACM (2015) (Association of Computing Machinery) explains the code: Software engineers shall commit themselves to making the analysis, specification, design, development, testing and maintenance of software a beneficial and respected profession. In accordance with their commitment to the health, safety and welfare of the public, software engineers shall adhere to the following Principles, which are described and include among other points the Public (software engineers shall act consistently with the public interest), Client and Employer (software engineers shall act in a manner that is in the best interests of their client and employer consistent with the public interest); and, Judgment (software engineers shall maintain integrity and independence in their professional judgment).

The ethical issues of web design should be very similar to those of the JSECOE where the public interest is first and foremost says Harris (2010). To the question “How should a Web site is designed so that it is in the public interest?” Harris (2009) proposes four broad ethical web design guidelines to be included into what constitutes the “public interest”. These are:

- Information should not be hidden;
- Information should not be used or transferred without proper consent;
- Consent should be properly obtained; and,
- Privacy should be maintained.

According to the Special Eurobarometer 307 (2009) the municipalities in Europe have major powers in key sectors such as education, transport, the environment and economic development which account for 2/3 of the total public investment expenditure. The Special Eurobarometer 307 (2009) also shows that Europeans recognize that local authorities have an important impact on their living conditions at a percentage of 38%. The Eurobarometer 307 has been engaged in the field of public opinion measurement in the EU for over twenty years, surveying both the general public and special target groups as needed by the different services of the European Commission (2012).

In the countries studied in the thesis, all members of the EU, the contents of a website and the rules on how information will be published and manipulated are not ruled by law.

In Sweden, according to Tomas Johansson Haavik, a Web Strategist at SALAR (the Swedish Association of Local Authorities and Regions), the municipalities are only encouraged to follow existing guidelines, foremost those included in WCAG 2.0, level AA. Information about cookies on municipal websites is mandatory, due to regulations from the EU. How the websites do it technically is at this moment up to the websites themselves. SALAR also points out the guidelines from the Swedish Government Guidelines (2015) which are also based on WCAG 2.0.

In the Swedish municipalities’ handbook *About Human Rights in Municipality Level* by Abiri, Brodin and Johansson (2008), universality is pointed out as central principle – all have the same rights, which are indivisible - no one’s rights are more important than another’s rights but all are part of the same whole idea of equality.

As local and regional authorities are subsidized financially by the European Union, they are also influenced by the European Union. The influence occurs in many different ways such as in co-financed projects with the interested countries or in decisions that affect the local and regional authorities’ way of governance. According to information published by SKL (2015b), estimates show that approximately 60 per cent of the issues dealt with by municipal and county council assemblies are directly or indirectly influenced by European funding or decisions taken by the EU. In another publication, “The role of the municipalities” SKL (2015c), SALAR explains that the municipalities

play several different roles as service providers, developer of society, supervisory authorities and employers. I refer to the above sources in order to show that municipalities in the EU have no directions on how to design or what to include on their websites even if they are in many of their decisions financially dependent on the EU.

## 4. Method

Many articles and methods have been published as tool for accessible and usable websites. For example, according to Nielsen's article *Accessibility Is Not Enough* (2005), "when you want to improve your website for users with disabilities, remember the real goal: to help them better use the site". Explaining ethics (W3C, 2014), The World Wide Web Consortium under "Ethics and Branding" indicates that by making responsible choices in policy and genuinely demonstrating that those policies are implemented, an extremely positive brand image can be created. As professionals, W3C notes, "it's our job to try and produce the best quality output we can. In a society that values us as individuals it's important to not exclude someone because they have different needs" (W3C, 2014).

Companies that show that they care about their customers will retain much more loyalty than those that do not. Kennedy (2010) argues that designing an accessible website involves more than writing standardized code. Kennedy (2010) argues also that an important distinction between standards and accessibility is that, whilst some efforts have been made to regulate accessibility from outside of the web industry, the standards movement has been entirely self-regulatory.

I argue that thinking ethically when designing a website includes website accessibility and usability. It is an ethical responsibility of the owner and the developer of the website to include the above two key characteristics when designing the website. This argument is backed by the World Wide Web Consortium W3C (2015b): "The Web is fundamentally designed to work for all people, whatever their hardware, software, language, culture, location, or physical or mental ability".

During the period between December 2014 and April 2015 I audited the websites of 24 EU municipalities (Appendix 1). The sample includes websites of towns from six different EU member countries. For my audit I have chosen websites where the information was written in English, Swedish, Finnish, Greek, French or Spanish in languages that either I or somebody in my environment is familiar with. The purpose of the review is to evaluate to what extent these websites meet a list of guidelines for ethical behavior (Appendix 2) that I have created after studying existing ethical guidelines and proposals from professional bodies; reading literature from experts in the field of ethics; from knowledge I received from courses I have attended relevant to website development techniques, accessibility, usability, e-commerce and online databases; and my own experience in web design techniques as a tutor.

The websites' information content, i.e. its relevance approach has not been reviewed. Neither have the technical design of the websites (such as readability regardless of the browser used and screen size) nor the web content for mobile devices (or the provision of a logical tab order used by screen readers) been reviewed.

The lack of code of ethics and EU legislation in the ethical design of municipality websites in the towns – members of the EU is notable. This can perhaps be explained as a lack of respect to the citizens' expectations for ethical behavior. This argument is backed by the importance books and articles I have read give to Ethics in society; the importance many professional bodies (i.e. doctors, librarians, electrical engineers) give to their own code of ethics; the interest about Ethical behavior

since ancient time; and, the importance privacy, quality, accuracy and currency of online information has for internet users. None international organization (i.e. the UN) has neither published such a code.

#### **4.1. Questions about ethical design**

The list of guidelines for ethical behavior of municipality websites is in the form of Yes / No questions, Q4 to Q20. Questions Q1 to Q2 (municipality name and municipality URL) are informative for the reader and not be analyzed. Q3 (municipality population) is also informative but it will be used when evaluating municipalities' performance in relation to their size. As I argued in the introduction of the thesis, I expect bigger municipalities to give better results.

*Q1 Municipality Name:* All municipality names are listed in Appendix 1. Four municipalities from each of Spain, France, Cyprus, UK, Sweden and Finland have been chosen. These municipalities form a variety of EU countries from a variety of geographical locations and population size. The native language of each of these countries is a language that either I or somebody in my environment is familiar with. The name of the town is listed in this question.

*Q2 Municipality URL:* The URL of each town is shown under this question. All the municipalities of this study have a website.

*Q3 Population:* The population of the municipalities is shown in this field. The inhabitants in the selected towns range from 29000 (Riihimäki, Finland) to 1.6 million (Barcelona, Spain).

*Q4 Website information available in other languages:* Information in non-native languages that may be relevant to have on a website is up to each authority to decide individually as they appear not to be any regulations by the EU. W3C noted already in its Web Content Accessibility Guidelines 1.0 that website owners must have in mind that many users may be operating in contexts very different from the website's own, for example "they may not speak or understand fluently the language in which the document is written", W3C (1999).

If people with a first language other than the native one are a part of the site's audience then parts of the content of the site should be translated. I argue that the following should be explained in additional languages:

- a) A brief description of what the authority does, as well as
- b) Information on how to contact the authority

This question examines if the above contents of the website are available in any language other than the country's native. I argue that the design of the website is ethical, if information in additional languages is available.

*Q5 Listen to the page contents:* According to W3C's "Diversity of the Web" (W3C, 2012) people with disabilities access and navigate the Web in different ways, depending on their individual needs and preferences. Sometimes people configure standard software and hardware according to their needs, and sometimes people use specialized software or hardware that helps them read a website<sup>1</sup>. Some common approaches for interacting with the Web include Assistive Technologies, software or hardware that people use to improve interaction with the web. According to W3C these include screen readers that read aloud web pages for people who cannot read text (W3C, 2012).

According to the EU (Eurostat 2014a), disability is defined as: 1) People having a basic activity difficulty (such as sight, hearing, walking, and communicating); and, 2) People limited in work because of a longstanding health problem and/or a basic activity difficulty (LHPAD).

The European Disability Forum (EDF 2015) notes that, there are 80 million Europeans with disabilities (over 15% of the whole population). W3C notes that many users may not be able to see, move, process some types of information easily or at all, may have difficulty reading text, use a keyboard or mouse, have a text-only screen, a small screen, or a slow Internet connection, (W3C, 1999).

This question examines the availability of a tool on the website that helps citizens to listen to its content. I argue that the design of the website is ethical, if a tool to listen to the website contents is available.

*Q6 Option to P=participate to the town meetings or R=read the meeting minutes:* Transparency emphasizes the importance of openness on policy making and implementation, according to Dratwa (2014). For this reason municipalities should allow the citizen to know for example what is done in the municipality or how the decisions are made. Through open-for-the-public town meetings, municipalities can increase citizen participation to the community. This participation allows citizens to examine the activities of elected officials and public servants and ensure that they are acting in the public interest. By giving access to what is discussed shows that the board of the elected members is open to suggestions and accepting critics.

This question studies the availability of both participating and reading the minutes of municipality meetings (BOTH), only participating (P), only reading the minutes of municipality meetings (R), or none of the above (No). I argue that the design of the website is ethical, if citizens are allowed to participate to the town meetings or read the meeting minutes.

*Q7 Search function field:* According to W3C (2012), the methods used by visitors to search a website can be generally divided into two groups: looking through the web site's web menus and lists of links, and/or finding and using a search function on the web site.

Search is used when navigation fails. According to Nielsen (2011), even though advanced search can sometimes help, simple search works best, and search should be presented as a simple box, since that's what users are looking for. Nielsen likens search to a bricks-and-mortar store, where 'a sales assistant is able to offer customers immediate, helpful service and find exactly what the customer is looking for. Online, it is the search box asks "how may I help you?" by allowing customers to reveal exactly what they are looking for via their search queries'. According to Tremblay (2015), the search function should appear on each page of the site. As the citizen expects a total search, all content that is accessible through the website should be searchable, including publications and other documents. Metzger (2007) argues that search capabilities increase online information credibility and transparency. Users can locate content by searching for specific words or phrases, without needing to understand or navigate through the structure of the website.

This question examines whether there is a search function on the website and if it includes all content. I argue that the design of the website is ethical, if a search function is available on the website.

*Q8 Access to the town library:* The town's library is an important place for accessing information, studying and cultural events for the town. According to Edwards, Rauseo and Unger (2013) libraries provide important business resources, especially for small local businesses. Giving access from the municipality website to the library shows respect to the citizens' needs for information, business, studies or culture. This question examines the option to access the local library from the website for

single search for books, videos or magazines, or for borrowing. I argue that the design of the website is ethical, if the website offers access to the public library.

*Q9 Contact details, general or personal e-mail and telephone availability:* By providing contact information, Metzger (2007) argues that a website's accuracy is increased. Citizens are able to check if the municipality provides contact information (i.e., "Does the Web site list contact information such as a phone number or address?"). Quick customer-service responses, Metzger continues, increase online information credibility and transparency. According to La Porte, Demchak and de Jong (2009), interactivity is a measure of the level of convenience or degree of immediate feedback, which is the component of openness. The greater the "click value" (the extent to which important elements are "clickable"), the more convenient it is to acquire data or interact with the website and thus the more the website encourages the client to make use of the site and the website itself.

Having in mind the results of the Special Eurobarometer 307 (2009) regarding the importance Europeans give to local authorities contact details on a website are even more important for the citizen and the municipality. It reflects websites ability to communicate and interact with the citizens. Contact details are technically easy to develop on a website and are ways to give to citizens a voice on the internet. The question is measured with Yes (websites include e-mail and telephone numbers) or No when no contact facilities are available. However, it is important to point out this thesis does not check how well these communication links are used by the municipality in order to fulfill their role on the website. I argue that the design of the website is ethical, if methods to contact the authority are available.

*Q10 E-services:* Availability of e-services offered on a website increases a website's openness. Openness refers to the extent to which a public website provides i.e. services. The more 'open' a website, the more facts, figures, services, and other pieces of information are viewable, argue Gant and Gant (2002). Examples of e-services offered on municipality websites can include:

- e-services where people can follow online the process of their own applications;
- application for home care services;
- request for transportation service;
- application for child care;
- choosing a school;
- opportunities for citizens to vote in elections;
- to book vacant premises;
- to get access to a library and borrow books or music in traditional or in electronic form;
- to issue certificates; and
- the opportunity to submit comments or complaints to municipal employees or elected officials.

This question examines if e-services are offered on the website. A "yes" as an answer to this question shows that e-services are available and a "no" shows the lack of such a service. I argue that the design of the website is ethical, if the citizens are offered any e-services.

*Q11 e-payments:* E-payments through a municipality are also a service that increases the websites' openness, according to Gant and Gant (2002). Are e-payments provided on the web site? A "yes" as an answer shows that e-payments are available and a "no" shows the lack of such a service. I argue that the design of the website is ethical, if the website offers access to e-payment services.

The legal aspects of e-commerce when deciding to sell products or services online are not examined, which a website should fulfill.

*Q12 Indication when page was updated:* Citizens can check the currency of information. A date stamp indicating when the information was originally uploaded or last changed, Metzger (2007) argues, will help citizens in this approach i.e., “Does the site provide information about when the information was last posted or updated?”. I argue that an indication when a page was last updated increases a website’s transparency. Transparency shows how easy it is for the users to assess the legitimacy of the portal content. Information about the date when the website was last updated is vital for users to trust the portal content according to Gant and Gant (2002). Date marking is an important criterion when judging the credibility of information on a website. I argue that a municipality website must avoid outdated information. In such a case it is important to inform early in the text if the information is out of date and if there is more current information then the web site should refer to that. This particularly applies to information that needs updating regularly (i.e. municipality meetings, events and deadlines). This will help the citizen to determine more easily how current the information on the website is. I argue that the design of the website is ethical, if the website provides information on when the website was last updated.

*Q13 Option to contact the person responsible for the page:* A tool to contact the person responsible for the website increases a website’s transparency. This type of information is also vital for users to trust the portal content, Gant and Gant (2002) argue. According to the EU’s Regulation (EC) No 45/2001 (OJ 2001) each institution or body must appoint at least one person as Data Protection Officer (European Parliament and the Council of 18 December 2000 on the protection of individuals with regard to the processing of personal data by the Community institutions and bodies and on the free movement of such data). According to Gant and Gant (2002), it shows responsibility when the person responsible for the web site is named. There are security issues that arise when municipalities provide e-services. First, the municipality has to confirm the identity of users of e-services (authentication). Secondly, the municipalities ensure that personal information is protected when transmitted via open network. Thirdly, the municipality must ensure the protection of personal data collected in connection with the services provided. For the above reasons the municipality has to be responsible and show that the user of the website receives proper respect. The municipality’s website must show that it is secure and no identity theft can be done while using the website. Identity theft has been an area of great concern among web visitors for years. According to Siegel (2009), in the United States nearly 1 million users have suffered from identity theft fraud, with a cost of more than 1 billion dollars a year. In Britain, identity theft is one of the fastest growing criminal trends with yearly costs of around 1.3 billion pound sterling. With more people using e-services online and joining social media sites that require them to share personal information, the potential for hacking and leverage this data for financial gain has never been greater.

I argue that the design of the website is ethical, if the website provides information on about the person who is responsible for the information published or processed on the website.

*Q14 Informing about cookies:* A ‘cookie’ is a small text file that a website asks to be saved on the visitor’s computer, according to Microsoft (2015). The EU Directive 2009/136/EC (OJ, 2009) requires websites to get consent from visitors to store or retrieve any information on a computer or other device. Cookies are used on many websites to allow visitors to use various functions. Information contained in cookies can also be used to track the surfing of a user on websites that use the same cookie, according to the Swedish Post and Telecom Authority, PTS (2003). According to PTS (2015), there are two kinds of cookie. One kind saves a file for a long time on the visitor’s computer; this cookie has an expiry date. The second kind of cookie is called a ‘session cookie’ and does not have an expiry date. This cookie is temporarily stored in the memory of a user’s computer while this user is



surfing on a site and it enables websites to monitor the activities of users on the Internet. According to the Swedish Electronic Communications Act, PTS (2003), all visitors to a website with cookies must have access to information stating that the website contains cookies and the purpose for which cookies are used. Visitors must also consent to cookies being used. I argue that the design of the website is ethical, if the website informs the visitor that it contains cookies and the purpose for which cookies are used.

*Q15 Following Guidelines or laws about cookies:* The protection of privacy is a human right recognized by the UN Declaration of Human Rights of 1948, Art.12 (UN 1948). According to Dratwa (2014), the European Court of Human Rights (ECHR) defines privacy in its Article 8 as the “right to respect for private and family life”. Everybody has the right to respect for their private and family life, their home and their correspondence according to ECHR. The EU Directive 2009/136/EC (OJ 2009) an amendment of Directive 2002/58/EC on Privacy and Electronic Communications (otherwise known as E-Privacy Directive and Directive 2002/22/EC) as adopted by the European Parliament, informs that storage of user-personal data relating to electronic communications networks and services can only be done with the prior consent of the user, unless such actions are strictly necessary to the supplier for the delivery of a specific service requested by the subscriber or user. The Cookie Law, as it is also called, requires websites to get consent from visitors to store or retrieve any information on a computer, smartphone or tablet. EU member states had until the 25<sup>th</sup> of May 2011 to implement these changes into their own law (OJ 2009).

According to the EU’s Directive 2009/136/EC all websites owned by companies, authorities or persons based or leaving in the EU should be complying with this law. If they do not, the citizen can complain about it either to the site owners or to legal authorities. In most EU countries, this would be the organization responsible for Data Protection or regulation of the telecommunications industry. In the UK it is the Information Commissioner's Office (ICO), in France is the French data protection authority (CNIL), in Spain the regulator is the Spanish Data Protection Authority (*Agencia Española de Protección de Datos*, AEPD), in Sweden is The Post and Telecom Authority (PTS), in Finland is The Office of the Data Protection Ombudsman (Tietosuoja) and in Cyprus is The Office of the Commissioner of Telecommunications and Postal Regulation (OCTPR). The organizations listed above are for the 6 countries where the selected 24 municipalities of this study belong to.

In Sweden, under the Swedish Electronic Communications Act, PTS (2003), all visitors to a website with cookies must have access to information stating that the website contains cookies and the purpose for which cookies are used. The use of cookies is not prohibited. However, the web site owner must ensure that the visitor consents to the use cookies. In simple terms, ‘consent’ means conscious approval, according to the PTS (2003).

The interception and falsification of cookies may under certain conditions be used as tools for electronic crime, for instance, for unauthorized logging on, unauthorized tampering with the content of baskets, distortion of statistics and unauthorized voting explains PTS (2003). It is in the interests of the web site owners to take measures to prevent this from happening. Likewise, website owners must ensure that the personal information collected via cookies is not misused, either by the owners themselves or by collaborating third-parties. Website owners that choose to install various kinds of component on their website (advertising functions, statistics functions, questionnaire tools, etc.), are responsible for third-party cookies.

The information that the owner provides to the visitors regarding the use of cookies should as a minimum contain information about what the various cookies are called, what data is stored in the cookies and how long they are saved in the visitor's web browser. It should also clearly state the purpose of the cookies, and similarly whether the information comes from or is released to a third

party. This information should be published on the website in native language, according to PTS (2015). I argue that the design of the website is ethical, if the website informs the visitor that it follows the existing laws about cookies.

*Q16 User is informed what personal data is collected:* According to Directive 2009/136/EC (OJ, 2009) “customers should be informed of their rights with respect to the use of their personal information in subscriber directories and in particular of the purpose or purposes of such directories, as well as their right, free of charge, not to be included in a public subscriber directory, as provided for in Directive 2002/58/EC (Directive on privacy and electronic communications). Customers should also be informed of systems which allow information to be included in the directory database but which do not disclose such information to users of directory services”.

In France, the authority responsible for ensuring the protection of personal data is the Commission Nationale Informatique et Liberté (CNIL) sous le numéro 396271 (CNIL) “No personal information is collected without the user’s knowledge, No personal information is sold to third parties”. Article 27 of the Data Protection Act of 6 January 1978 (CNIL no date), gives a citizen the right to access, rectify, modify and delete data concerning the citizen.

When the municipality provides e-services, it is often the case of a computerized processing of personal data. In the brochure The Personal Data Act published by the Swedish Ministry of Justice (MOJ, 2006) is written that “The controller is under a duty to provide to anyone who so requests, expeditiously and in a suitable manner, information concerning computer and other processing of personal data...” The municipal authority is therefore responsible to provide all information about a citizen’s personal data that is accessed, processed or saved when the citizen used the page. The information must be provided regardless of whether the data are collected with or without the citizen’s consent.

Same directions are given by the authorities of other countries, for instance the Spanish Data Protection Agency (AEPD), and the British Data Protection Act 1998 (NA, 1998) noting that the information that the data controller is obliged to leave voluntarily should contain:

- (a) information about the identity of the controller, who in the case of the municipality is the person responsible within the municipality;
- (b) the purposes of the processing; and
- (c) any information collected about the citizen.

This question examines if the website informs about the personal data that is collected by the website. A “yes” as an answer shows that the website informs the citizen about data that are collected by the website and a “no” that no information from the website is available. I argue that the design of the website is ethical, if the website informs the citizen what personal data are collected and stored by the website.

*Q17 User has the option to ask on how this personal data have been used - Processed (of personal data):* By giving the citizen the option to ask how personal data selected by the website have been used or processed is vital for users to trust the portal content, according to Gant and Gant (2002).

In Sweden, according to the Swedish Personal Data Act (MOJ, 2006) processing is “any operation or set of operations which is taken as regards personal data, whether or not it occurs by automatic means, for example collection, recording, organization, storage, adaptation or alteration, retrieval, gathering, use, disclosure by transmission, dissemination or otherwise making information available, alignment

or combination, blocking, erasure or destruction”. This Act applies to such processing of personal data as is wholly or partly automated. The Act also applies to other processing of personal data, if the data is included in or is intended to form part of a structured collection of personal data that is available for searching or compilation according to specific criteria. It does not apply to such processing of personal data that a natural person performs in the course of activities of a purely private nature.

The Office of the Finnish Ombudsman (Tietosuoja, 2015) explains that “processing of personal data means the collection, recording, organization, use, transfer, disclosure, storage, manipulation, combination, protection, deletion and erasure of personal data, as well as other measures directed at personal data”.

It is important to train the employees of the website’s owner to follow specific procedures for the registration of personal information for authentication, for the handling of sensitive personal data and to make clear to employees what is allowed, what the impact will be if they break a rule and how compliance rules are followed up. It is also important that personal data transmitted over networks should, depending on how sensitive they are, be protected for example by encryption. The EU Directive 2009/136/EC (OJ, 2009) explains the responsibilities when processing of personal data: “Community law imposes duties on data controllers regarding the processing of personal data, including an obligation to implement appropriate technical and organizational protection measures against, for example, loss of data”.

This question examines if the citizen can ask if personal data selected by the website have been used or processed. A “yes” as an answer to this question shows that the website offers this information and a “no” shows the lack of such a service. I argue that the design of the website is ethical, if the citizen can ask how personal data selected by the website have been used.

*Q18 Option to change the text size:* This tool on a municipality website increases the website’s usability. Usability refers to the ease with which users can access information and navigate the web portal, according to Gant and Gant (2002). Even if a website has technologically advanced tools and information of good quality, lack of an option to change the text size may decrease the values of the website’s advantages. This can make access to the website difficult to people with sight problems. Change of the text size has to do with adapting the size of text according to the citizen’s personal needs. According to Nielsen (2008), between the ages of 25 and 60, people’s ability to use websites decline by 0.8% per year – mostly because they spend more time per page, but also because of navigation difficulties. Data published by the European Disability Forum (EDF, 2015) shows that the persons with disability in the 27 EU member states are 80 million people (over 15% of the total population), adding also that there is a strong correlation between disability and ageing.

This question examines if the citizen has the option to change the size of the text on the website. A “yes” as an answer to this question shows that the website offers this service and a “no” shows the lack of such a tool. I argue that the design of the website is ethical, if the citizen has the option to change the size of the font used in the website.

*Q19 Content summary availability:* A website visitor may use different methods to search the site. It may therefore be useful to supplement the search function and ordinary navigation (menus, submenus and links between pages) with a content summary. The availability of a content summary on a website makes the access to information easier, according to Gant and Gant (2002). A content outline may look different depending on the size of the site and what the owner wants to highlight.

Examples of content outlines include:

- a Site map, or an
- A-Z which presents a selection of website content in alphabetical order.

This question examines if the website offers a content summary. A “yes” as an answer to this question shows that the website offers this service and a “no” shows the lack of such a tool. I argue that the design of the website is ethical, if the website provides a content summary.

*Q20 Emergency information on the website:* According to Afuah and Tucci (2002), the internet is fast, it has no boundaries of operation, it can carry enormous amounts of information and it can bring together under one platform all other media types (sound, video or print). These characteristics make Internet information an important tool in managing crisis. Good web information can reduce the number of incoming calls efficiently according to the UK Cabinet Office (2012).

The Internet as a communications medium has the ability to instantaneously distribute information to a mass audience at low-cost. Bucher (2002) commented in NY Times on 12 September 2001: "More than news, what people all over the world craved in the wake of yesterday's terrorist attacks was connection to each other, and many of them found that most easily achieved by going online." Bucher (2002) further adds: "In the past week, the Internet was more than it has ever been before. Not only were those of us at a distance able to read first-hand, up-to-date reports of what was happening, but those survivors who were caught up in the chaos were able to email and send instant messages to family, friends, and colleagues to reassure them. When the phone system collapsed, the Internet came through".

In the European Union there appears not to exist any regulation regarding this subject. This question examines how many of the municipalities have included such information on their websites. A “yes” as an answer to this question shows that the website offers this service and a “no” shows the lack of such a tool. I argue that the design of the website is ethical, if information in case of emergency is available on the website.

## 5. Results

This chapter presents the results of the reviewed websites. The analysis of the results is shown as follows: In subchapter 5.1 the results are shown by question (Q4 to Q 20). For each question there is an Excel graph showing the total results in a graphical form. In subchapter 5.2 the results are shown by country. A graph in Excel show the total results by country in numbers and in percentage. In subchapter 5.3 the results are shown by municipality size in inhabitants. A table and a chart in Excel are used to show the total results by municipality size.

### 5.1 Analysis by Question

Each website was reviewed against a list of evaluation questions (Q4 to Q20) for ethical behavior (Appendix 2). The websites have been examined manually at two separate chronological points. The results for each question are also shown in an Excel graph and can be found in Appendix 4. A copy of the Excel sheet is shown in Appendix 3.

*Q1 Municipality name:* It shows the municipality name. A list with the all municipality names is found in Appendix 1.

*Q2 URL:* In this question I show the internet address of the evaluated websites.

*Q3 Population Size:* The number of the inhabitants of the municipality is shown here. Included are big municipalities like Barcelona and Manchester, middle population size municipalities like Espoo and Angers and small municipalities like Halmstad and Paphos.

*Q4 Website information available in other languages:* 17 out of 24 websites (71%) provided this information (Yes) and seven of the websites (29%) lack this information (No). The following municipalities had at least the content of their home page available in other language than the native: Göteborg, Halmstad, Umea, Gavle, Limassol, Nicosia, Paphos, Larnaca, Marseille, Calais, Turku, Espoo, Riihimäki, Joensuu, Girona, Barcelona and Murcia. The following seven (29%) websites did not offer their content in other language: Manchester, Forest Heath & St Edmundsberg, Cardiff, Craven, Perpignan, Angers and Zamora.

*Q5 Listen to the page contents:* Eight of the websites (33%) provided this tool (Yes) and sixteen (67%) of the websites lack this tool (No). The following municipality websites provide the tool to listen to the website content: Göteborg, Halmstad, Umea, Gavle, Manchester, Turku, Espoo and Barcelona. These municipality websites did not provide a tool to listen to the information: Forest Heath & St Edmundsberg, Cardiff, Craven, Limassol, Nicosia, Paphos, Larnaca, Marseille, Calais, Perpignan, Angers, Riihimäki, Joensuu, Girona, Murcia and Zamora.

*Q6 Option to P=participate to the town meetings or R=read the meeting minutes:* Two of the websites provided the opportunity to both participate and read the meeting minutes (Yes Both). The websites are Göteborg and Manchester. Fourteen municipality websites offered the opportunity to only read the meeting minutes (R). The websites are Halmstad, Umea, Gavle, Forest Heath & St Edmundsberg, Cardiff, Craven, Marseille, Perpignan, Angers, Espoo, Riihimäki, Barcelona, Murcia and Zamora. Eight of the websites (33%) lack this option (No), and these are the websites of Limassol, Paphos, Nicosia, Larnaca, Calais, Turku, Joensuu and Girona.

*Q7 Search function field:* This tool can advise and help the citizen find what is available on the website. All (92%) except of two (8%) of the evaluated sites had a search field at the top of each page. The two websites that lack this tool are Larnaca and Zamora.

*Q8 Access to the town library:* Sixteen (67%) of the evaluated websites had this tool. The sixteen websites are those of Göteborg, Halmstad, Umea, Gavle, Manchester, Cardiff, Craven, Perpignan, Turku, Joensuu, Espoo, Riihimäki, Girona, Barcelona, Murcia and Zamora. This tool was missing from eight (33%) websites which are the websites of Forest Heath & St Edmundsberg, Limassol, Paphos, Nicosia, Larnaca, Marseille, Calais and Angers.

*Q9 Contact details, general or personal e-mail and telephone number availability:* All websites (100%) offer the option to citizens to contact the municipality (Yes). Some websites include chat rooms to interact on line with the citizens. There are also many websites using social media platforms such as Facebook, Twitter and LinkedIn for better interaction between the citizens and the municipality.

*Q10 E-services:* Sixteen (67%) of the evaluated websites offer e-services to their citizens. E-services are offered on the websites of Göteborg, Halmstad, Umea, Gavle, Manchester, Cardiff, Craven, Paphos, Nicosia, Marseille, Perpignan, Turku, Riihimäki, Girona, Barcelona and Zamora.

Eight (33%) websites lack this information tool. The websites that lack this service are Forest Heath & St Edmundsberg, Limassol, Larnaca, Calais, Angers, Espoo, Joensuu and Murcia.

*Q11 E-payments:* Eleven (46%) of the evaluated websites offer this service. The websites that accept e-payments are Manchester, Forest Heath & St Edmundsberg, Cardiff, Craven, Paphos, Limassol, Calais, Angers, Girona, Barcelona and Zamora.

This service was missing from thirteen (54%) cases, which are Göteborg, Halmstad, Umea, Gavle, Nicosia, Larnaca, Marseille, Perpignan, Turku, Espoo, Riihimaki, Joensuu and Murcia.

*Q12 Page last-updated date:* Only eight (33%) of the evaluated websites were informing about the sites' updated date (yes). The websites are Göteborg, Halmstad, Umea, Craven, Perpignan, Turku, Joensuu and Espoo.

Sixteen (67%) websites lack this information (No). The websites are Gavle, Manchester, Forest Heath & St Edmundsberg, Cardiff, Limassol, Paphos, Nicosia, Larnaca, Marseille, Calais, Angers, Riihimaki, Girona, Barcelona, Murcia and Zamora.

*Q13 Option to contact the person responsible for the page:* Nine (38%) of the evaluated websites inform their citizens about the person responsible for the website content (yes) and how to contact this authority (Göteborg, Halmstad, Umea, Gavle, Manchester, Forest Heath & St Edmundsberg, Marseille, Calais and Angers).

Responsibility and contact details were missing from 15 (62%) websites (no). The websites are Cardiff, Craven, Limassol, Paphos, Nicosia, Larnaca, Perpignan, Turku, Joensuu, Espoo, Riihimaki, Girona, Barcelona, Murcia and Zamora.

*Q14 Informing visitors about cookies:* Only fourteen (58%) of the websites investigated were informing about cookies (Yes). Information about the existence of cookies are offered on the websites of Göteborg, Halmstad, Umea, Gavle, Manchester, Forest Heath & St Edmundsberg, Cardiff, Craven, Turku, Espoo, Perpignan, Marseille, Barcelona and Zamora. Ten (42%) websites lack this information (No). The websites are Limassol, Paphos, Nicosia, Larnaca, Joensuu, Riihimaki, Calais, Angers, Girona and Murcia.

*Q15 Following guidelines or laws about cookies:* Only fourteen (58%) of the evaluated websites are informing the citizen about the guidelines or laws followed while handling cookies (Yes). The websites are those of Göteborg, Halmstad, Umea, Gavle, Manchester, Forest Heath & St Edmundsberg, Cardiff, Craven, Espoo, Perpignan, Marseille, Angers, Barcelona and Zamora. Ten (42%) of the websites lack this information (No). The websites are those of Limassol, Paphos, Nicosia, Larnaca, Turku, Joensuu, Riihimaki, Calais, Girona and Murcia.

*Q16 Visitor is informed what personal data is collected (privacy):* Thirteen (54%) of the evaluated websites inform the citizens about what personal data are collected by the websites. The websites are those of Göteborg, Umea, Gavle, Manchester, Forest Heath & St Edmundsberg, Cardiff, Craven, Espoo, Perpignan, Marseille, Angers, Barcelona, and Zamora. Eleven (46%) out of the 24 websites were judged to lack information about how privacy was handled. There was no information whether the citizen leaves personal information after their visit through actions such as filling in forms with name, address or e-mail address. The websites are those of Halmstad, Limassol, Paphos, Nicosia, Larnaca, Turku, Joensuu, Riihimaki, Calais, Girona and Murcia.

*Q17 User has the option to ask on how his / hers personal data have been used - Processing of personal data:* Information about the citizen's right to information regarding how personal data is used was missing from thirteen websites (54%). The websites are those of Halmstad, Manchester, Limassol, Paphos, Nicosia, Larnaca, Turku, Joensuu, Riihimaki, Calais, Girona, Barcelona and Murcia. Eleven (46%) of the evaluated websites had this service (yes). The websites are those of Göteborg, Umea,

Gavle, Forest Heath & St Edmundsberg, Cardiff, Craven, Espoo, Perpignan, Marseille, Angers and Zamora.

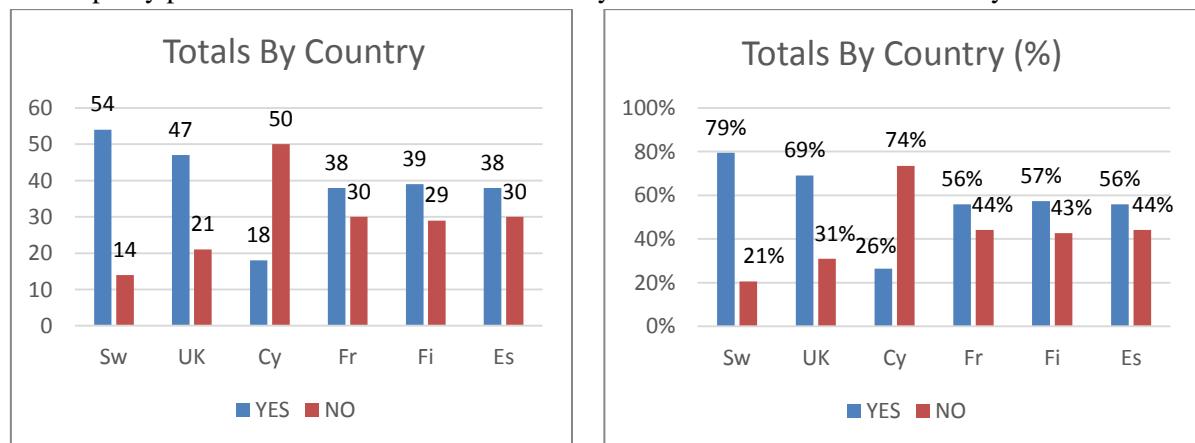
*Q18 Option to change the text size:* This tool was available in thirteen (54%) of the websites evaluated (Yes). The websites are those of Halmstad, Umea, Manchester, Forest Heath & St Edmundsberg, Craven, Paphos, Espoo, Turku, Joensuu, Riihimaki, Zamora, Girona and Murcia. Eleven (46%) of the websites lack this tool (No).

*Q19 content summary availability:* A content summary tool was available in eighteen (75%) of the evaluated websites (Halmstad, Umea, Gavle, Manchester, Forest Heath & St Edmundsberg, Cardiff, Limassol, Nicosia, Turku, Espoo, Riihimaki, Marseille, Calais and Angers, Barcelona, Girona, Murcia and Zamora). Six (25%) of the websites lack this tool (Göteborg, Craven, Paphos, Larnaca, Joensuu and Perpignan).

*Q20 Emergency information on the website:* Only four (17%) of the evaluated websites provide information about emergency procedures (Yes). This service was available on the websites of Perpignan, Angers, Espoo and Riihimaki. Twenty (83%) websites lack this information (No).

## 5.2. Analysis by country

The two charts, A and B, show the total results by country. The best results are those of the municipalities in Sweden, followed by the UK, Finland, France and Spain, and Cyprus. All countries except Cyprus have more “Yes” answers than “No” answers. From these results it is noticeable that the country size is not the deciding factor when designing ethical municipality websites. Sweden which is a small country of 10 million inhabitants, reached better results than bigger countries. Cyprus, the smallest of the selected countries had the worst results. I argue that in order to explain the municipality performance in relation to the country size further studies are necessary.



*Chart A: “Yes” and “No” answers by country    Chart B: “Yes” and “No” answers in percent*

Chart A shows the total “Yes” answers and “No” answers by country. Chart B shows the same results in percentages.

## 5.3. Analysis by municipality size

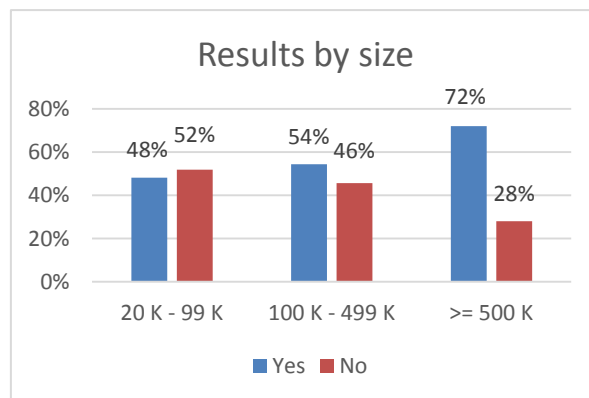
As I noted in the introduction of the thesis (page 6), referring to a report from European Commission (2007), where bigger in size towns are more healthy financially as they have more income from taxes, business activities and sale of services, I expected bigger in size municipalities to show better results in the ethical content of their websites. The municipalities I have selected for evaluation were not by their number of inhabitants but were selected randomly, and for this reason the material shown in

Table 4 is not equally divided in big, medium and small municipalities. For this reason further studies are necessary to explain if there is a relation between the municipality size and its performance in ethical content in their websites.

The municipalities are grouped by size as in Table 4 (bigger than 500.000 inhabitants, between 100.000 and 499.000 inhabitants and smaller than 100.000 inhabitants. As shown in Chart C, the best results are those of the big municipalities, followed by the middle size municipalities and the small size municipalities coming last. Chart C show the total results by group.

<u>Towns</u>	<u>Number of Towns</u>	<u>Size in inhabitants</u>
1.Barcelona, Marseille, Goteborg and Manchester	4	500.000 – 1 million
2.Cardiff, Espoo, Murcia, Gavle, Nicosia, Limassol, Perpignan, Angers, Turku	9	100.000 – 499.000
3.Halmstad, Umea, Forest Heath & St Edmundsberg, Paphos, Larnaca, Craven, Calais, Riihimaki, Joensuu, Girona, Zamora	11	20.000 – 99.000

*Table 4*



*Chart C*

Some notes that might affect the analysis of the results for some questions are explained below.

In question Q4: Perpignan: The languages available are French and Catalan which are considered as local languages; therefore the answer was “No”. In the case of other municipalities a second language was accepted as a foreign language. In question Q5: Perpignan: The LSF listening system was not working at the time of my visit to the website. In question Q6: Turku: Read minutes are available for only 1 meeting (2013-08-26) and for this reason the answer to this question for this town was “No”. Nicosia: Agenda on what will be discussed is available, but no meeting minutes. For this reason the answer to this question for this town was a “No”.

In question Q9: Girona: This municipality gives the option for written request from a citizen for an appointment. For this reason the answer to this question for this town was “Yes”.

In question Q10: Murcia: The website directs the visitor to “face.gob.es” that uses an invalid security certificate (for Windows). For this purpose it was not possible to check the availability of e-services through this website, therefore the answer to the question for Murcia was “No”.

In question Q14: Umea: The answer to this question was “Yes”, although the information was not on the municipality’s homepage. Barcelona: This information was available on some pages only and therefore the answer was “No”. This website was one of the biggest websites evaluated in this thesis.



Turku: The answer to this question was “Yes”, although the information was not on the municipality’s homepage.

In question Q17: Goteborg: The answer to this question was a “Yes”, even if the citizen can ask for this service once a year.

## 6. Discussion

How would municipalities answer Socrates's test of 3 regarding the Cookie Law?

Socrates to municipalities: why the websites are not informing the citizens about cookies when there is a law indicating for the opposite?

1. The test of Truth: Is it true?
2. The test of Goodness: is it something good?
3. The test of Usefulness: is it useful to me?

Would Socrates be disappointed by their answer?

A total of 58% of the evaluation questions are answered "Yes" and 42% are answered "No". I argue that due to the lack of laws and a code of ethics in the EU regarding what an ethical municipality website design should include, the ethical design of a municipality website is totally dependent on the local authorities' own initiative. Bad ethical design can damage the purpose for which a municipality website has been developed. I argue that the problems that may appear because of bad ethical design, can have as a result:

- a. citizens are not getting informed as well as they could be, as information is difficult to use
- b. citizens have difficulties to interact with the authority, less openness
- c. citizens with no trust to the municipality website
- d. citizens feel that they are excluded from decisions
- e. citizens feel that the information they receive is not accurate and up to date
- f. citizens feel that their personal data can be misused
- g. citizens feel that they do not receive proper respect

*a. Citizens are not getting informed as information is difficult to use.* Municipality websites that do not offer search facilities (Q7, and Q19), tools to change the websites font size (Q18) or tools to listen the website content (Q5), such as the website of the municipality of Larnaca, are less open for citizen interaction. Citizens of these municipalities might feel that they receive less information regarding the municipalities' activities or services because the websites are difficult to use. Usability, openness, transparency and participation rank lower on these websites. Usability refers to the ease with which users can access information and navigate the web portal, according to Gant and Gant (2002). Openness refers to the extent to which a public website provides i.e. services. Transparency indicates how easy it is for the users to assess the legitimacy of the website content. Information such as the person responsible for online content, date of last update, and security and privacy policies, is vital for users to trust the accuracy of portal content according to Gant and Gant (2002).

Question Q5 (Q5 = Option to listen to the website content) emphasizes a website's usability, transparency and participation. The results of the evaluation were very disappointing as only 33% of the websites offered this service to their citizens. W3C (2012) notes the importance of easy of accessing website information by everyone, easily as people with disabilities may have difficulty reading text or using a keyboard or a mouse. Other users may have a text-only screen, a small screen, or a slow Internet connection. The European Disability Forum noted that 15 % of Europeans have some type of disability (EDF, 2015). Explaining the importance of this evaluation question I argued that the design of the website is ethical, if a tool to listen to the website contents is available. Question Q7 (Q7 = Search function field in all the pages) emphasizes the importance of usability on a website. Search is used when navigation fails and helps citizens find what the citizens are looking for according to Nielsen (2011). It should appear on each page of the site Tremblay (2015). According to Metzger

(2007), search capabilities are increasing online information credibility and transparency. In this question, search function was available on 92% of the evaluated websites. Question Q18 (Q18 = Option to change the text size of the website) is adding to the website usability, according to Gant and Gant (2002). Nielsen mentions that people's ability to use websites decline by 0.8% per year, while EU statistics show that people with disability in the EU27 amount to 75 million people. A tool to change the text size of the website was only available in thirteen (54%) of the evaluated websites. Finally, in Q19 (Q19 = Content summary availability) the importance of information availability on a website is indicated. Gant and Gant (2002) explain that the availability of a content summary on a website makes the access to information easier. A content summary tool was available in eighteen (75%) of the evaluated websites. I argue that the design of a website is ethical, when a search function, a content summary tool, a tool to change the text size and a tool to listen to the content are available on the website.

*b. citizens have difficulties to interact with the authority, less openness.* Contact information on the website is important for the citizens' interaction with the municipality (Q9). It adds openness as the website adds communication facilities to all public audiences. Citizens receive more information and services as the website is more open. E-services and e-payments (Q10 and Q11) add openness to the website. Gant and Gant (2002) explain that the more 'open' a website, the more facts, figures, services, and other pieces of information are viewable. Websites without facilities for e-services and e-payments, such as the websites of Larnaca, Espoo, Murcia and Gavle (e-payments only), are less open for citizen interaction.

In Q9 (Q9 = Contact details, general or personal e-mail and telephone number available) emphasizes the importance of providing contact information, which adds to the website's accuracy according to Metzger (2007). La Porte, Demchak and de Jong (2009) argue that interactivity is a measure of the level of convenience or degree of immediate feedback, which is a component of openness. All (100%) the surveyed websites offered this tool. Q10 (Q10 = E-services availability) also increases the websites openness as citizens receive more facts and information According to Gant and Gant (2002) the more 'open' a website, the more information is viewable. Sixteen (67%) of the evaluated websites offer e-services to their citizens. Q11 (Q11 = e-payments availability) increases the websites' openness according to Gant and Gant (2002). Eleven (46%) of the surveyed sites are offering this service. I argue that the design is ethical, when e-services, e-payments and facilities to contact the municipality are available.

*c. citizens with no trust to the municipality website.* Websites should provide information and contact details about the person responsible for the website (Q3). If such information is missing, as in the websites of Cardiff, Limassol, Perpignan, Turku and Murcia, it might affect the citizen's trust to the website.

Q13 (Q13 = Option to contact the person responsible for the page) emphasizes website transparency which is vital for users to trust the portal content, according to Gant and Gant (2002). EU Regulation No 45/2001 (OJ, 2001) requests from all institutions or bodies to inform visitors about the person responsible for their website. Gant and Gant (2002) note that having this information on a website shows responsibility. Responsibility and contact details were missing from 15 (62%) of the evaluated websites. Ethical website design should provide information about the person who has the responsibility for the information published or processed on the website.

*d. citizens feeling that they are excluded from decisions.* Municipalities that do not offer the option to participate in town meetings are not promoting transparency according to Dratwa (2014). In these municipalities, such as Paphos, Joensuu or Girona, citizens have fewer communication channels in comparison with municipalities where online participation is allowed. I argue that these citizens might

feel that they cannot participate in discussions for decisions that affect them as citizens of the municipality.

Q6 (Q6 = Option to participate to the town meetings or read meeting minutes) emphasizes transparency and the importance of openness on policy making and implementation. According to Dratwa (2014) municipalities can increase citizen participation to the community through open town meetings. I argue that the results mirror the municipalities' interest for the citizens' right for information, participation, transparency and openness in decision making. The option to participate was only available on 67% of the evaluated websites while 33% of the websites lack this service to their citizens.

*e. citizens feel that the information they receive is not accurate and current.* Accuracy and currency of information is important on municipality websites (Q12). If the website does not inform about the currency of information (such as in Gavle, Manchester, Nicosia or Marseille), citizens cannot decide about the accuracy and usefulness of this information.

Q12 (Q12 = Page last-updated date) emphasizes the importance of an indication to when the website information was originally uploaded or last changed, which according to Metzger (2007) proffs the published information's currency and credibility, and adds to the website's transparency.

Transparency shows how easy it is for users to assess the legitimacy of the portal content which is vital for users to trust the portal content according to Gant and Gant (2002). Only eight (33%) from the 24 evaluated websites were informing their citizens about the sites' updated date.

*f. citizens feel that their personal data can be misused.* Information regarding the use of cookies (following laws about cookies, informing the citizen about cookies, giving the option to the citizen to ask how cookies are used and informing about which personal data have been accessed, processed, stored and used by the municipality) is important for a citizen to have (Q14, Q15, Q16, and Q17). Websites where this information is not available, such as the websites of Riihimäki, Girona and Larnaca, do not provide citizen interaction with the website.

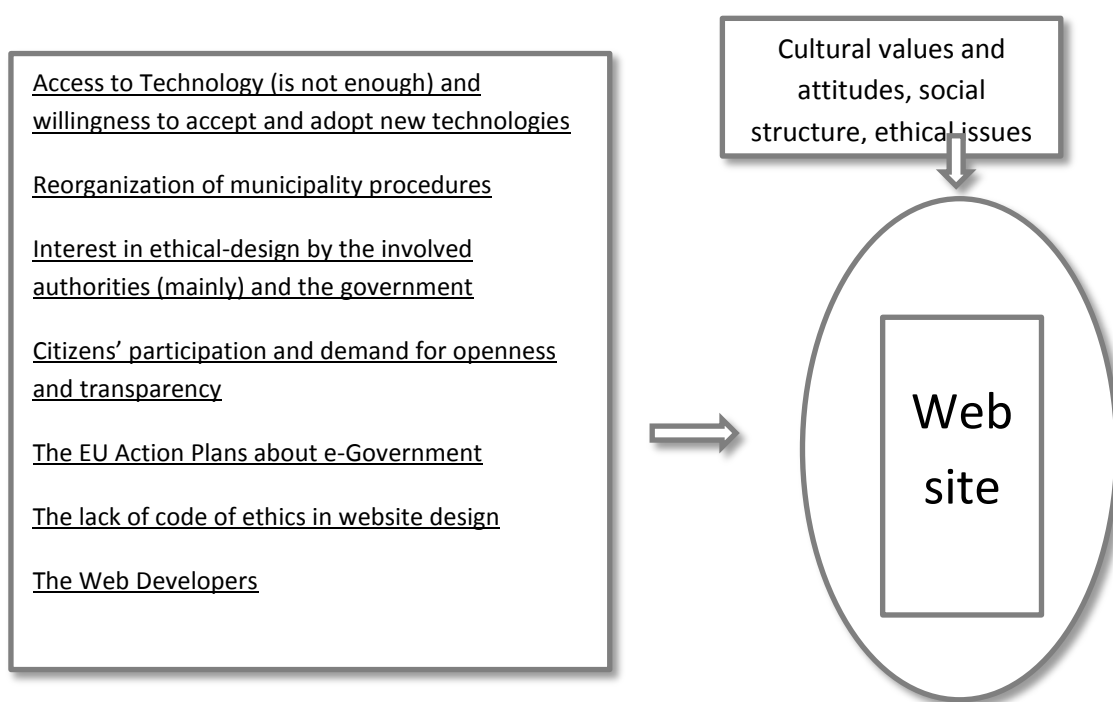
Q14 (Q14 = Informing about cookies) shows the importance of informing the citizens about the use of cookies on the municipality website. EU Directive 2009/136/EC (OJ, 2009) require websites to get consent from visitors to store or retrieve any information on a computer or other device. EU member Governments had until the 25<sup>th</sup> of May 2011 to implement these changes into their own law. At the time of the evaluation only fourteen (58%) of the evaluated websites were informing their citizens about cookies while the other 42% of the websites are not. This may mean that the EU and the member countries do not monitor this aspect online. Q15 (Q15 = following guidelines or laws about cookies) emphasizes the importance of protection of online data. Organizations (like the European Court of Human Rights and the UN), EU Directives (like the 2009/136/EC), country bodies for the protection of personal data (like ICO in the UK, CNIL in France, AEPD in Spain, PTS in Sweden, Tietosuojala in Finland and OCTPR in Cyprus) indicate the "right to respect for private and family life". Only fourteen (58%) of the evaluated websites are informing the citizen about the guidelines or laws that are followed while handling cookies. Q16 (Q16 = User get informed which personal data are collected) emphasizes the citizen's right for information with respect to the collection of personal information. EU's Directive 2009/136/EC c informs that "customers should be informed of their rights with respect to the use of their personal information in subscriber directories and in particular of the purpose or purposes of such directories, as well as their right, free of charge, not to be included in a public subscriber directory." As mentioned in previous chapters, according to Directive 2009/136/EC all websites owned by companies, authorities or persons based or living in the EU should be complying with the law. Only thirteen (54%) out of the 24 evaluated websites have information about this subject while 46% do not give any information. Q17 (Q17 = User has the option to ask on how this personal data have been used) indicates the importance of giving the citizen the option to ask how

personal data selected by the website has been used or processed, which is vital for users to trust the portal content, according to Gant and Gant (2002). The responsibilities when processing personal data are explained through legislation in the six selected countries. Information about the citizen's right to information regarding how personal data is used was missing from thirteen (54%) of the evaluated websites. I argue that the design of a municipality website is ethical, if the website informs the visitor that it contains cookies, the purpose for which cookies are used, and which personal data have been accessed, processed, stored or used by the municipality.

*g. citizens feel that they do not receive proper respect.* Availability of the content in languages other than the native is important. It adds accessibility and openness as more people can get information, for example how to contact the municipality as well as details about opening hours or procedures (Q4). Q4 (Q4= Website information available in other languages) adds to a website content accessibility according to W3C's guidelines (W3C, 1999), noting that if people with a first language other than the native one are a part of the site's audience then parts of content of the site should be translated. In this question only 71% of the evaluated websites offered their content in a second language. Q8 (Q8 = access to the town library) shows responsibility to the citizens according to Edwards, Rauseo and Unger (2013), who note that giving access from the municipality website to the library shows respect to the citizens' needs for information, business, studies or culture. In this question access to the library was only available in 67% of the evaluated websites.

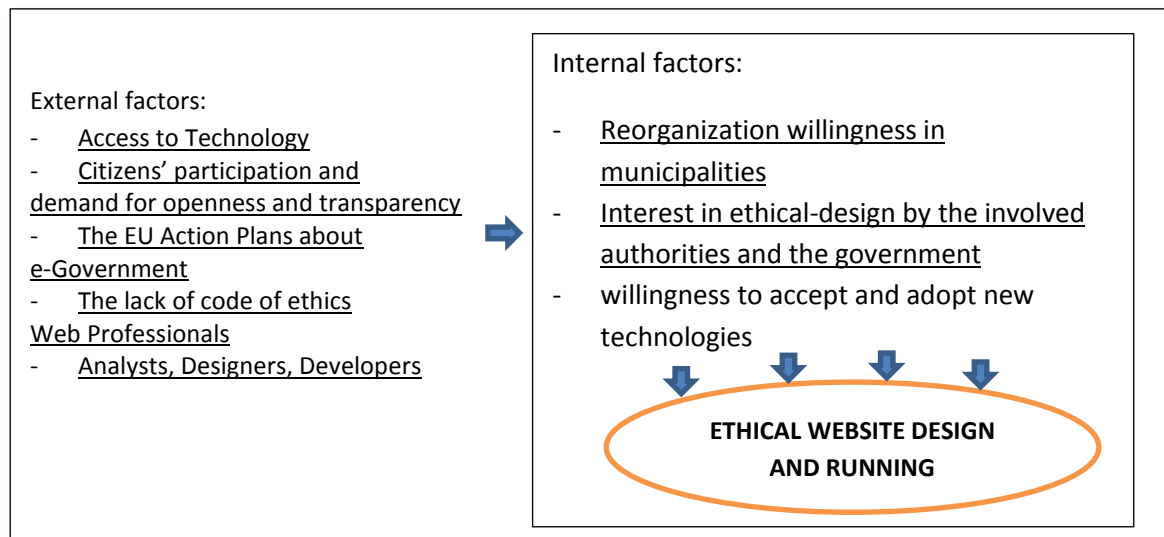
## 7. Conclusions and suggestions

The conclusion of the thesis, which is also the main research question, whether the municipalities in the EU are taking into consideration ethical aspects when designing their websites, is that excluding the Cookie Law which has not been adopted by many (42%) of the municipalities, the ethical content of the municipalities' websites is not regulated by any EU or country laws resulting in that the websites' ethical design is up to the municipalities interest or initiative. The second research question, whether there are laws or directions, from the EU or local governments, on how personal data should be handled and what rights the citizens have when using the internet, is answered as yes there are laws on these subjects but the municipalities, again, are not always adopting the law. The third question whether municipalities are following laws and directives regarding ethical design of their websites the answer is no, as there are no laws on this subject excluding the Cookie Law as mentioned in previous chapters.



*Figure 1. Factors that affect the design and running of an ethical municipality website*

The environment where a municipality operates sets the conditions and limitations the municipality operates in. This explains partially that although authorities accept the importance of internet in citizens' life we see the absence of initiatives from EU and local governments to adopt laws or rules regarding ethical design and use of municipality websites. At the same time, it is important to note that aspects such as the ease of misuse of personal data, the difficulty of recovering lost data, the lack of equal access to information and the lack of participation should have already alarmed the EU and authorities like the municipalities.



*Figure 2. Internal and external factors that affect the ethical design of a municipality website.*

Figure 1 and Figure 2 present the factors that can affect an ethical design of a website. In Figure 2 the factors are divided in two groups, external and internal. As external I grouped the factors that affect the municipality website design from outside its boundaries. The external factors set the conditions, legislation and boundaries within which the municipality operates. In the internal factors group I list those that are existing inside the municipality. I argue that these factors have immediate effect on how the municipality functions concerning ethical design. These factors can be handled without the need of external approval and must be prioritized as more urgent to develop. I argue that the role of all the listed factors when introducing ethics in the design of a website is equally important and the miss functioning of any of them is the reason why municipality websites show bad results in their evaluation. For this reason I suggest a number of supporting measures to the factors of Figure 1, which can be used to strengthen the effort for more ethical design in municipality websites:

#### Access to technology and willingness to accept and adopt new technologies in decision making

The introduction of Internet technology by itself in order to automate municipality functions or introduce online services does not necessarily result in more open, efficient and socially inclusive municipalities. These solutions are only effective if they are considered alongside other key parameters such as: organizational structure (i.e. a hierarchical arrangement of the authorities, coordination and supervision, communications, rights and duties); social structure (i.e. understanding of how citizens interact and are organized together); cultural values and attitudes (i.e. understand the commonly held standards of what is acceptable or unacceptable, important or unimportant, right or wrong); process reorganization within municipalities (i.e. by organizing its processes and allocating its resources to effectively support and improve the efficiency of the services); and ethical issues (such as establishing procedures in deciding what is right (ethical) or wrong and avoiding conflicts of interest).

#### Reorganization of the municipality's administrative procedures is important

The potential benefits of the internet in the municipalities can only materialize when they are introduced as part of a well-planned reorganization. Reorganization is important as many procedures will be automated. Slow bureaucratic procedures and activities can be accelerated, distances will no longer be a problem for good service and processes can be refreshed. Training of the staff on how to

handle incoming and outgoing general or personal information is important. Reorganization must include introduction of procedures and rules to strengthen quality (credibility, currency, transparency), information security, accuracy and privacy in order to promote confidentiality and respect of personal data transferred through the websites. Adopting the benefits of internet technology (Afuah and Tucci, 2002), municipalities will increase their efficiency through less time consuming services to citizens and 24/7 service, allow citizen participation, feedback and promote e-democracy. Citizens will also benefit from an effective municipality processing as services will be a one-stop procedure and will be benefited even further when new services will be added.

#### Interest in ethical design by the involved authorities and the government

Although there are many stages to implement an ethical acceptable website with each stage requiring time to reach its final stage, I argue that there has been enough time since municipalities first started using internet technology and websites to contact their citizens. Prins (2001) notes that government offices have been using intranets and the World Wide Web since 1990. To establish ethical behavior within the municipality, training all the involved staff is very important. The training must explain the importance of ethics and must include exercises such as how to avoid conflicts resulting from personal interest, how to exercise procurement integrity etc.

#### Citizens' participation and demand for openness and transparency

Citizens' participation and demand for openness and transparency can persuade the municipality to publish more ethical website content. Citizen participation can be achieved among other initiatives through citizen training (internet training), by organizing open discussions where the role of local governments will be explained, through public presentations of results and municipality initiatives, or by organizing seminars where the role of internet technology in decision making will be explained.

#### EU Action Plans and other decisions for e-Government

The EU's Action Plans and calls promoting issues such as transparency and the development of services designed around users' needs for the development of e-Government are important and should be taken into consideration by the member countries. An example is EU's "Action Plan for the period 2011 – 2015", defined by the Malmö Ministerial Declaration in 2009. The evaluation of the 24 websites showed that the decisions are not followed by all member countries. In order to follow decisions, the EU and the member countries should address more effort to convince municipalities of the decision's importance for their citizens. As a step in following EU's or countries' rules, is training. The involved authorities should be trained on the role of the EU and the importance in following laws promoting ethics in society in general or in governance in particular.

Initiatives for ethical design of municipality websites can also be addressed by other active groups and authorities interested in ethical web design such as citizens' rights organizations, web developer organizations, human rights organizations, bodies responsible for the security of personal data and the education community.

#### The lack of code of ethics (legislation) in website design

The moral responsibility of many professionals is regulated by various professional codes, according to Steinerová (2014). The code of ethics guides the professional in how to act for public good. A code of ethics in the design of municipality websites is missing.

Floridi (2006) notes that "technological changes have outpaced ethical developments, bringing about unanticipated problems that have caused a policy vacuum filled by computer ethics, which has initially surfaces from practical concerns arising in the information society". Floridi (2006) notes that in order



to solve ethical and other problems, rational decisions have to be taken such as legislation and codes of ethics are to be formulated and enforced. Our study showed that in countries where there are government and local authority initiatives (such as Sweden) the results were much better than in other countries (such as Cyprus). The lack of code of ethics and other factors that have been explained above in combination with some municipalities' low initiative for ethical website design has resulted in low evaluation results.

### The web developers

The code of ethics will be the tool for website developers to do their duties with respect, objectivity and integrity and in accordance with professional standards, reminding at the same time that the interest of the citizen should be placed above own interest.

I argue that the lack of legislation and a code of ethics in combination with the citizens' low demand for openness and transparency are the two most important reasons why some websites are very low graded.

I suggest an initiative from the EU and web design professional bodies to formulate a code of ethics for website design. Specialists in ethics can support this initiative. Supporting documents to this initiative can be the code of ethics of other professional organizations such as the IEE, the SPJ (SPJ, 2014) and ACM (ACM, 2015). Velasquez et al. (no date), summarize the 5 sources of ethical standards, that different philosophers and ethicists have suggested (the Utilitarian Approach, the Rights Approach, the Fairness or Justice Approach, the Common Good Approach, the Virtue Approach), indicating that they can be used when evaluating different options to choose from for an action. Each of the five sources adds a dimension to what ethical behavior is, according to Velasquez et al. (no date):

- Which option will produce the most good and do the least harm? (The Utilitarian Approach)
- Which option best respects the rights of all who have a stake? (The Rights Approach)
- Which option treats people equally or proportionately? (The Justice Approach)
- Which option best serves the community as a whole, not just some member?  
(The Common Good Approach)
- Which option leads me to act as the sort of person I want to be? (The Virtue Approach)

The above summary can also be used in the formulation of a code of ethics in website design. Velasquez et al. (no date), also adds that to identify ethical standards is hard. I argue that through training and practising what is ethical, an ethical decision approach will be established. Formulating a positive approach to ethical thinking will help the ethical design of municipality websites.

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## 9. Appendices

### 9.1. Selected Municipalities

Number	Municipality	Country
1	Göteborg	Sweden
2	Halmstad	Sweden
3	Umea	Sweden
4	Gavle	Sweden
5	Manchester	UK
6	Forest Heath & St Edmundsberg	UK
7	Cardif	UK
8	Craven	UK
9	Limassol	Cyprus
10	Nicosia	Cyprus
11	Paphos	Cyprus
12	Larnaca	Cyprus
13	Marseille	FR
14	Perpignan	FR
15	Calais	FR
16	Angers	FR
17	Turku	Finland
18	Espoo	Finland
19	Riihimaki	Finland
20	Joensuu	Finland
21	Girona	Spain
22	Barcelona	Spain
23	Murcia	Spain
24	Zamora	Spain

## ***9.2. List of questions***

Q1 Town Name:

Q2 Town URL:

Q3 Population:

Q4 Website information available in other languages:

Q5 Listen to the page contents:

Q6 Option to P=participate to the town meetings or R=read the meeting minutes:

Q7 Search function field, on all pages:

Q8 Access to the town library:

Q9 Contact details, general or personal e-mail and tel. nr availability:

Q10 E-services, availability:

Q11 e-payments, availability:

Q12 Page last-updated date:

Q13 Option to contact the person responsible for the page:

Q14. Informing about cookies:

Q15. Following Guidelines or laws about cookies:

Q16 User get informed on which personal data are collected:

Q17 User has the option to ask on how this personal data have been used - Processing (of personal data):

Q18 Option to change the text size of the website:

Q19 Content summary availability:

Q20 Emergency information on the website:

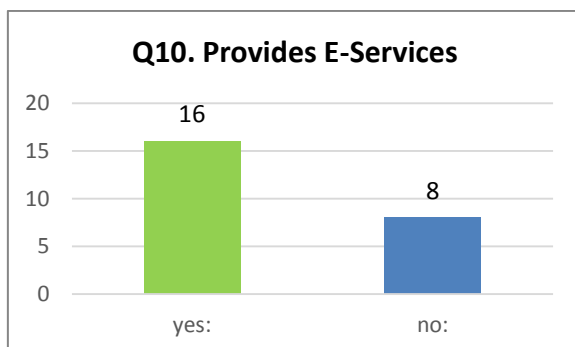
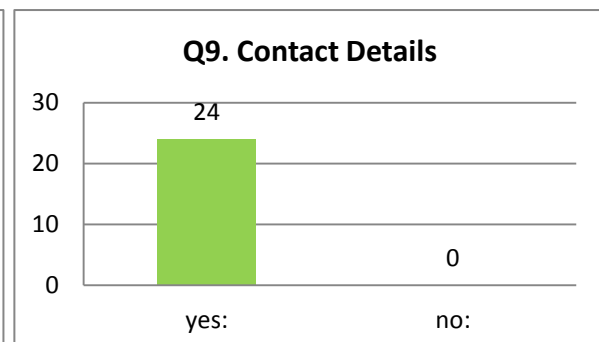
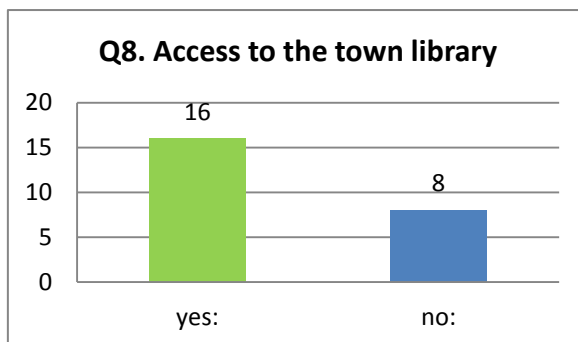
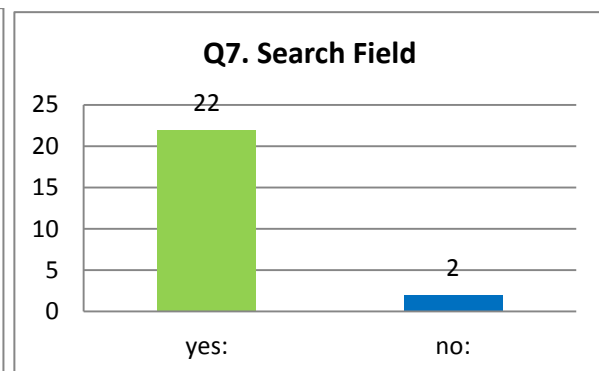
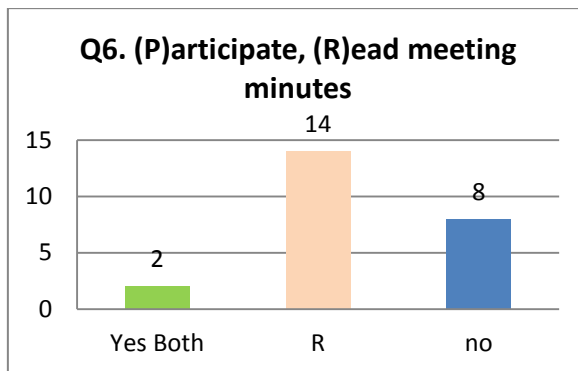
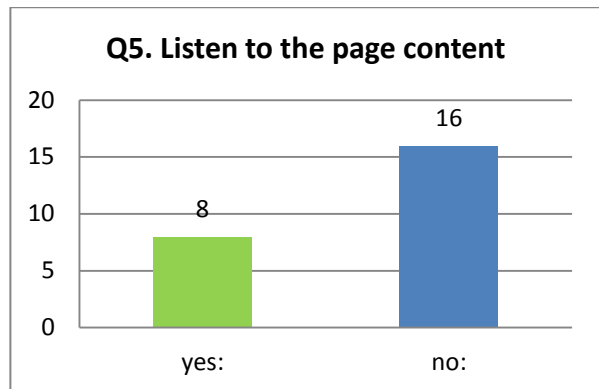
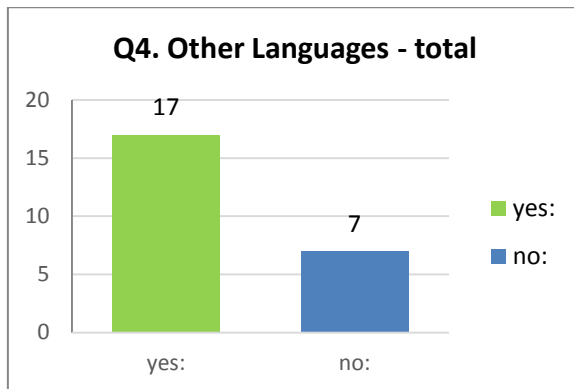
### 9.3. Table of results

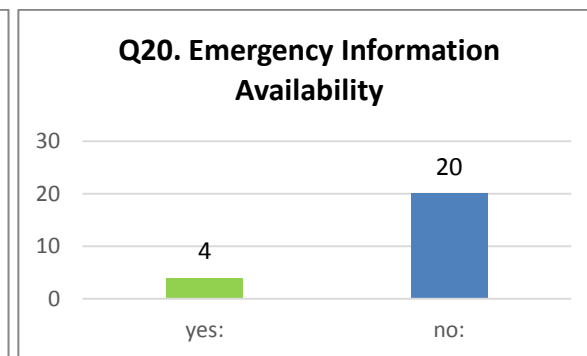
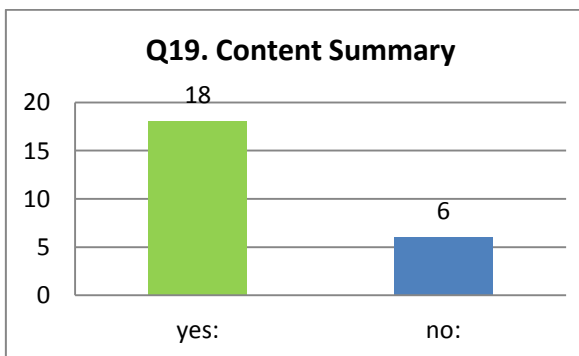
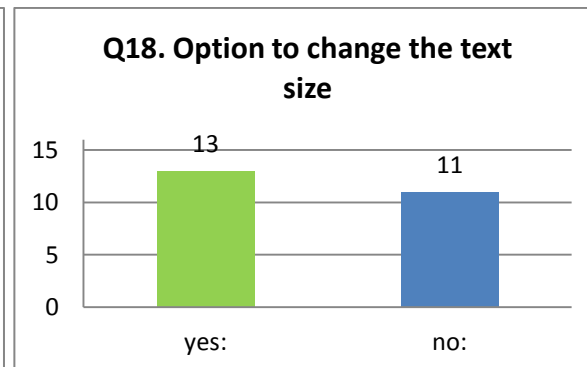
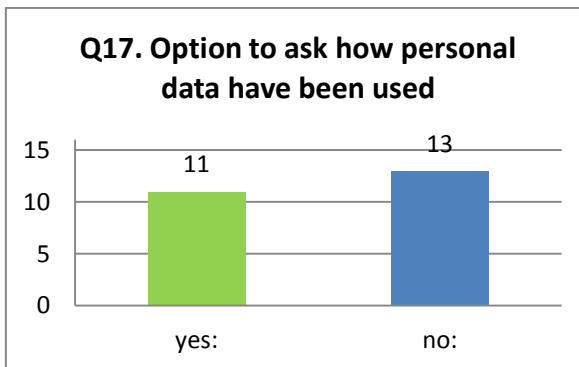
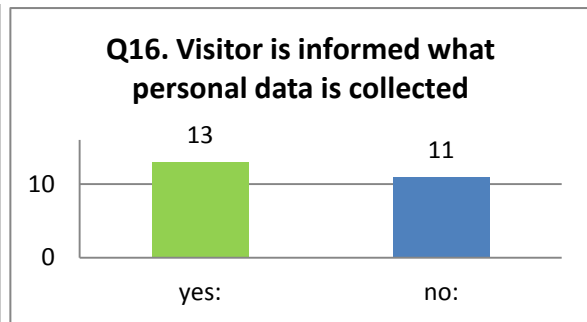
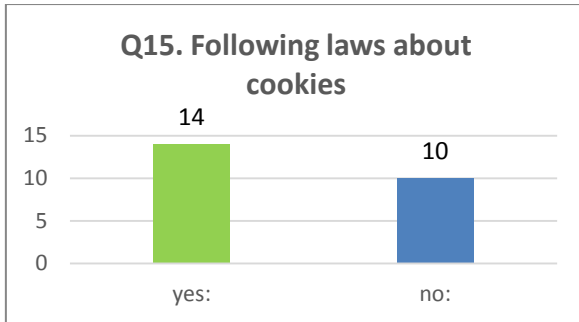
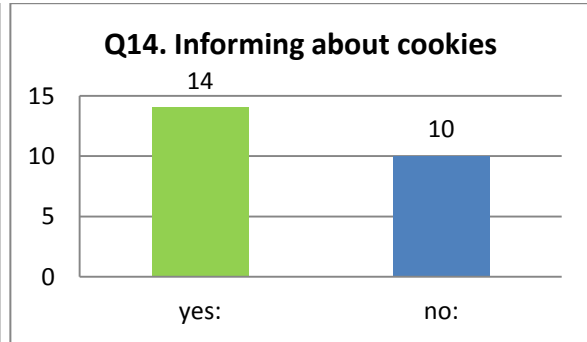
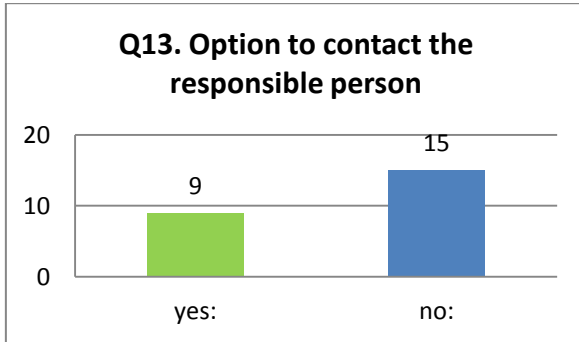
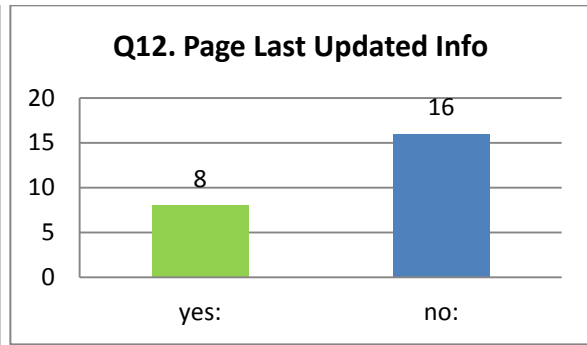
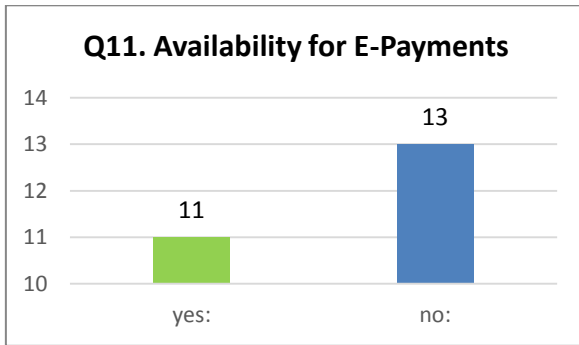
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Town Name	url	Populati on	Other Languages	Listen to the page contents	Option to P=participate to the town meetings or R=read or watch the meeting minutes	Search field	Access to the town library	Contact details, general or personal e-mail and tel. nr availability	E-services	e-payment s	Indication when the page last updated date	Option to contact the person responsible for the page	Informing visitors about cookies ?	Following guidelines or laws about cookies ?	Visitor is informed what personal data is collected	User has the option to ask how this personal data have been used	Option to change the text size	content summary availability	Emergency information on the website
Göteborg	<a href="http://gotteborg.se">http://gotteborg.se</a>	549839	yes	yes	Yes both	yes	yes	yes	yes	no	yes	Yes	yes	yes	yes	yes	no	No	no
Halmstad	<a href="http://www.halmstad.se/">http://www.halmstad.se/</a>	58577	yes	yes	R	yes	yes	yes	yes	no	yes	yes	yes	yes	no	no	yes	yes	no
Umea	<a href="http://www.umea.se">www.umea.se</a>	79594	yes	yes	R	yes	yes	yes	yes	no	yes	yes	Yes	yes	yes	yes	yes	yes	no
Gävle	<a href="http://www.gavle.se">www.gavle.se</a>	102000	yes	yes	R	yes	yes	yes	yes	no	no	yes	yes	yes	yes	yes	no	yes	no

Manchester	<a href="http://www.manchester.gov.uk/">http://www.manchester.gov.uk/</a>	502900	no	yes	Yes both	yes	yes	yes	yes	yes	no	yes	yes	yes	yes	no	yes	Yes	no
Forest Heath	<a href="http://www.forest-heath.gov.uk/">http://www.forest-heath.gov.uk/</a>	60000	no	no	R	yes	no	yes	no	yes	no	yes	yes	yes	yes	yes	Yes	yes	no
Cardiff	<a href="http://www.cardiff.gov.uk">www.cardiff.gov.uk</a>	350000	no	no	R	yes	yes	yes	yes	yes	no	no	yes	yes	yes	yes	no	yes	no
Craven	<a href="http://www.cravendc.gov.uk/">http://www.cravendc.gov.uk/</a>	55500	no	no	R	yes	yes	yes	yes	yes	yes	no	yes	yes	yes	yes	yes	no	no
Limassol	<a href="http://www.limassolmunicipal.com.cy/">www.limassolmunicipal.com.cy/</a>	120000	yes	no	no	yes	no	yes	no	yes	no	no	no	no	no	no	no	yes	no
Paphos	<a href="http://pafos.org.cy/">http://pafos.org.cy/</a>	32900	yes	no	no	yes	no	yes	yes	yes	no	no	no	no	no	no	yes	no	no
Nicosia	<a href="http://www.nicosia.org.cy/el-GR/home/">http://www.nicosia.org.cy/el-GR/home/</a>	170000	yes	no	No	yes	no	yes	yes	no	no	no	no	no	no	no	no	yes	no
Larnaca	<a href="http://www.larnaca.org.cy">www.larnaca.org.cy</a>	55000	yes	no	no	no	no	yes	no	no	no	no	no	no	no	no	no	no	no

Marseille	<a href="http://www.marseille.fr/site/evdm/jspl/site/Portal.jsp">http://www.marseille.fr/site/evdm/jspl/site/Portal.jsp</a>	850,726	yes	no	R	Yes	no	yes	yes	no	no	yes	yes	Yes	Yes	yes	no	yes	no
Perpignan	<a href="http://www.mairie-perpignan.fr/">http://www.mairie-perpignan.fr/</a>	117,419	no	no	R	yes	yes	yes	yes	no	yes	no	yes	yes	yes	yes	no	no	yes
Calais	<a href="http://www.mairie-calais.fr">www.mairie-calais.fr</a>	72,500	Yes	no	no	yes	no	yes	no	yes	no	yes	no	no	no	no	no	yes	no
Angers	<a href="http://www.angers.fr">www.angers.fr</a>	147,500	no	no	R	yes	no	yes	no	yes	no	Yes	no	yes	yes	yes	no	yes	yes
Turku	<a href="http://www.turku.fi">www.turku.fi</a>	184,123	Yes	Yes	No	Yes	Yes	yes	yes	no	yes	no	yes	no	no	no	Yes	Yes	no
Espoo	<a href="http://Espo.fi">Espo.fi</a>	265000	Yes	Yes	R	Yes	Yes	yes	no	No	yes	No	Yes	yes	yes	yes	yes	yes	yes
Riihimäki	<a href="http://Riihimaki.fi">Riihimaki.fi</a>	29000	Yes	No	R	yes	yes	yes	yes	no	no	no	no	no	no	no	yes	yes	yes
Joensuu	<a href="http://Joensuu.fi">Joensuu.fi</a>	75000	Yes	no	no	yes	yes	yes	no	no	yes	no	no	no	no	no	yes	no	no
Girona	<a href="http://www2.girona.cat">www2.girona.cat</a>	96722	Yes	no	no	yes	yes	yes	yes	yes	no	no	no	no	no	no	yes	yes	no
Barcelona	<a href="http://www.bcn.cat">www.bcn.cat</a>	1.620.000	Yes	yes	R	yes	Yes	yes	yes	yes	no	no	yes	yes	yes	no	no	yes	no
Murcia	<a href="http://Murcia.es">Murcia.es</a>	442573	Yes	no	R	yes	yes	yes	no	no	no	no	no	no	no	no	yes	yes	no
Zamora	<a href="http://ww.ayto-zamora">ww.ayto-zamora</a>	66000	no	no	R	no	yes	yes	yes	yes	no	no	yes	yes	yes	yes	yes	yes	no

## 9.4. Graphs per question





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