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KEeLAN: ASSESSMENT OF TURKISH LOCAL AUTHORITIES' FRONT OFFICES ON THE INTERNET THROUGH THE CONTEXT OF E-EUROPE BASIC SERVICES TO DETERMINE THE E-GOVERNMENT STAGES AND BACK OFFICE INTEGRATION OF THE BEST-PRACTICES BASED ON THE EFQM KEY ELEMENTS

PHD DISSERTATION

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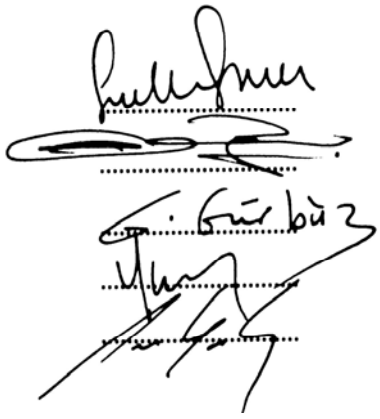

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ABSTRACT

KEeLAN: Assessment of Turkish Local Authorities' Front Offices on the Internet through the Context of E-Europe Basic Services to Determine the E-Government Stages and Back Office Integration of the Best-Practices Based on the EFQM Key Elements.

This research is comprised of three phases. In the first phase it explores the recent situation of the Turkish local authorities on e-Government by pointing out the basic indicators. 3228 Turkish local governments were the municipalities and form the base sampling framework of this study. For the second phase, from 969 units, 104 of these authorities offering e-service provisions were selected so as to perform a web-scan. The objective was to find 20 best practice cases under the context of 9 basic services agreed by e-Europe framework. In the third phase, a benchmarking tool developed from European Foundation for Quality Management (EFQM) elements was sent to these authorities' key personnel. The aim of this benchmarking assessment was to explore the degree of change and performance in the back office organizations of the 20 best practice local authorities. SPSS was used to analyze the data. The summary results were presented in the order of 5 key elements of EFQM, starting with leadership, policy and strategy, people, partnership and resources, and processes. The sixth element, regional context, was added later by the Key Elements of Electronic Local Authorities' Networks (KEeLAN) consortium due to the specific focus on this aspect. The overall results were compared with the European local authorities' results. The intention of the comparisons was to give a general outlook from the both phases; to value the maturity levels of the Turkish local governments on e-services and the degree of change and performance of their back-offices. The results were however significant as well as interesting. Albeit the low number of web ownership among the Turkish local governments, they displayed excellent examples of e-services.

ÖZET

KEeLAN: eAvrupa Temel Hizmetleri Çerçevesinde E-Devlet Düzeylerini Tespit Etmek Amacıyla Türk Yerel Yönetimlerinin Internet'teki Ön-Bürolarının ve EFQM Anahtar Unsurları Çerçevesinde En iyi Örneklerinin Arka-Büro Entegrasyonlarının Değerlendirilmesi.

Bu araştırma üç aşamadan oluşmaktadır. İlk aşamada Türkiye'deki yerel yönetimlerin mevcut durumları incelenmiş ve e-devlet ile ilgili temel göstergeler ortaya konmuştur. 3228 adet yerel yönetim birimi belediyelerden oluşmakta ve bu birimler araştırmamızın örneklemini meydana getirmektedir. İkinci aşamadaysa web sitesi olan 969 yerel yönetimden 104 tanesi, e-hizmet verdiklerinden dolayı bir çevrimiçi taramadan geçirilmişlerdir. Amacımız eAvrupa çerçevesinde belirlenmiş 9 temel hizmette en gelişmiş düzeyi tutturanlardan 20 tanesini en iyi örnek olarak seçmektir. Üçüncü aşamada, EFQM mükemmellik modelinden geliştirilmiş bir kıyaslama anketi anahtar kişilere gönderilmiştir. Kıyaslama sonucunda amaç, yerel yönetimlerin arka bürolarındaki değişimin boyutunu ve derecesini ortaya çıkarmaktır. Sonuçlar SPSS aracılığıyla analiz edilmiştir. Sonuçlar sırasıyla EFQM'de yer alan 5 temel grupta sunulmuştur. Bunlar liderlik, politika ve strateji, çalışanlar, işbirlikleri ve kaynaklar ve süreçlerden oluşmaktadır. Ancak daha sonra eklenen altıncı madde, yöresel işbirliği, özellikle konunun yerel yönetimler olmasından dolayı, KEeLAN konsorsiyumu tarafından kıyaslama aracında kullanılmıştır. Tüm sonuçlar Avrupa yerel yönetimlerininkilerle karşılaştırılmıştır. Bu karşılaştırmalarla, her iki aşama için değişik bir bakış açısı vermek hedeflenmiştir; öncelikle Türk yerel yönetimlerinin e-hizmet düzeyleri değerlendirilmiş ve ardından arka bürolarının değişim dereceleri ile performansları ortaya konmuştur. Sonuçlar anlamlı olduğu kadar ilginçtir de. Her ne kadar web sitesine sahip Türk yerel yönetimleri sayıca az olsa da e-hizmet sağlamada mükemmel örnekler sergilemişlerdir.

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LIST OF ABBREVIATIONS

AAC	:	Austrian Association of Communities
ADSL	:	Asymmetric Digital Subscriber Line
AKP	:	Turkish Justice and Development Party
APEC	:	Asia-Pacific Economic Cooperation
CGEY	:	The Cap Gemini Ernst & Young Group
CIS	:	City/Urban Information System
CRM	:	Customer Relations Management
DPT	:	Turkish for SPO (State Planning Organization)
DSL	:	Digital Subscriber Line
DTI	:	Department of Trade and Industry
EFQM	:	European Foundation for Quality Management
EIPA	:	European Institute of Public Administration
ELANET	:	the European Local Authorities' Telematic Network
ERIS@	:	European Regional Information Society Association
EU	:	European Union
EUPAN	:	European Public Administration Network
FY2004	:	Fiscal Year 2004
G2C	:	Government-to-citizen
G2G	:	Government-to-government
GIS	:	Geographic Information System
ICT	:	Information and Communication Technology
IDeA	:	British Improvement and Development Agency
IE	:	Instituto de Empresa
IS	:	Information Society
IST	:	Information Society Technologies
IT	:	Information Technology
infoDev	:	The Information for Development Program
KA	:	eEurope Key Action
KEeLAN	:	Key Elements of Electronic Local Authorities' Networks
LAN	:	Local Area Network

NECCC	:	The National Electronic Commerce Coordinating Council
NPM	:	New Public Management
NSF	:	US National Science Foundation
OECD	:	Organization for Economic Cooperation and Development
PC	:	Personal Computer
PDCA	:	Plan-Do-Check-Act
PEGS	:	pan-European e-Government services
PremNote	:	World Bank Premier Notes for Public Sector
RTD	:	European research and technological development
SBS	:	Small Business Service
SD	:	Standard Deviation
SDSL	:	Single Line DSL
SPA	:	Special Provincial Administrations
SPO	:	State Planning Organization
STAP	:	Short Term Action Plan
TESEV	:	The Turkish Economic and Social Studies Foundation
TiG/MTW	:	The Innovation Group plc
TQM	:	Total Quality Management
TUBITAK	:	Turkish for the Scientific and Technical Research Council of Turkey
TUENA	:	Turkish National Information Infrastructure Master Plan
TurkStat	:	Turkish Statistical Institute
ULB	:	French for Free University of Brussels
URL	:	Uniform Resource Locator
VAT	:	Value Added Tax
VN/INTOSAI	:	German for United Nations (Vereinten Nationen)/ International Organization of Supreme Audit Institutions
YerelBilgi	:	Turkish for Local Information
YerelNet	:	Turkish for Local Networks
YTP	:	Turkish for the New Turkey Party

I. INTRODUCTION

E-Government, as most of the people tend to believe, is not solely a new hype of the "e-"s. Nor is it a "new emergent area of research in the discipline of public management" (Criado et al., 2003: 3). It is, actually, an intersection of multi-disciplinary areas like organization theory, social science, informatics, computer science, public administration, business administration, economy, political science, law, government professionals, library science etc. (Löfstedt, 2005: 5). To make a whole history short, the starting point goes back to the introduction of the Internet when it was first invented in 1960s as a communication network for defense research purposes. Nobody envisaged the enormous transformation of the entire society then.

Today, the explosive growth in Internet usage along with rapid development of Information and Communication Technologies (ICTs) and e-commerce/e-business in the private sector have put growing pressure on the public entities to serve citizens electronically (Ho, 2002; Heath, 2000). This time the change or reform catalyzed by ICTs should not be confused with reform efforts through IT in administrations (Kraemer and King, 2003). It's a "paradigm shift" (Persiteras et al., 2002) on which governments we know are being "reinvented" (Winnick, 1995; Atkinson and

Ulevich, 2000; Jain, 2004) and "digitalized" (Atkinson and Ulevich, 2000, Lee et al., 2005).

Starting with central government institutions, these new reform efforts passed through local governments as well. The aim is to achieve efficient, inclusive, transparent public administrations (Ministarial Declaration, 2005). The need for change in terms of pressures derived from fiscal and performance issues, the rising tide of digital citizens, new technologies creating new networks, and globalization lead the way to re-organization efforts (Tapscott and Agnew, 2001). Local governments play the key role here due to the provision of the most services locally or regionally where they are the closest to the citizens. Transforming of local government services into e-services by making them available at anytime and anywhere requires collaborations and coordination of every actor responsible around the citizens. This study is an extension of and a contribution to the KEeLAN project. That's why KEeLAN was chosen for this study is particularly associated with e-Europe objectives about local and regional level. Both the e-Europe (2002) and e-Europe (2005) programs extend a ground for evaluation the progress towards information society, including local e-Government as one of the main and separate fields of interest.

Although in national level and likewise in European context by implementation of the e-Europe 2005 Action Plan, e-Government is one of the main concerns of the "Information Society" program of Turkey. But somehow relevant issues to support and reinforce the role of municipalities, provinces and regions in the implementation of the e-Europe 2005 Action Plan has been often neglected. Lack

of coordination and cooperation among the actors both horizontally as well as vertically, duplication of individual efforts, lack of qualified personnel, islands of automation in the regional context and some more obstacles are playing a great role in the local level of e-Government initiatives of Turkey. Likewise, the academic extension also lacks in this prospect and scant examples of papers rather theoretical do exist in the same field. Even in the process of the research, related authorities were asked whether cooperation exists with academia, none came up with a positive answer respectively. Thus, to fulfill this space in the academic world as well as to support the local administrations on their way to transform themselves into e-administrations, this research is unique in that sense. In the age of "globalization and localization" (Finger and Pécaud, 2003:6) KEeLAN and similar projects will pave ways to become alternative channels of improving the local government and democratic mechanism in our country.

The objectives of this research are threefold:

The first phase comprises the recent situation of the Turkish local authorities on e-Government. The basic research of this phase is organized under the topics given below;

- Distribution of municipalities by their legal status,
- Number of Local Administrations in Turkey,
- The Current Status of Turkish Local e-Governments by Population Group, Internet Access, Website Ownership, Information Technology (IT) Department Ownership, and E-services,
- Progress of the Turkish Local e-Governments between years 2001-2006,
- Change of Internet Access from 2001- 2006,

- Change of IT Department Ownership from 2001- 2006,
- Internet Access Types of the Turkish Local Governments
- The Current Status of Turkish Local e-Governments by Political Backgrounds
- Internet Access Types of the Turkish Local Governments by Political Parties

The second phase is based on the performance of the service delivery on the web (front-office) under the context of 9 basic services agreed by e-Europe. Consequently, 20 best practice cases are determined by their service maturity at levels 3 and 4 for further benchmarking process.

The third and the last phase covers the degree of change in their back office organizations of these local authorities through EFQM based Key Elements.

Meanwhile, the findings are benchmarked against the Member Countries' results to set up a ground and standpoint for the Turkish authorities.

Some minor though equally important contributions were made into the literature. Through the study we'll like to:

- Communicate the results and findings to the related audience.
- Raise awareness in Turkish regional and local public administrations with regard to administrative change or renewal through the use of Information and Communication Technologies (ICTs) and the adoption of new models and roadmaps for integrated local governments.

- Identify other Turkish initiatives with a stake in the development of integrated e-Government throughout Europe and establish new channels of communication and collaboration with them.
- Build some common bench learning methodologies at Turkish level to improve web front offices and modernize the public administration.
- To fulfill the gap of research on local administrations because all the research dissemination is based on central governments or on agency levels.
- Consider how local government is responding to the new culture of e-governance by examining how it is meeting both public and government demands.

The tools and different methodologies used in this research are disseminated on KEeLAN website for the ones who determine to make similar research in the same fields. We hope this will open up a wide range of opportunities for the Turkish local governments to see their standpoints against their counterparts in Europe and to provide them the best-practice cases to exploit the time they had already lost. By avoiding the errors of the others and the handicaps committed, they will accelerate and close the gap.

This research is organized under 5 chapters. Initiated by the introductory session, it is followed by the chapter 2. In chapter 2, **"Evolution and Assessment of E-Government Projects"**, we deal with the evolution of e-Government; from which context it was spread out, when and how it was developed; the New Public Management and its relation with e-Government is also highlighted. Meantime, the

restructuring efforts in Turkish context and the current situation of e-Government initiatives are also discussed. The last session of this chapter comprises the assessment methodologies in this field.

In chapter 3, **"KEeLAN"**, we outline in particular how the KEeLAN project was developed in e-Europe program. By pinpointing the relations and the other regional initiatives in Europe along with the methodology and findings of the project are also widely discussed. A brief literature review under the KEeLAN concept and its key elements are addressed accordingly.

In chapter 4, **"Research Methodology"**, the core part of the whole research, we implement the KEeLAN methodology into Turkey's local governments so as to fulfill the field neglected by academia about local e-Governments. We consider a 3 phased research design, starting with core statistical results like the website ownership of Turkish local governments; distribution of political parties among municipalities; the website ownership of those initiatives; population, intranet/Internet use among local government, etc. 2nd phase goes along with web scanning of the Turkish local government websites on e-service provision implied by e-Europe context about 20 basic services out of which 9 are used in the tool. Then, we proceed with the 3rd phase after selecting 20 best-practices and sending e-mails attached with self-assessment benchmarking tools version 1.1 in Turkish. Due to some technical problems and coordination concerns we build a website and embed the related benchmarking questionnaire there. Afterwards, the selected authorities are invited to fill their part of questionnaire. Prior to the implementation stage, initial

contacts are established with related key personnel from each local government. We receive 15 replies in return and those are used for benchmarking with the European counterparts.

Finally in chapter 5, **"Discussions and Conclusions"**, we summarize the results obtained so far and discuss the main findings to outline the direction for future work in this field.

In the appendices we convened an implementation manual and an example of performance measures table for the local authorities to assist them on their way when taking steps on initiating local e-Government projects. The core manual is provided by the KEeLAN consortium for the use of local authorities. The absence of such a manual was inquired during the interview sessions by the key personnel of those authorities. Most of those people signaled the importance of a guide how, when, and from where to start.

II. EVOLUTION AND ASSESSMENT OF E-GOVERNMENT PROJECTS

2.1. New Public Management to E-Government

The Weberian model of organization, where the governments are thought to be levels of hierarchical bureaucracies, focuses on only internal and managerial concerns and emphasizes departmentalization, specialization, standardization, and routinization of the production process (Düren, 1994; Ho, 2002; Eyob, 2004; Jain, 2004; Teofilovic, 2002). Through rules, regulations, and hierarchical supervision, the bureaucratic models were successful due to precision, speed, clarity in communication, reduction of friction, reduction of personnel costs (Thompson, 2003). It also ensures the fair treatment of clients. Yet, the Weberian bureaucracy is often criticized and attacked for its inflexibility, proceduralism, inefficiency, and incapability to serve "human clients" who have preferences and feelings, as well as for the impossibility of measuring performance and holding accountable public officials, 'old type' bureaucracy has been seen as static and unable to adapt to changing circumstances. (Jain, 2004; Navarra and Cornford, 2003; Teofilovic, 2002).

Tapscott and Agnew (2001) highlight the need for change of governments in terms of pressures derived from fiscal and performance issues, the rising tide of digital citizens, new technologies creating new networks, and globalization. Whereas Kett (2000) emphasizes on the foundations of worldwide reforms of governments. He argues these changes under six core characteristics; productivity, marketization, service orientation, decentralization, policy, and accountability for results. Similar point of view can be observed in Larbi (1999:12) where he put the emphasis on changes in the economic, social, political, technological and administrative environments "combined to prompt and drive radical changes in public administration and management systems". He argues that the main targets of these changes are focused on improvements in the ways in which the governments are managed and services are delivered. Heeks (1998) pinpoints about general crises in public sector emerged during 1970s. The perceived problems were focused on inputs (increase in expenditures), processes (waste, delay, mismanagement and corruption) and outputs (inefficient and bad services in general).

The sensation of 1980s, "Reinventing government" approach, tried to change "inward-looking" focus to "outward-looking" so as to emphasize the concerns and requirements of end-users (Ho, 2002:435). Contrary to the common belief about citizens, they introduced the new approach where citizens are regarded as "customers", the central focus in designing government service delivery (Fichtner, 2001; Ho, 2002; Jutla et al., 2002). Same approach is evaluated by Duivenboden and Lips (2001) in respect with these developments in the functioning of public bureaucracies and their relationship with citizens, based upon customer-orientation.

On the other hand, as Ho (2002: 435) pinpoints, besides the positive aspects, some major obstacles like "the essence of transaction costs, time-consuming and costly citizen engagements, pressures they already face in the daily operation of governments arise and even stop the efforts in many places".

Another circle of scholars like Hambleton (2004), Navarra and Cornford (2003), Teicher et al. (2002), Aichholzer (2001), and particularly Santos and Heeks (2003) put emphasis on information and web technologies in public administration. Ho (2002) argues that governments were using ICTs long before increasing use of the Internet to amend operating efficiency and enhance internal communication. However, it should not be forgotten that the focus of e-Government in this era, according to him (Ho, 2002: 435) "was primarily internal and managerial to improve operating efficiency and enhance internal communication".

The increasing and accelerating growth of global networks, particularly the Internet, did not only transform businesses and markets in private sector but also revolutionized learning and knowledge-sharing, generated flux of information by empowering citizens and communities in new ways to redefine governance, and created significant wealth and economic growth in many countries (Digital Opportunities for All, 2001). All literature highlights the importance of Internet and its influence on social and cultural structure by referring its networking capability (Riley, 2001; Tapscott and Agnew, 1999; Banerjee, 2000; G8 Dot Force Genoa Action Plan, 2001; Analysys Report Number 00-216, 2000; Levin, 1996; PUMA(98)15, 1999; Stiglitz et al., 2000; İnce, 2001; Backus, 2001; Duivenboden and Lips, 2001; Dawes et al., 1999; Peterson and de Wit, 1999). The Internet related

technologies are revolutionizing the way people live, communicate, and work. Rising levels of internet usage by governments, the private sector and society in general announced a new era for public administration, challenging the New Public Management (NPM) paradigm which has dominated public administration trends for the last 20 years. According to Dunleavy and Margetts (2000:2) "the radical impact of NPM" on governmental organizations around the world is over. But still the fundamental structures of NPM are visible. Once, to overcome the bottlenecks in public like fiscal or similar crises, efficiency and effectiveness, private sector solutions and practices were being implemented (Larbi, 1999). Yet, it has been replaced by the increasing demands of Web-enabled government or e-Government. For Kolachalam (2002) and Santos and Heeks (2003), these demands of e-Government are just the extension of NPM reform efforts. They see this phenomenon as the continuous reform efforts which the NPM and ICTs interconnect together on a networked environment. Similar view can also be observed in Navarra and Cornford (2003) where they claim that implementation of e-Government, requires the combination elements of both change management and the broader aspirations of NPM. In parallel with the last point of view Criado et al. (2003) agrees that NPM and e-Government are related together on certain aspects like service delivery, customer satisfaction, efficiency and crossing departmental boundaries.

But unlike private sector in e-commerce and e-business that adapted the new opportunities in service delivery in a fast way, governments were rather cautious at the beginning. This was not only due to the new technologies introduced to the public use but concerns related to security and privacy issues (Benchmarking *e*-Government in Europe and the US, 2003). The new era of 1990s were leading

inevitably to a "global shake-up" because of the Internet boom (Ebbers, 2002:9). The rigid forms of bureaucracies of "old economy" were going to face hard times. Even some sources pointed out that an "e-Government revolution" was taking place (Benchmarking e-Government Revolution, 2000:6).

ICTs have been and still are one of the most important enabling tools for reforms (Bastelaer, 2001; Pavlichev, 2004; Anselmi et al., 2002; Moon, 2002; Analysys, 1998; Accenture, 2001; Heeks, 2001; Mele, 2003; Kraemer and King, 2003). Although the quest for internal managerial needs like efficiency gains (Audit Report, 2004; Millard et al., 2004; Chevallerau, 2005; Mele, 2003; Beynon-Davies and Williams, 2003; Gershon, 2004; OECD, 2003b) and the effective delivery of project yields(Audit Report, 2004; Chevallerau, 2005; Goings et al., 2004) have been main drivers of ICT use in government, the direction has turned merely to other "good governance objectives" (Macome and Macueve, 2005:5), such as improving services, more accountability and transparency and facilitating consultation and citizen engagement. Ho (2002) argues that as a separate new term, e-Government was first formally mentioned in The National Performance Review report by Gore in 1993, apparently introducing new horizons in public service delivery. But prior to this, even in the mid 1980s he concludes that there have been a wide range of local communities with citizen networks online around the world, experimenting early and primitive e-Government initiatives. Another source in literature, Jackson and Curthoys (2001:210), asserted that e-Government was originally formulated in 1997 as the new 'digital government' through the work of the US National Science Foundation (NSF).

Basically it will be suitable to admit that information technology and the Internet are transforming public administration in the digital era. In the traditional bureaucratic paradigm, public managers focus on internal productive efficiency, functional rationality and departmentalization, hierarchical control, and rule-based management (DeHart-Davis and Pandey, 2003). In contrast, under the e-Government paradigm, like the paradigm of information-technology-based organizations in the business world (Heeks, 1998), public managers shift from emphasizing producer concerns, such as cost-efficiency, to focusing on user satisfaction and control, flexibility in service delivery, and network management with internal and external parties. The new paradigm also stresses innovation, organizational learning, and entrepreneurship so that government can continue to reinvent itself. In addition, public service is no longer standardized in the new model. With the help of information technology, an e-Government can customize services based on personal preferences and needs.

Ho (2002) argues the transformation power of the new paradigm about the organizational principles in government. He underpins the approach of the bureaucratic model through emphasizing a top-down management and hierarchical communication; on the other hand the new model focuses on merely issues like teamwork, multidirectional network, direct communication between parties, and a fast feedback loop.

2.2. Restructuring Efforts and Turkey's Current Situation on E-Government

Despite some distracted attempts over the last 15 years towards de-concentration and decentralization, Turkey's unitary system is still comprised of a highly centralized government and administrative structure. The country is divided into 81 special provinces each of which is headed by a governor appointed by the national government. The provinces are sub-divided into a total of 850 districts. In addition to the provincial units of central government departments, there are three layers of local authorities: Special Provincial Administrations, Municipalities and Villages (OECD Report, 2002).

2.2.1. Restructuring Efforts of the Public Administration

Understanding which factors affect adoption of e-Government initiatives on the local level is important, both from academic and practical perspectives. Local government has the most direct effect on citizens' lives. Griffin et al. (2004) argues that the local authority performs various roles. The most significant of these are being service providers, regulators, strategic planners and advocates for the local community. Pavlichev (2004) points out the importance of local authority for the average citizen by personal interactions. The most frequent relationship occurs with government at this level (EU, 2003). The famous Maastricht Treaty declared that the European Union (EU) was based on the decisions taken as closely as possible to the citizens while pinpointing the importance of the local democracy (the Scottish

Office, 1998). Even to some sources (AAC, 2003) the strength of the local governments have been associated with the driving force of EU.

With the term "local governments" in this research, generally, it is meant municipalities. Municipalities are one of the most important local administrative units along with Special Provincial Administrations (SPA) and villages as well as different unions of these local representatives. Almost 79,5 % of the whole population resides in the boundaries of local governments (Bindebir, 2004:1). But through the view of efficiency, subsidiary and some other additional factors not only did villages become over pacified; the SPAs as well lost their entity of locality and became the extensions of central governments (Aydemir, 2003); so to say " much weaker" than ever (Kavruk, 2004:200). Due to strict administrative tutelage system and control of the central government, almost all of the basic service provisions have been taken from the responsibility of local governments. According to Kavruk (2004:200) "today approximately 85 % of the public services are provided by the central government organizations" whereas local governments provide only "15 %". This is contradictory to the Member States' Public Sector provisions in general because the majority of the tasks are handled in the local level (EU, 2003). Some of these services in Turkey however, were accomplished on the local level in the past. Even overlapping of services is also common in some fields of tasks among the related parties on both levels (Kavruk, 2004).

Issues like increasing and sophistication of demands, rapid increase of change in circumstances, pollution, migration, advanced technology dictate change in the management concepts we knew. Fiscal strains and bottlenecks, lack of available

resources and unemployment problems gave rise to new approaches like efficiency, effectiveness and accountability. Thus, observing dissatisfied citizens on the local level should not be surprising. Local governments are trying to find additional resources to maintain the quality of their service provisions. Moreover, the widespread corruption in local governments, people tend to show disinterest and lack of trust towards the universal subjects like subsidiary, local democracy and citizen empowerment. These approaches are confirmed by Polatoglu‘s (2000) arguments as well. He claims the tradition of local democracy in Turkey was not strong enough for that it didn’t stem from an “indigenous development”. Similar point of view is observed from another scholar Loewendahl (2005:25) while she supports above mentioned statements by indicating “the weak tradition of partnership” among local governments in terms of unitary and centralization.

A countrywide study by a group of Turkish scholars (Adaman et al., 1999) under the Turkish Economic and Social Studies Foundation (TESEV) sponsorship conducted a survey about the level of content on the quality of administrations and governance among the Turkish citizens. The satisfaction on the local level was considerably higher than the central level. But for the local services the most problematic ones were sewage systems, road maintenance, parks and recreation centers, city traffic, municipal police service, and particularly construction regulations and permits. The research discusses the importance of the quality of services in governmental institutions. The overall support for a reform activity in the local agenda reaches up to 80 %. It is interesting to see that some basic points, given below, were considered as rather important in service provisions by the Turkish people:

- Equality in service delivery
- Flawless, fair and trustable service delivery
- Interest and sympathy in service delivery
- Efficiency and effectiveness in service delivery.

Some real efforts were witnessed over the last decade in order to support self-government and the delegation of the powers of the institutions of the central government to the provincial level, but the old structures and the traditions of a highly centralized public administration prevailed (Canan, 2003). Canan (2003:3) even concludes that "the domains of power" between the local and central governments are overlapping with each other. He proceeds with his discussion about the power issue by addressing that recently some of these powers have been delegated down to the municipalities. Unfortunately the powers and resources of municipalities have remained relatively limited.

Thus, it is not surprising to find out that the attempts to reform the local governments are as old as the republic itself. Table 2.1. gives a brief summary of the chronology of reform efforts covering the local government.

Table 2.1. Chronology of Local Government Reforms in Turkey

1930	Municipalities Act No. 1580 was enacted. (Was valid till 2005).
1961	Adoption of a new constitution setting out the principle of decentralization. Local authorities are referred to in Article 115 of Municipalities Act and their different categories.

1984	Act No. 3030 laying the ground for reorganization of the major cities and establishing two-tier metropolitan municipalities, comprising both sub-municipalities (lower tier) and metropolitan municipalities (upper tier).
1987	Law on Special Provincial Administration.
1988	▪ Signature of the Council of Europe's Charter of Local Self-Government, which entered into force in 1993. ▪ Decentralization and deconcentration programs introduced in several sectors and a two-tier metropolitan system of government introduced in the largest cities.
1992	▪ Town and city assemblies representing those most concerned with local problems established as part of the re-organization process. ▪ Studies of administrative organization continue to examine the possible transfer of responsibilities from central to local government.
1995	Amendment of Article 127 of the 1982 Constitution concerning local administrative bodies.
1997	Launching of Agenda 21 promotional program covering twenty five municipalities;
2003-2005	Urgent Action Plan of the Government; ▪ The Draft Law on Basic Principles and Restructuring of Public Management: · Rules for the administration are defined, · Duties and services of the Central Administration are defined, · Local administrations will carry out the local and common services, · Organization of central administration. ▪ The Law # 5216 on Metropolitan Municipalities, ▪ The Law# 5302 on Special Provincial Administrations, ▪ The Law# 5393 on Municipalities, ▪ The Law # 5355 on Unions of Local Administrations, ▪ The Law # 5449 on the Establishment, Coordination and Duties of Development Agencies,

	▪ The Draft Bill on Special Provincial Administration and Municipality Income.
2003-2005	Short Term Action Plan (STAP) on e-Government initiatives These Plans go along with other reform initiatives

Adapted from Bindebir (2004:2-3), OECD Country Report: Turkey (1998), and Sungar (2005)

With the recent reform efforts (Known as STAP) of Adalet ve Kalkınma Partisi (Turkish for Justice and Development Party-AKP) government accelerated from 2003, spanned up by EU candidateship, a new law on Municipalities No. 5393 was enacted by the Parliament on 03/07/2005, widening and giving the municipalities additional tasks and responsibilities along with supplementary fiscal sources to cope up with the new situation. The law provides general principles and the scope of the decentralization process along with the job definitions. In table 2.2. the distinction of the basic duties among the central and local authorities are summarized.

Table 2.2. The Duties of Central and Local Governments

Central government	Local government
▪ national defense	• health
▪ foreign policy	• preservation of cultural and historical heritage
▪ fiscal and economic policy	
▪ education	• school buildings
▪ law and order	• local transportation
▪ national transportation	• local traffic
▪ coordination among public authorities	• basic local infrastructure
▪ setting up standards and principles	• development of tourism

Source: UNPAN 015909 (Retrieved on 02/20/2006)

Volunteering into civic participations, broader cooperation with the local actors in the region as well as with the international partners, and some contemporary

management systems like performance and strategic management systems became obligatory duties of local governments. Other highlighted points from the law are stated as follows (Sungar, 2005:2):

- Improving organizational, managerial and information systems (local e-Governments),
- Strengthening the capability for decision-making,
- Redefining the role and structure of coordinating bodies charged with modernizing working and communication procedures and means,
- Setting-up a more professional and neutral civil service, with efficient links between the political and administrative levels, rationalizing and modernizing current structures,
- Operationalizing newly created structures,
- Continuing the decentralization process and strengthening local authorities,
- Modernizing public finance management,
- Increasing the degree of transparency for citizens and creating partnerships with civil society.

STAP does not only cover the administrative issues but also transformation to information society thus e-Government events as well. So, like many other cases around the world, e-Government related topics are assumed in the same framework of reform initiatives (Chadwick and May, 2003); Turkey's was not different.

2.2.2. Turkey's Current Situation on E-Government

Turkey's e-transformation efforts date back to 1993 with the World Bank Report on modernization of informatics and economics, and between 1993 and 2003 this process sustained by the different governments so far. The efforts accelerated by the new AKP government in 1993 with the famous STAP. Table 2.3., given below, summarizes these efforts in general.

Table 2.3. Chronology of the E-Transformation Efforts

1993	World Bank Report	Modernization of Informatics and Economics, Turkey
1998-2002	Directorate of Foreign Trade	E-commerce Coordination Committee
1999	Ministry of Transportation-TUBITAK (the Scientific and Technical Research Council of Turkey)	TUENA (Turkish National Information Infrastructure Master Plan)
1998-2002	Prime Ministry	Public Net Initiatives
2002	Related Parties	Turkish Informatics Board Meeting
2001-2002	Prime Ministry	eTurkey Initiatives
2002-2004	TUBITAK (the Scientific and Technical Research Council of Turkey)	Vision 2023

Adapted from STAP Booklet September 2004

It is undeniable to admit that all these attempts somehow contributed to the overall framework of e-transformation, but due to some certain reasons, mainly lack of a coordination mechanism prevented progress on a solid ground of e-Government. But from 2003, led off by the AKP government's Short Action Plan, the famous STAP, collected the dispersed initiatives under one control mechanism, State Planning Organization (SPO) and additionally recognition of Turkey's candidacy accelerated e-Government initiatives into a full force. However, unlike European region, Turkish local e-Government projects are not widespread and not so many in

quantity. The weight has been put on central e-Government initiatives mostly and somehow local agenda has been neglected (Çakal, 2005). And there are some striking examples of Government-to-government (G2G) and Government-to-citizen (G2C) levels.

2.2.2.1. Central Government

As of 2005, table 2.4. gives the completed picture of the events that has been accomplished so far. It is obvious that the government is progressing in a slow pace however the completed targets was mostly aimed to close the gap in the overall infrastructure neglected by the others. Among those targets, related to local government, were scarce, almost none.

Table 2.4. Recent Status of E-Transformation Targets in STAP

	Number of the targets	%
Not Commenced	6	8
Just Commenced	1	1
Still on Progress	32	44
Completed	34	47
TOTAL	73	100
Transferred to the plan of the year 2005	19	26

Source: Çakal, 2006

Another table (2.5.) shows the progress between the years 2003 and 2005 on important indicators from ICTs. It should be kept in mind that ICTs are the main

ingredients of the e-transformation of a country. In other words, they are strategic resources.

It is interesting to observe the increase of the Internet users from 8,5 % to 20,7 % between 2003 – 2005. And most important of all, the upward tendency of the broadband users in the same period from 100.000 to 1.500.000 is also a positive indicator which will catalyze the efforts on e-Government in Turkey. Within the targets of the year 2006 to 2008, two important issues related to local governments will be covered: one from GIS infrastructure and one from social policies about street working children. But the problem of coordination still remains and among the targets of the year 2006, there seems to be no solution about this topic (Çakal, 2006).

Table 2.5. Progress of Basic Indicators from ICT Sector

	2003	**2004**	**2005**
Fixed Phone Capacity (x 1000)	21.163	21.006	21.106
Fixed Phoned Subscription (x 1000)	18.917	19.125	19.000
Intensity of fixed phone subscription (%)	26.8	26.7	26.2
Mobile Phone Subscription (x 1000)	27.925	34.708	43.000
Intensity of mobile phone subscription (%)	39.5	48.5	59.3
Internet users (x 1000)	6.000	10.000	15.000
Intensity of Internet users (%)	8.5	14	20.7
Broadband Users (x 1000)	100	500	1.500
Cable TV Subscription (x 1000)	1.044	1.127	1.250
The Size of ICT Market (Billion dollars)	10.3	11.9	13.8
Telecommunications	8,5	9,6	11,0

Source: DPT, 2006

To view from a broader angel in general, detailed indicators of the Internet diffusion become important. Based on the Internet World Stats' website, there are 1,022,863,307 Internet users as of March 2006 which amounts to 15.7 % of the population, according to Computer Industry Almanac (2006) (http://www.internetworldstats.com/stats.htm). According to the results of ICT Usage Survey on Households and Individuals carried out by TurkStat (2005) 8.66 % of households have access to the Internet at home. It was 7.02 % in the same period of the previous year.

In the period of April-June 2005, of all the individuals in 16-74 age groups, proportion of computer use is 17.65 % and Internet use is 13.93 %. Those proportions are 23.16 % and 18.57 % for urban areas, 8.28 % and 6.05 % for rural areas respectively. Proportions of computer and Internet use were 16.80 % and 13.25% in the same period of the previous year.

Modem (dial up access over normal telephone line) and DSL (ADSL, SDSL etc.) are the most widely used Internet connection types with 52.27 % and 19.27 % respectively.

Table 2.6. Proportion of computer and Internet use by gender (%)

		Proportion of computer use			Proportion of Internet use		
		Total	**Female**	**Male**	**Total**	**Female**	**Male**
Within the last three	Turkey	17,65	5,77	11,88	13,93	4,33	9,60

months	Urban	23,16	7,92	15,24	18,57	6,06	12,51
(April-June, 2005)	Rural	8,28	2,12	6,16	6,05	1,39	4,66
Between 3 months and a year ago	Turkey	1,88	0,71	1,17	1,52	0,54	0,99
	Urban	2,44	0,95	1,49	1,96	0,72	1,24
	Rural	0,92	0,29	0,63	0,78	0,22	0,56
More than one year	Turkey	3,42	1,53	1,89	2,10	0,74	1,36
	Urban	3,98	1,83	2,16	2,54	0,92	1,61
	Rural	2,45	1,03	1,42	1,36	0,43	0,92
Never used	Turkey	77,06	42,28	34,78	82,45	44,68	37,76
	Urban	70,41	38,65	31,77	76,94	41,65	35,29
	Rural	88,35	48,45	39,90	91,81	49,84	41,97

Source: TurkStat (2005)

According to the survey results 67.65 % of households with Internet access at home provide Internet connection via PC (TurkStat, 2005).

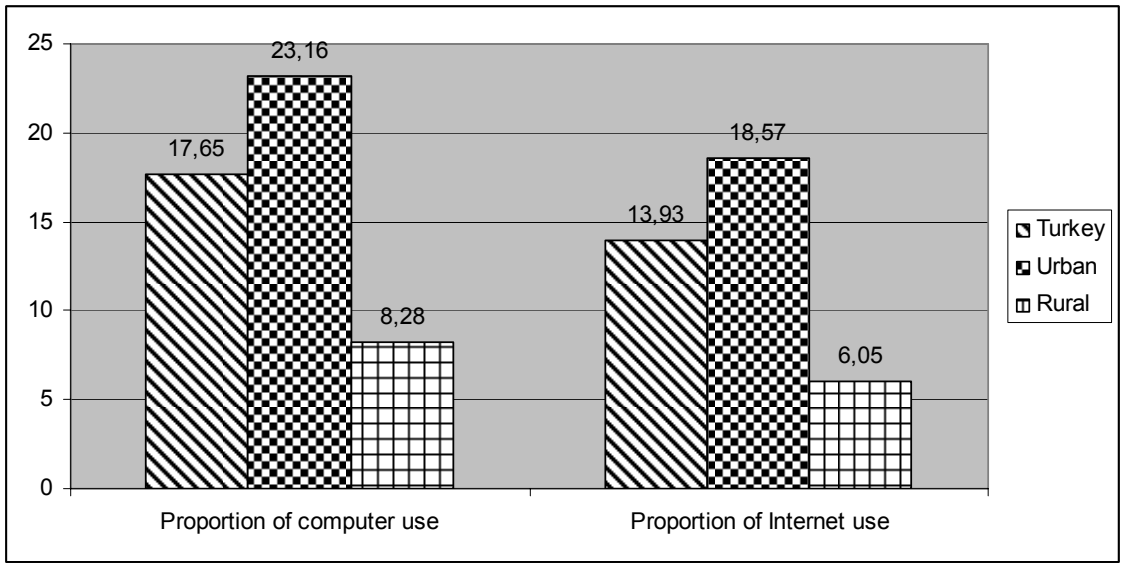


Figure 2.1. Proportion of Computer and Internet Use (%)

Source: TurkStat (2005)

The low figures of rural areas about both computer and the Internet diffusions (8,28 % and 6,05 % respectively), remind the danger of "digital divide" if not precise measures are taken in the near future. Actually, same low figures appeared with females who are reaching to Internet and are computer users.

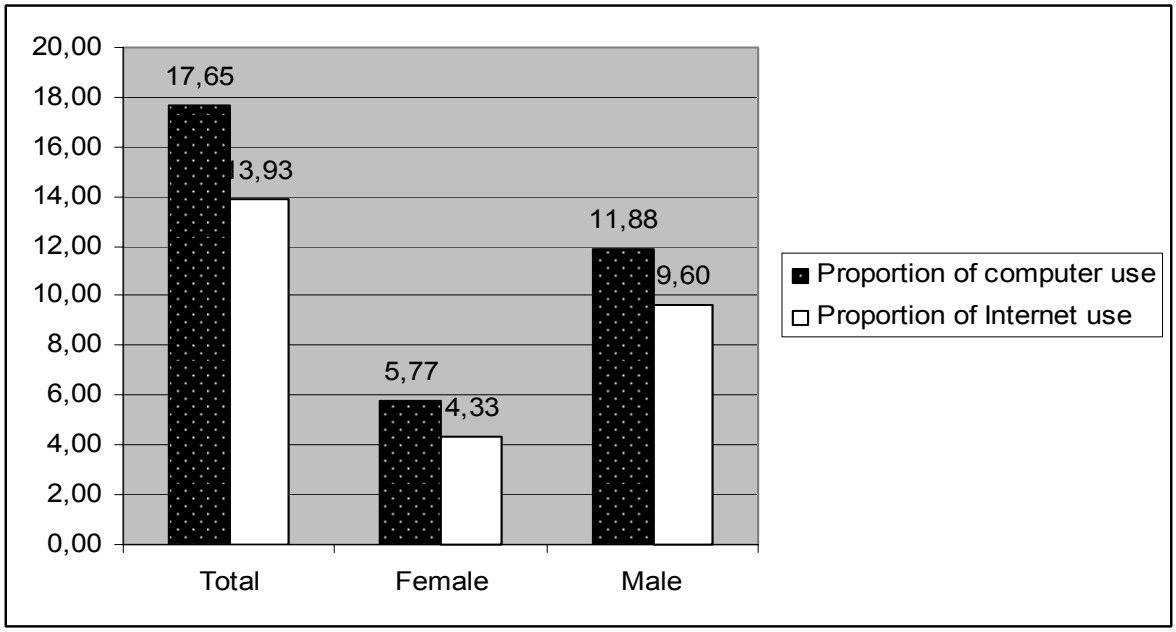


Figure 2.2. Proportion of Computer and Internet Use by Gender (%)
Source: TurkStat (2005)

2.2.2.2. Local Government

Research on local government, exist almost none, among the Turkish Academia. Nonetheless, as of the year 2005, for the first time, two individual research projects took place under the tutelage of TurkStat (2006a and 2006b): Municipal Web Services and Municipal City Information System Researches. Both researches supplied fruitful information within the framework of reflecting the recent status of local e-Government initiatives.

According to the results of Municipal Web Services Research (TurkStat, 2006a), among the 662 municipalities with population above 10000, 99 % have internet access and 82 % have intranet. 64 % of the above mentioned municipalities have web sites, while 24 % of the ones which do not have web sites are planning to have a web site in a year. The summary of the findings are given below (TurkStat, 2006a:1);

- Among the information on the web sites of the municipalities having web sites, the contact information and completed and ongoing jobs has the biggest share.
- Within the municipalities having web sites, mostly the municipalities having higher population in their localities update their web sites. The municipalities which do not update their web sites are found mostly in localities with the population group 10000-20000.
- The municipalities having web sites mostly use newspapers, magazines, billboards, and other web sites for the promotion of their web sites.
- These municipalities mostly face the problem of qualified staff, software costs, and permission for e-signature collection while providing web services.

Table 2.7. Possession of Internet, Intranet and Web Sites in Municipalities

Population Group	Num. of Municipality	Internet	%	Intranet	%	Web Site	%
10 000-20 000	271	268	98,9	198	73,1	118	43,5
20 001-50 000	184	183	99,5	157	85,3	125	67,9
50 001-100 000	84	84	100,0	74	88,1	64	76,2
100 001-250 000	60	60	100,0	56	93,3	56	93,3
250 001-500 000	39	39	100,0	38	97,4	37	94,9
500 000+	24	24	100,0	20	83,3	24	100,0
Total	**662**	**658**	**99,4**	**543**	**82,0**	**424**	**64,0**

Source: TurkStat (2006a)

TurkStat's (2006a) research findings were based only for the local government with populations above 10 000. Albeit the intensity of population is higher (87 %) among these groups and more, the number of the local governments below 10 000 tend to be higher this time (2.568). Underpinned once more by TurkStat's (2006a) research, bigger local authorities have almost 100 % Internet connection and website ownership. But it is important to see the numbers of the municipalities in the cluster of 10 000 – 20 000 before interpreting the results about the website and the Internet ownerships. That's why having a ratio of 98,9 % in this respect should not be underestimated.

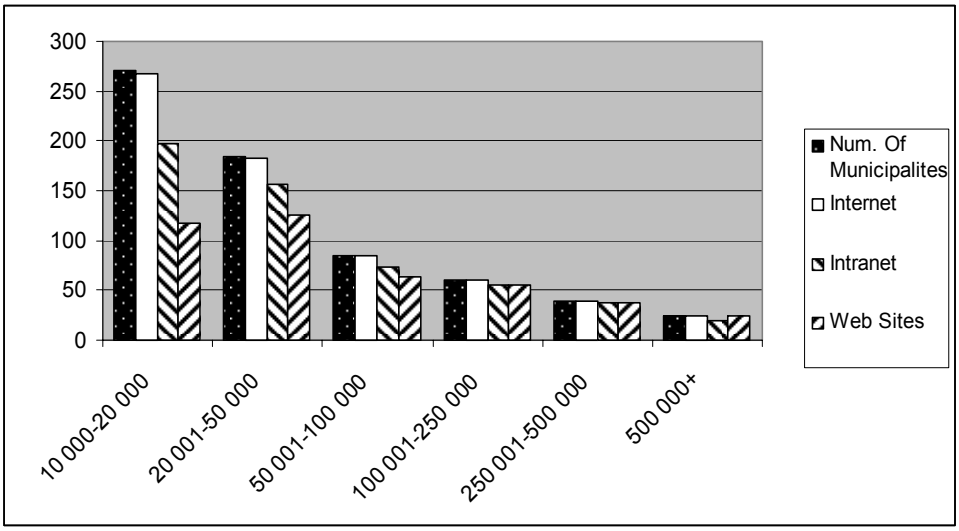


Figure 2.3. Possession of Internet, Intranet and Web Sites in Municipalities by Population Group

Source: TurkStat (2006a)

Table 2.8. Number of Data Processing Units and Staff in Municipalities by Population Groups

Population Group	Number of municipalities	Having data processing unit	Number of staff in data processing unit				
			1 - 5	6- 10	11-15	16-20	21+
10 000-20 000	271	52	52	-	-	-	-
20 001-50 000	184	96	95	1	-	-	-
50 001-100 000	84	61	59	1	1	-	-
100 001-250 000	60	55	48	7	-	-	-
250 001-500 000	39	37	25	7	4	-	1
500 000+	24	24	7	9	4	2	2
Total	**662**	**325**	**286**	**25**	**9**	**2**	**3**

Source: TurkStat (2006a)

The ownership of IT departments among the authorities also varies according to the size. Smaller authorities tend to have less IT units (19 %) than the big ones

(100%). Affirmed once more, bigger units tend to be employing more IT staff than the others. But bigger means heavy load on duty so it's quite normal to have more staff than the smaller ones in that sense.

Table 2.9. Number of Units Deciding on the Content of the Services Provided Through Web Site in Municipalities by Population Groups

Population Group	Number of municipalities having web sites	Number of units deciding on the content of the services provided through web site			
		Higher authorities	Data processing unit	The unit responsible for web decisions	Other
10 000-20 000	118	91	14	6	7
20 001-50 000	125	80	31	7	7
50 001-100 000	64	38	16	6	4
100 001-250 000	56	32	14	4	6
250 001-500 000	37	16	8	3	10
500 000+	24	19	2	3	-
Total	**424**	**276**	**85**	**29**	**34**

Source: TurkStat (2006a)

What are meant with higher authorities are the leading officials that decide the contents of their websites. The ratio reaches to an average of 65 % of the municipalities owning websites. However, this situation is somewhat contradictory to e-Government's hype; bringing "tele-democracy" (Kinder, 2002) to its citizens. The expected contribution by all levels should not only be restricted by the decisions on

the content of the websites but also on the decisions of every level of the local administrations.

Table 2.10. Number of Units Designing Web Site in Municipalities by Population Groups

Population Group	Number of municipalities having web sites	Number of units designing web site			
		Data processing unit of municipality	Private sector	Staff of other units of the municipality	Other
10 000-20 000	118	17	67	28	6
20 001-50 000	125	44	58	18	5
50 001-100 000	64	27	25	7	5
100 001-250 000	56	21	27	7	1
250 001-500 000	37	20	14	1	2
500 000+	24	14	7	2	1
Total	**424**	**143**	**198**	**63**	**20**

Source: TurkStat (2006a)

Website design seems to be outsourced to the private sector (47 %), whereas the in-house development reached only to 34 %. In short and midterm, this may appear profitable, but in the longer term, it will cause some sort of dependency and greater problems. Bigger cities show an increasing propensity on in-house development thanks to sufficient personnel and equipment but smaller ones should find other way than full dependency.

Table 2.11. Number of Units Updating Web Site in Municipalities By Population Groups

Population Group	Number of municipalities having web sites	Number of units updating web site			
		Data processing unit of municipality	Private sector	Staff of other units of the municipality	Other
10 000-20 000	118	31	37	43	7
20 001-50 000	125	58	26	33	8
50 001-100 000	64	42	10	8	4
100 001-250 000	56	32	8	13	3
250 001-500 000	37	24	2	5	6
500 000+	24	15	2	4	3
Total	**424**	**202**	**85**	**106**	**31**

Source: TurkStat (2006a)

It can be concluded that the updates took place in-house mostly (73 %). Still, there are examples of private sector partnerships within this context. Unfortunately, this high ratio is not complemented by the frequency of updating process. Only 37 % of those cities update their sites on a daily basis. While 25 % updates weekly, 16 % modifies on a monthly basis (Table 2.13.).

Table 2.12. The Type and the Number of Services Provided Through Internet in Municipalities

Type of services	Information given	%	Application	%	Payment	%
Water	54	12,7	18	4,2	7	1,7
Natural Gas	1	0,2	2	0,5	-	0,0
Real Estate	107	25,2	16	3,8	22	5,2
Duties, taxes and levies	46	10,8	4	0,9	8	1,9
Other	39	9,2	3	0,7	4	0,9
Note: 90 of total 424 municipalities having web site do not provide any services above through Internet.						

Source: TurkStat (2006a)

According to table 2.12., among the 424 surveyed local governments, 334 declared different interactive service provisions on the net. The most frequently provided service is real estate, ranging from information to applications and to online payments. It is followed by water, duties, taxes and levies respectively. This is also coherent with the findings of this research. In spite of quality concerns stated by the interviewers while talking about the reasons for e-Government initiatives, the main cause seems to be somewhat economic than quality. 21 % of the municipalities remain as sole brochurewares online without providing any service provisions.

Table 2.13. The Frequency of Updating of Web Sites in Municipalities by Population Groups

Population Group	Daily	Weekly	Monthly	Once in three month	Once in six month	No update
10 000-20 000	17	23	22	14	15	27
20 001-50 000	34	38	24	13	6	10
50 001-100 000	22	24	12	1	2	3
100 001-250 000	33	11	6	1	1	4
250 001-500 000	30	5	1	1	-	-
500 000+	20	3	1	-	-	-
Total	**156**	**104**	**66**	**30**	**24**	**44**

Source: TurkStat (2006a)

Out of 424 municipalities with websites, only 156 (37%) stated to have been updating their websites on a daily basis. This cluster is followed by the authorities who update on a weekly (25%), monthly (16%), three-monthly (7%), and six-monthly (6%) schedules. The portion without any updates was found as 10%, should be considered as a high ratio. However, the research (TurkStat, 2006a) lacks by not giving any reasons behind this.

Table 2.14. Types of Promotion of Web Sites in Municipalities by Population Groups

Population Group	Advertisement in newspaper, magazine etc.	Advertisement on TV and radio	Billboards	Other web site	Other (Search engine)	No promotion
10 000-20 000	29	1	51	52	13	11
20 001-50 000	41	6	70	56	14	14
50 001-100 000	22	7	31	25	5	10
100 001-250 000	18	3	32	29	7	5
250 001-500 000	11	1	28	12	6	4
500 000+	7	1	17	10	4	-
Total	**128**	**19**	**229**	**184**	**49**	**44**

Source: TurkStat (2006a)

Table 2.14. shows interesting facts about the promotion channels preferred by the local authorities on e-Government. One of the most effective channels, the search engine usage for promotion tends to be low, compared to other alternatives. Billboards appear to be occupying all promotional activities among the Turkish local authorities. What is striking however is the smaller cities effective use of marketing media than the bigger ones. It is apparent that there is a problem with implementing promotional techniques among the local authorities.

Table 2.15. The Problems Faced in Municipalities while Providing Services through Web Sites

Problems	Number of Municipalities	%
Insufficiency on providing confidentiality of information	47	11,1
Slow Internet connections	89	21,0
Insufficiency of qualified web staff	221	52,1
High hardware costs (for upgrading etc)	98	23,1
High software costs (for upgrading etc)	119	28,1
The process of purchasing hardware and software being long and difficult (Tender process)	76	17,9
Permission for e-signature collection not being taken yet.	117	27,6
Other	17	4,0

Source: TurkStat (2006a)

With table 2.15. insufficiency of qualified web staff appears to be the dominant problem of the local governments. Afterwards it is followed by high software costs. This proves the importance of in-house software development as stated before. It is interesting to observe as the third obstacle the e-signature issue. Though the law on e-signatures was legislated before, the delay on related regulations and the long-lasting debate about this issue caused confusion in the public.

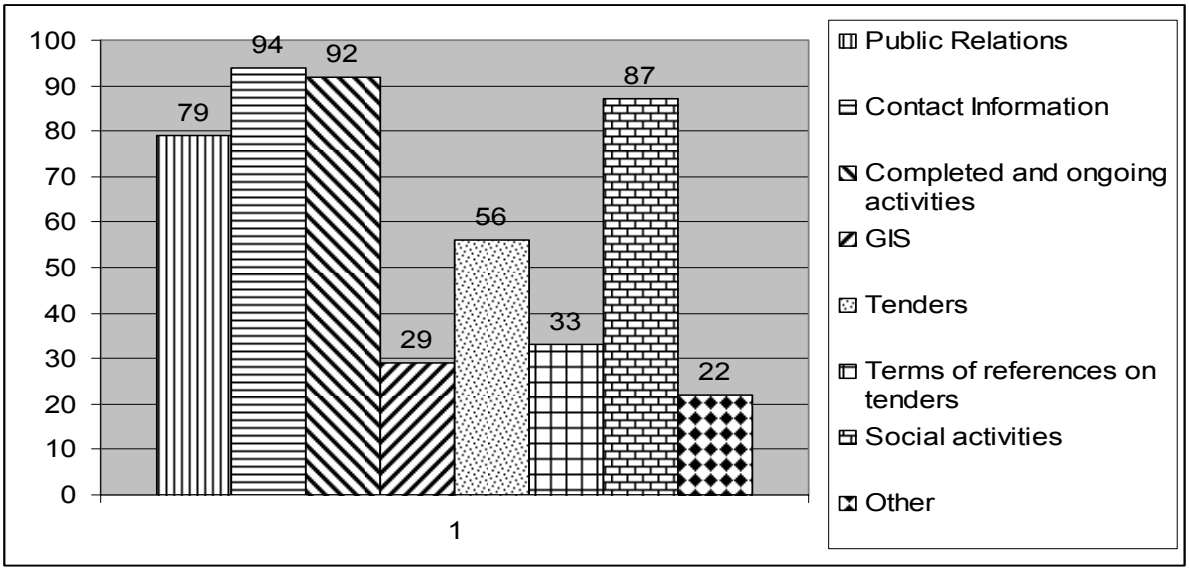


Figure 2.4. The Information Provided Through Web Sites in Municipalities (%)
Source: TurkStat (2006a)

On figure 2.4., the types of information provided by the Turkish local governments have been categorized. The first frequent two are contact information and information about completed as well as ongoing activities of the municipalities. These are respectively followed by information about social activities and activities focused on public relations.

The second research took place between May 2005 and August 2005. According to the data obtained from 3066 municipality of 3228 municipality (TurkStat, 2006b), 543 municipalities (18 %) have numerating units. 104 of municipalities with numerating units have been keeping up to date numerating information. But, only 17 of these municipalities have computer based numeric data.

In addition, 126 municipalities (4 %) have present City Information Systems (CIS) Study. Till the end of 2008, 194 municipalities will build CIS in their jurisdictions.

Table 2.16. Number of Local Governments Planning to Build CIS till 2008

CIS planning year	Number of Municipalities planning CIS
2006	148
2007	42
2008	4

Source: TurkStat (2006b)

Both of these studies were accomplished simultaneously while this research was on progress. The findings and results overall, somewhat complement each other. The importance however, of all the field researches still remains. Additionally, Güler's (2001) study on the computer and web diffusion among the Turkish local governments were obtained through YerelBilgi project. According to this study, which took place in 2001, computer diffusion reached to 69 %. 2100 municipalities had at least one computer installed in their jurisdictions. At the meantime, the web diffusion was stuck into 22 % among the ones having computers. Another significant finding was about the IT department ownership; 12 %. Her findings also evidence the clear danger of disparities among the regions. Marmara, the richest of all, has the highest ratios, whereas, southeast regions, lack both computer and Internet diffusions (See Table 2.17. below for the findings in the study).

Table 2.17. The Findings of the 2001 Study by Güler

	Computer Ownership		Internet Diffusion		IT Dep Ownership		Outsourcing		Automation	
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
Mediterranean	73%	27%	24%	76%	15%	85%	78%	22%	39%	61%
East Anatolia	53%	47%	18%	82%	15%	85%	53%	47%	28%	72%
Aegean	80%	20%	25%	75%	15%	85%	86%	14%	50%	50%
Southeast	43%	57%	13%	87%	21%	79%	42%	58%	21%	79%
Mid-Anatolia	61%	39%	20%	80%	15%	85%	64%	36%	41%	59%
Black sea	65%	35%	20%	80%	15%	85%	70%	30%	39%	61%
Marmara	90%	10%	26%	74%	31%	69%	91%	9%	54%	46%
TOTAL	**69%**	**31%**	**22%**	**78%**	**18%**	**82%**	**75%**	**25%**	**43%**	**57%**

Source: Güler (2001:7)

2.3. Recent Researches on Local E-Government

Faya (2001) divides e-Government literature into three basic schools of thought hardly referring to any implications on local aspects. First school ideologists allege that e-Government is the use of ICTs in public sector. Second school claims that e-Government is the realization of e-service aspect. The third and the last school of thought consider this new phenomenon as a "revolution" (Faya, 2001:5). A recent and vast review of e-Government literature, carried out by Löfstedt (2005), shows a map of current research in this field. He doesn't claim to be complete for various reasons, though, it provides a raw picture of e-Government research trend worldwide. By referring to various academicians and related studies he divides the map into five basic pillars; e-Democracy, e-Security, Management and Organization, Interactions, and intensively eServices. According to a recent study (Hammerman

and Puetz, 2004:6) on Michigan Local Government websites, the importance of e-service on Internet is stated through some important aspects like "broadening knowledge, improving efficiency and saving costs, strengthening service with additional and alternative channels, increasing access by providing services 7/24 basis, boosting civic participation, and deepening trust".

Another report commissioned by the Dutch Presidency of the European Public Administration Network (EUPAN), entitled "Does e-Government pay off?"(2004:9), identifies, again through similar point of view, seven types of interrelated benefits like improved quality of information and information supply, reduction of process time, reduction of administrative burdens, cost reduction, improved service level, increased efficiency, and increased customer satisfaction.

The benefits seem to be somewhat alike in every aspect particularly in improving the government-citizen relationship. This electronic context is may be one of the most important elements of the improvement of public services, "a topic repeatedly at the top of the domestic political agenda" (Better Connected, 2003:10). This report (Better Connected, 2003) highlights about the interactions between government and citizens that these interactions take place with local authorities and even estimates that these interactions are four times as many as with central government. They are founded on the principles of community of interest, access and accountability; it remains closest to the people, both in proximity and value. Same report continues its evaluations and points out that "as an emerging method of access, the local authority website is a core strategic tool for local government, not only offering a wide range of self-service options but also enabling a host of

intermediaries (e.g. front-line staff in contact centers and one stop shops) to serve the public better" (Better connected, 2003:7). However, opposite to these above mentioned benefits widely discussed in literature, implementation of local e-Government is supposed to be "the most diverse and complex change program ever taken by the local authorities" (Local e-Government Process Evaluation, 2003: 6). The change does not only affect the internal operations on the local level but also the way local authorities interact with citizens, local businesses, other public service providers and as well as national government.

According to Holden et al. (2002:2) "the contemporary literature on local e-Government, including both surveys and case studies, can be characterized as being both recent and scant". Kinder (2002) surveys "tele-democracy" (the term he uses for e-Government) in 31 European cities covering 14 states and shows that progressive city administrations in Europe are early adopters of tele-democracy with a diffusion rate of 72 %. He admits, however, that the selection of the cities that were examined displays a considerable bias: it was conducted on the basis of assumed best-practice. Moon (2002) looks into the rhetoric and reality of e-Government at the municipal level in the United States and concludes that e-Government has been adopted by many municipal governments, but remains at an early stage and has not yielded many of the expected outcomes that the rhetoric of e-Government has promised. Similarly, a recent report in the European regional context bestows by Business School Instituto de Empresa (IE, 2005) and Software AG, states out that the implementation of e-Government services by Spanish municipalities was "unordered and inefficient" as well as lacking in strategic manner. Assessing the level of e-service maturity among municipalities by 91 Spanish towns and cities above 75,000

dwellers, the report underlines only a small majority of these cities currently offer fully transactional e-services and e-democracy applications. Accordingly, the ranking of cities are made on their level of e-services implementation. In parallel with the same point of view another study from the University of Zaragoza, (Torres et al., 2004), indicates that the most of the European cities, among 12 EU Member States, are still providing non-interactive e-services and non-deliberative e-democracy facilities. The websites of 35 cities with the population more than 500,000 were analyzed between 2003 and 2004. The focus of the study is on measuring their e-services and e-democracy offering, as well as their degree of 'web maturity'.

Yıldız (1999) found in 1999 that there were only 30 websites of Turkish municipalities where almost all of them were brochure wares and no clues of interactions were detected. The only information related to the local area was based on the mayor's biography and his/her services. This point of view was similarly supported by Bensghir's (2000a, 2000b, 2000c) websites analysis of three metropolitan cities Istanbul, Ankara and Izmir one year later. Güler's study (2001), on the other hand, was to find out the computer diffusion of the Turkish local governments. In her study she explored the recent status of local e-Government initiatives among the e-Turkey efforts and complaint about the same problem of coordination. She underpinned two significant developments on the local agenda; YerelNet (LocalNetworks) and YerelBilgi (LocalInfo) projects. The research highlighted some striking figures provided by YerelBilgi. 69 % of the Turkish local governments had at least one computer. And among those computer owners, the Internet penetration was 22 %. The type of connection was only dial-up, during the time of the study, broadband services were scarce. Meanwhile a recent research

carried out by some Turkish scholars (Köylü et al., 2005) about e-Government maturity indexes highlighted insufficiency of standards among the Turkish governmental websites including the municipalities. Their scope of maturity indexes were only limited by the websites, the front-office services. Back office organizations were not included.

Griffin et al. (2004) presented the results of a two-phased exploratory study of the phenomenon of joined-up e-Government. The first phase investigates the extent to which local authority websites are becoming digital intermediaries in the supply of joined-up e-Government services. The second phase evaluates the challenges of joined-up e-Government from the local authority perspective. Norris (2003) examined the delivery of electronic democracy (or e-democracy) among U. S. local governments through their e-Government activities or offerings through focus groups with officials from 37 municipal and county governments. Petrauskas and Limba (2003) analyzed the quality of communication between citizens of Lithuania and local administrations by Internet. According to the research which was done for the first time in the country, 9 out of 60 local authorities didn't have internet websites. 64% of the 14 newly created local authorities' websites met less than a half of the information evaluation criteria. 14% of those websites met half of the information evaluation criteria. 21% of the websites satisfied over a half of the information evaluation criteria. In Shackleton et al.'s (2004) research, which examined the current status of Australian local government electronic service delivery, they explored the appropriateness of current e-Business maturity models for evaluating the progress local governments towards electronic service delivery. The research involved an evaluation of local government websites and a detailed case

study of one local council. The results indicate that apart from Web based information provision, little progress has been made in the transition to electronic service delivery in most areas of local government. Kim and Bretschneider (2004) started their research by providing a comprehensive definition of IT capacity, which incorporates both human aspect and non-human aspect of IT capacity. Next, they proposed a theoretical model to identify and knit together the crucial factors affecting the achievement of IT capacity in local governments. They found that the managerial capability of IT manager affected the level of IT capacity of a local government through the interactions with support from administrative authorities and financial supports available for IT innovation. A series of cases from New Jersey municipalities illustrated the proposed theory and enriched it by revealing the relationships between the factors not identified in the theory. Janssen and Wagenaar (2004), through their perspective of Information System Engineering, analyzed shared services concept in Dutch Local E-Government initiatives by investigating the motives and management issues determining its successful implementation. Davis and Williams (2003) argues dynamics of the relationship between innovations in ICTs within local government and the modernization of local government. Furthermore, they present an analysis of the electronic government strategies of 22 Welsh unitary authorities and use this analysis for highlighting a number of issues relating to the progress of the electronic local government agenda within the UK. Van der Meer and Van Winden (2003) evaluated the issue through the analyses the way European urban policymakers guide their cities into the Information Age and the change lead by the ICTs in the local level e-governance. Their findings suggested that indeed ICTs are changing cities but these changes occur differently in each city where size or population has no significance at all. Norris and Demeter (1999), on

the other hand, explored computer and web adoption, and their findings indicated that the adoption rate was directly related to city size; although variables like region of the country, form of government, and metropolitan status may play a role in this context. These findings are highly consistent with findings from other studies about the adoption of IT by local governments like Norris and Campillo (2003); Kaylor et al. (2001); West (2000 and 2001). Though only KEeLAN (2002:4) study proposed opposite view about the same issue and found out that "there is no correlation between size of local authority and level of maturity of web-based service delivery: bigger does not automatically mean better."

Scholars like Koh and Prybutok (2002:1) studied local e-Government through a "theoretical foundation for assessing the readiness of a government organization to transform itself to a provider of fully integrated e-Government services". Their focus is on the progress of complexity towards one-shop portal rather than the size and population. Meantime, Shackleton et al. (2004) reveal in their recent study that the maturity of local government websites differ great in variety than their counterparts in national level due to low access to the same level of resources. The complexity of web based services differs among the municipal level as well because of the same concerns. Although most of them lack transactional stages of e-Government, they are able to exploit the potential of the web to enhance the democratic qualities often promised by the common literature. Similar point of view can be seen in the study of Kim and Bretschneider (2004). They somehow contradict the previous findings in literature and found that the size or population is not seen as predominant factors of e-Government maturity but rather the interaction between the municipality and state government along with IT adaptation and other variables.

Being a service provider, a regulator, a strategic planner and an advocate for the local community are among the most significant roles of local government (Griffin and Halpin, 2004). When local e-Government is considered, among those "being a service provider" concept protrudes the most because of its nature. It is may be the most controversial point through the Turkish New Public Management literature and the recent debate on local government reforms. Governments are struggling in the face of cutbacks, declining revenues, and amidst taxpayer revolts. Efficiency, effectiveness, and equity are at the forefront of discussions about local government management.

2.4. E-Government Assessment Methodologies

Assessment is vital to discovering the current state of e-Government development, working out the extent to which objectives within various strategies and action plans have been reached, ascertaining strengths and weaknesses, shaping new guidelines, looking for examples of best practice and finally comparing different e-Government organizations at the national and international levels.

Owing to the very nature of rapid evolution in this field, and disagreements on core definitions (Löfstedt, 2005) (e.g. e-Government itself has a broader framework whereas e-services are one of its elements, etc) e-Government initiatives around the world are trying to develop structured assessment methodologies that will fit into the context of the countries where there are established. The confusion in the early stages of the e-Government research lost its fever and replaced by more attuned

and structured methodologies. The phases of this research were based on KEeLAN methodology as was told before. But to inspect the overall picture of the e-Government research map, phases are broken down into four dimensions, each of which are given with their locus of themes, the levels of coverage and the related references from the literature respectively (See Table 2.18.)

The reason of why KEeLAN was chosen for this study is particularly associated with e-Europe objectives about local and regional level. Both the e-Europe (2002) and e-Europe (2005) programs extend a ground for evaluation the progress towards information society, including local e-Government as one of the main and separate fields of interest. To monitor the progress in the regional level as well as in the national level, along with action plans, different lists of indicators were formulated. Although varied, officially, the CapGemini Ernst & Young (CGEY) approach (also in KEeLAN), which measures not only the e-Government availability but also the level of online development of 20 basic public services are used by the EU (Kunstelj and Vintar, 2004).

For 12 of these services, the citizens are the target group while the remaining 8 are targeting the businesses sector (ULB, 2003:6). In addition to these services, a five-stage framework (Also known as the stages of maturity) has been developed. KEeLAN (2002:8) formulated its approach from different models about the growth-curve of e-Government and stages of maturity (such as PWC* Consulting, the European Commission and CGEY). What lacks from the other researches in the EU context was criticized by Kunstelj and Vintar (2004). They compared the approaches

that assessed the e-Government progress in the Member States and argued the disadvantages merely due to the negligence of back-office issues (Kunstelj and Vintar 2004:137).

Meanwhile, management and organization topic relates to both front-offices as well as back-offices. Thus, it is included in the literature review paradigm.

KEeLAN's (2002) tool developed for assessing the website maturity and services is the only well-structured instrument for evaluating local e-Government agenda. Others screened various issues from secrecy to usability, and more but lacked to cover the EU dimension. Also they didn't include the front and back-offices at same framework of the extent of their assessments. Even the maturity of stages differs from two dimensional to six dimensional approaches.

Table 2.18. E-Government Assessment Methodologies in Literature

Themes of the assessment	Level of government	References
E-service delivery via the Internet: Digital Government Worldwide: An e-Government Assessment of Municipal Web Sites	Local	Melitski et al.(2005)
Evaluating Web-based e-Government services with a citizen-centric approach	Central	Wang et al.(2005)
Transforming local e-Government services: the use of application service providers	Local	Chen and Gant (2001)

* . Price Waterhouse Coopers (PWC)

Towards User-centred e-Government – Understanding Potential Demand for Online Public Services.	Local and Regional	Gareis (2004)
The utilization of e-Government services: citizen trust, innovation and acceptance factors	All Levels	Carter and Bélanger (2005)
E-Government: Hype and reality	All Levels	Kreizman (2002)
An analysis of a Shared Service Centre in E-Government	Local	Janssen and Wagenaar
A framework for managing the lifecycle of transactional e-Government services	Central	Vassilakis et al.(2003)
A secure e-Government platform architecture for small to medium sized public organizations	Local	Kaliontzoglou et al. (2004)
The website as an intermediary in service provision	Local	Griffin and Halpin (2002)
Website content, management and website style design	Local	Criado and Ramilo (2003)
Evaluation of the integration of IT strategy and use of Internet technologies	Local	Phythian and Taylor (2001)
Evaluation of implementation strategies	Central	Beynon-Davies and Williams (2003)
The Next Wave of E-Government: The Challenges of Data Architecture	Local	Kaylor (2005)
E-Government Web Quality Assessment: A Citizen-Centric Approach	Central	Wangpipatwong and Chutimaskul (2005)
Models and Metrics for Evaluating Local Electronic Government Systems and Services	Local	Carbo and Williams (2005)

KEeLAN-Key Elements for Electronic Local Authorities' Network	Local	KEeLAN (2003a)
Evaluating Global e-Government Sites: A View using Web Diagnostic Tools	Central	Choudrie et al. (2004)
E-governance Developments in EU Cities. Reshaping Government Relation to Citizens	Local	Torres et al. (2004)
Management and Organization: State of the art in e-Gov research – a survey	All Levels	Grönlund (2004)
E-Government evaluation: a framework and case study	Local	Gupta and Jana (2003)
Toward the Success of e-Government Initiatives: Mapping Known Success Factors to the Design of Practical Tools	All Levels	Ho and Pardo (2004)
Developing Fully Functional E-Government: A Four Stage Model	All Levels	Layne and Lee (2001)
Ethical problems for e-Government: An Evaluative Framework	All Levels	Mullen and Horner (2004)
E-Government, The digital divide and information sharing: Examining the Issues	All Levels	Riley (2004)
A European perspective towards online one-stop government: the eGOV project	All Levels	Wimmer (2002)
The Application of Methodologies in e-Government	Central	Eddowes (2004)
Using the New Institutional Economics in e-Government to deliver transformational change	Local	Ellis (2004)
E-development models (Stages or Phases): Four stages of e-Government maturity	All levels	Layne and Lee (2001)
Fifth stage added representing participative democracy	All levels	Moon (2002)
Evaluation of the barriers at each stage of growth	All levels	Moon (2002)
Assessing E-Government progress– why and what	All Levels	Jansen (2005)
KEeLAN-Key Elements for Electronic Local Authorities' Network	Local	KEeLAN (2002)

E-Government and e-democracy: A Comparison of Opportunities in the North and South	All Levels	Netcheava (2002)
E-Government Across the Globe: How Will 'e' Change Government	All Levels	Howard (2001)
Transformation Not Automation	All Levels	Chandler and Emanuels (2002)
What is e-Government?	All Levels	Silcock (2001)
Benchmarking E-Government: A Global Perspective	All Levels	United Nations – ASPA Report (2001)
E-Government from a User's Perspective	All Levels	APEC Paper (2004)
Evaluating the progress of e-Government development	All Levels	Kunstelj and Vintar (2004)
E-Government and the transformation of public administrations in EU countries; Beyond NPM or just a second wave of reforms?	Local	Torres et al. (2005)
Assessment of back-offices: Evaluating the progress of e-Government development	All Levels	Kunstelj and Vintar (2004)
E-Government Studies: Finland	Central	OECD (2003a)
KEeLAN-Key Elements for Electronic Local Authorities' Network	Local	KEeLAN (2002)
Methodology for Analyzing the Relationship Between the Reorganization of the Back Office and Better Electronic Public Services -European Good Practices (Back-office Reorganization	Central	Millard et al. (2004)

Adapted from Griffin and Halpin (2005), Löfstedt (2005), and Kunstelj and Vintar (2004)

(Some additional sources are added)

III. KEeLAN (KEY ELEMENTS FOR ELECTRONIC LOCAL AUTHORITIES' NETWORK)

KEeLAN is one of a broader corpus of research database on local agenda from e-Europe context. Along with others, it contributed to the overall objectives of the Information Society Technologies (IST) program and its four key action lines, especially key action line 1 "Systems and services to the citizen" and key action 2 "New methods of work and electronic commerce". The project, also addresses the action lines under IST support activities: IST 2001 - VIII.1.9 "Studies"; and VIII.1.8 "Dissemination and awareness of IST program results" (KEeLAN Proposal, 2001:7).

Overall, the study supports EU policies from a two dimensional perspective (KEeLAN Proposal, 2001:9-12):

- Community added value through introducing new ways of communication for local and regional governments, indicating fundamental change in the relation between government, citizens and business, overcoming the constraints for e-Government by the national level and building up benchmarking instruments to underpin best practices by learning from good and bad experiences, mistakes and successes of the others.

- Contribution to general EU policies by supporting e-Government and e-democracy, improving governmental services and sustainable development at local level.

3.1. KEeLAN under the European Union Information Society Programs

As was told before, KEeLAN is one of the many projects undertaken under the IST program through e-Europe research activities, also known as "Framework Programs". Mainly, these activities are collected by a five-year program, called as The Fifth Framework Program (FP5) which lays out the precedence for the EU's research agenda, covering a wide range of technological development and demonstration (RTD) activities for years between 1998-2002 (eEurope IST Program).

It is organized around four Key Actions (KAs) and five horizontal themes covering technological topics and objectives of strategic importance to Europe. KEeLAN directly contributes to KA1 and KA2 respectively. The objectives of these key actions are as follows (http://www.cordis.lu/ist/activit.htm):

1. Systems and Services for the Citizen (KA1)

"To meet the needs and expectations of European citizens for high quality and affordable services of general interest. RTD will be carried out in the fields of

health, persons with special needs (including the elderly and disabled), administrations, environment and transport."

2. New Methods of Work and Electronic Commerce (KA2)

"To enable both individuals and organizations to innovate and be more effective and efficient in their work and businesses, thus increasing their competitiveness while improving the quality of the individual's working life and consumer confidence. RTD will support the identification of new organizational paradigms made possible through the convergence of information and communications technology, provide technologies to enhance trust and confidence, and develop tools required by individuals and groups to operate in new organizational environments".

According the KEeLAN Proposal (2001:32-33), the overall project database that relates to KA1 is identified under two headings; e-Government and e-democracy. The projects are addressed as follows:

Heading 1: E-Government (KA1)

a. CENTURI 21 (Community empowerment network through universal regional integration for the 21st century) that promotes widespread use of electronic services by citizens, empowering them to directly deal with their regional authorities and with local commercial organizations, as well as assists regional authorities to deliver their services digitally and interactively to the citizens;

b. FASME (Facilitating Administrative Services for Mobile Europeans);

c. TRIDENT (Three dimensional restitution via internet of digital elevation networks in towns) to develop a system capable of integrating advanced technologies of aero-stereographic image acquisition, digital three-dimensional cartography restitution, databases and internet networking, in order to improve services provision to EU administrations and citizens;

d. IMPULSE featuring the virtual citizen guides, a system providing support to local governments on new services for the citizens;

e. AGORA 2000 - Innovative IST platforms &services to support a democratic regional/urban planning process;

f. EMPLOY (New Employment through innovative tools and services for EU structural funding management);

g. AIDA (Advanced interactive digital administrations);

h. EURO-CITI (European cities platform for on-line transaction services);

i .FORMIDABLE (Friendly Operational Risk Management through Interoperable Decision Aid based on Local Environment);

j. PRISMA, an accompanying measure on innovative service models and assessment;

k. MEDIS, an accompanying measure to develop European models for Digital Islands with an active role of local governments;

l. EDEN to create a multilingual intelligent agent for web searching engines of administrations;

m. E-MINDER to create centers of competence for regional digital economies in three major regions of Southern Europe;

n. PACE (Public Administration and Electronic Commerce in Europe);

Heading 2: E-Democracy (KA1)

a. CYBERVOTE (Innovative cybervoting for internet terminals and mobile);

b. E-POLL (Electronic Polling System for remote voting operations);

c. WEBOCRACY (Web technologies supporting direct participation in democratic decisions).

KA2 or Key Action Line 2, mainly consists of the following projects, this time, covering only one heading; e-Government. The titles of the related projects are given below (KEeLAN Proposal, 2001:33):

Heading 1: E-Government (KA2)

a. E-ntry (Electronic Tendering, Bidding and Negotiation Real-Time System);

b. Smart Cities (Multi-application smart cards in Cities);

c. DIGISEC (Digital Signature infrastructure for administrative simplification and e-commerce development);

d. Motion (Mobile Teamwork Infrastructure for Organizations Networking);

e. Kits (Knowledge and Information Transfer System);

f. Smart SME (Smart forms of collaboration among Internet-workers);

g. Energia (Extended network to Eastern Region involving Government);

h. Vision (Virtual Incubator System for the Initiation and Operation of Networks);

i. Bene-bus (benchmarking of E-business solution for Western & Eastern European SMEs);

3.2. Web-scanning of Front Offices on Internet to Determine the Stages of Local E-Government through the Context of e-Europe Basic Services in KEeLAN

Although it is going to be clarified in a detailed way on the coming chapter, KEeLAN's first phase is constituted by the selection of total 50 case studies out of 100 best-practice websites based on front-office performance of service delivery, by scanning 700 e-Government websites of Member States local authorities (KEeLAN Proposal, 2001). The 700 websites have been scanned with the help of a 'web-scanning tool developed by the KEeLAN consortium. This tool is comprised of a list of questions, which evaluates the level of service delivery for a predefined selection of services, all of which were identified as basic services by European Commission through the framework of e-Europe benchmarking purposes. Actually, these service provisions were 20 in total but in order to deal with a sufficient amount of public services 9 basic services were defined along with their sub-services and included into the tool (KEeLAN Proposal, 2001). See table 3.1. for the whole list of those services. 12 relates to citizens whereas, 8 is aimed at businesses.

Table 3.1. e-Europe's 20 Basic Services

CITIZENS:	• Income taxes • Job search • Social security benefits • Personal documents • Car registration • Application for building permission • Declaration to the police • Public libraries • Birth and marriage certificates • Enrolment in higher education • Announcement of moving • Health-related services
BUSINESSES:	• Social contribution for employees • Corporate tax • VAT • Registration of a new company • Submission of data to the statistical office • Custom declaration • Environment-related permits • Public procurement

Source: Top of the Web (2004:60)

The tool was constituted to compute the level of maturity of the local authorities in e-Government front-office implementations. The tool was divided into four important distinguishing clusters, each of which underpinned certain issues like "request and application, handling, help, and modality of appearance" for both each of the services and sub-services (KEeLAN Proposal, 2001:4):

For the total list of 9 basic services along with sub-services, see table 4.3. in the following chapter.

Based on best scores of standalone services on the Internet per Member State a group of 100 best practice websites have been located. The aim and the assumption was to determine maturity stages at levels 3 and 4, which completed or initiated their back-office reorganizations addressing the specific modality of implementation of a service of each Member State.

Furthermore, a cluster of 50 case studies were delimitated through "a further in-depth analysis of on-line service delivery as well as knowledge and expertise of the Project Partners of the current statues of the field of e-Government, out of 100 best-practice websites" (KEeLAN Proposal, 2001:4).

After the first phase was dispatched, KEeLAN consortium drew following conclusions on the quality of service delivery of the predefined selection of services of the related websites (KEeLAN Proposal, 2001:4-5):

- **"The scanned websites of the selected European Union local authorities offer on general mainly one-way interaction** (One-way electronic exchange of information enabled by stand-alone system not linked to the back-office. The website enables downloading of information and forms to apply for services, which can be submitted off-line) **or two-way interaction** (Two-way electronic exchange of information (communication) enabled by means of a website which is linked to the back-office. The website and organization of the back-office enable electronic processing of forms to apply for services).
- There is no correlation between size of local authority and level of maturity of web-based service delivery: **bigger does not automatically mean better**.

- The variation in level of maturity of web-based service delivery is high in **Italy, France and Belgium: there are big differences in the level of service delivery between the different local authorities for the scanned services**.
- The variation in level of maturity of web-based service delivery is low in **Sweden, Denmark and Luxemburg (low spread): there are small differences in the level of service delivery between the different local authorities for the scanned services"**.

The lay out the quality of the tool used in web scanning phase, the overall correlation between the estimation and computation of the levels of maturity for web-based service deliveries were calculated. The result showed 0,63, and the following conclusions concerning the quality was found (KEeLAN, 2002:5-6):

- "The **correlation between calculated** level of maturity of web-based service delivery **and estimated level of maturity of web-based service delivery is high**.
- The correlation is especially **high for the predefined services 'Economic Development', 'Personal Documents', 'Credits and Loans', 'Education', 'Building Permits' and 'Environment'**.
- The **correlation for the predefined services 'Usability', 'Information', certain sub-services of 'Culture and Leisure' and certain levels of 'Policy Making' (such as 'Opinion Finding' and 'Opinion Forming') is lower**, due to the fact that these kinds of service delivery in general do not require a high level of interactivity (up- and downloading of data, editing personal data in databases), which creates problems for the tool".

3.3. Key Elements of the EFQM Excellence Model for Benchmarking the Best-practices in KEeLAN

The back-office reorganizations of the local governments were going to be assessed by the Benchmarking Tool v1.1 developed by the KEeLAN consortium. This tool was designated to benchmark the organizational quality as well as the depth of change within the organizations. It was divided according to the 'enabling' criteria of the Excellence Model of the European Foundation for Quality Management (EFQM model) i.e. 1) Leadership, 2) Policy and Strategy, 3) People, 4) Partnerships and Resources, and 5) Processes, with 6) Regional Context added due to specific purposes of the research (KEeLAN, 2003a). What has been adapted was certain inspiration by various EFQM publications; in other words a series of e-Government related statements were consequently formulated aiming to capture both the enabling features as well as the achieved results. These five key elements were the core concepts of the whole assessing process not only evaluating the depth of the change but also the quality of local e-Governments.

3.3.1. Leadership

The literature has ample studies on e-Government highlighting all points to the role of leadership as a critical success factor (KEeLAN, 2003a; Caldow, 2001, NECCC, 2004; Mak, 2001; Al-tawil and Sait, 2002): commitment of the highest leaders, both in the management as well as in the political context is the skeleton key if a successful transformation to an e-Government enabled organization is to be achieved. The lack of leadership support will pave the way to failure at the beginning

(Heeks, 2001). Throughout the literature of e-Government, leadership qualifications can be categorized under certain headings like most important of all vision (vision development, implementation and integration), strategy (development and implementation), policies (political will, support, and commitment), change (change management, reengineering, business process change, and performance management), project management, ICTs (IT and ICT alignment), communications (vertical-horizontal communication and coordination), sustainable, culture, and risk management. A selection of literature references have been given below in the table 3.2.

Table 3.2. Key Elements "Leadership, Policy and Strategy" in E-Government with References

TOPICS RELATED TO E-GOVERNMENT ISSUE LEADERSHIP, POLICY AND STRATEGY
VISION: vision development/vision implementation/integrated vision
Leitner (2003); KEeLAN(2003a); Lau (2004); Performance Audit Report (2001); Choudri et al.(2005); Criado et al. (2003); ULB(2003); Faya(2001); APEC Paper (2004); OECD (2003b); Riley (2003); Caldow (2001); IDEA Knowledge (2005); Davis and Williams (2003); Prefontaine et al. (2000); Webocracy (2003); Heath (2000); Kolachalam (2002); NECCC (2004); Jutla et al. (2002); Scholl (2002); Parrado (2002); Navarra and Cornford (2003); Bonham and Seifert (2003); Sood (2002)
STRATEGY: **Strategy development/implementation**
Lau (2004); EIPA (2005); Choudri et al. (2005); Ebrahim and Irani (2005); ULB (2003); Riley (2003); Prefontaine et al. (2000); PEGS Report (2005); Webocracy (2003); Heath (2000); Kolachalam (2002); Furukawa (2004); Heeks (2001); Mak (2001); Turner and Desloges (2002); Schedler and Scharf (2001)
POLICIES: **Political will/ support/commitment**
Leitner (2003); EIPA (2005); Criado et al. (2003); Ebrahim and Irani (2005); Moon et al. (2005); Torres et al. (2005); Dunleavy and Margetts (2000);ULB (2003); Pavlichev (2004); APEC Paper (2004); Brack and Nobel (2001); OECD (2003b); Riley (2003); Caldow (2001); IDEA Knowledge (2005); Davis and Williams (2003); Mossberger et al. (2005); PEGS Report (2005); Webocracy (2003); Kolachalam (2002); Furukawa (2004); Heeks (2001); Mak (2001); Jutla et al. (2002); Parrado (2002); Turner and Desloges (2002)
CHANGE: **Change management/reengineering/business process change/performance management**
EIPA (2005); Ebrahim and Irani (2005); Dunleavy and Margetts (2000); ULB (2003); Pavlichev (2004); Faya (2001); APEC Paper (2004); OECD (2003b); Ellis (2004); DPM Report (2003);

Caldow (2001); IDEA Knowledge (2005); Prefontaine et al. (2000); Webocracy (2003); FY2004-FY2008 Report (2003); Heath (2000); NECCC (2004); Furukawa (2004); Scholl (2002); Turner and Desloges (2002); Navarra and Conford (2003); Janssen and Veenstra (2005)
PROJECTS: **Project management**
EIPA (2005); ULB (2003); APEC Paper (2004); DPM Report (2003); Prefontaine et al. (2000); Parrado (2002)
ICTs: **IT/ICT alignment**
Ebrahim and Irani (2005); Davison et al. (2005); Kim and Bretschneider (2004); Faya (2001); Kraemer and King (2003); Prefontaine et al. (2000); Turner and Desloges (2002); Phythian and Taylor (2001); Dunleavy et al. (2003); Kamal (2004); Karimi et al. (2001)
COMMUNICATIONS: **Vertical-horizontal communication and coordination**
EIPA (2005); Criado et al. (2003); Ebrahim and Irani (2005); Faya (2001); Ho (2002); Allen et al. (2000); APEC Paper (2004); Nguyen et al. (2003); Caldow (2001); IDEA Knowledge (2005); Macome and Macueve (2005); Webocracy (2001); Webocracy (2003); NECCC (2004); Heeks (2001); Turner and Desloges (2002)
SUSTAINED: **Sustainable**
Working Paper Beyond 2005 (2004); Basu (2004); Moon and Welsh (2004); Nguyen et al. (2003); Caldow (2001); FY2004-FY2008 Report (2003); Scholl (2002); APEC Report (2004)
CULTURE:
EIPA (2005); Ebrahim and Irani (2005); Pavlichev (2004); Nguyen et al. (2003); FY2004-FY2008 Report (2003); Heath (2000); Jutla et al. (2002)
RISK MANAGEMENT:
EIPA (2005); APEC Report (2004); Faya (2001); OECD (2003b); Davis and Williams (2003)

The overall responsibility of the leadership starts with the vision development, and focusing narrowly just on the online presence but not on an integrated vision comprising the alignment of ICTs along with the managerial, socio-economic, knowledge on target groups, cultural and political issues will cause intolerable consequences (KEeLAN, 2003a).

3.3.2. Policy and Strategy

Policy and strategy are merely administrative choices with respect to goals, missions, priorities and adaptation to the institutional environment. Employee

empowerment, communications channels, inter-organizational cooperation and services integration, and the allocation of resources across projects/programs and activities are all included in this category.

KEeLAN (2003a:37) describes vision in the local agenda as "the role and position of the municipality in the Information Society". In broader terms the new democratic paradigm shifts the total control from institutions to the citizens by voicing their wishes and needs into the whole vision process. The report (KEeLAN, 2003a) drew a general framework of the new emerging government types;

- Initiator
- Stimulator
- Sponsor
- Launching customer
- Intermediary
- Barrier remover
- Coordinator

While formulating strategies every stakeholder's contribution from the employees to citizens should be included in such a way that it must be clearly and explicitly stated. KEeLAN (2003a) deals with this issue on the basis of some certain issues like consulting target groups, use of external information (universities, other local e-Governments, benchmarking, etc.), feasibility and evaluation studies, piloting of projects, change management methodologies, externally as well as internally communication and promotion techniques. Table 3.2. comprises additional references from e-Government literature on this key element.

3.3.3. People (e-skills)

People are one of the most important key elements, not only in local e-Government paradigm, but also in every type of revolutionary shift. KEeLAN (2003a) manipulates this issue through human resources management, continuous training, rewarding individual initiatives, monitoring staff's opinion, and staff's support to e-Government. These issues are scanned throughout the e-Government literature in the table 3.3. Lack of qualified skills on IT is one of the most debated issue in literature and recent research. Thus, training for the new paradigm gains importance.

Table 3.3. Key Element "People" in E-Government with References

TOPICS RELATED TO E-GOVERNMENT ISSUE
PEOPLE
Human resources management
Turner and Desloges (2002); Jutla et al. (2002); infoDev (2002); EIPA (2005); Kim and Bretschneider (2004); ULB (2003); Millard (2004); Final Panel Report (2005); Vriens and Achtenbergh (2004); Borgonovi and Mele (2003); Millard et al. (2004); Riley (2003); Banerjee and Chau (2004); Webocracy (2002); Criado et al. (2003); Deloitte Report (2000); ASPA Report (2001); Riley (2002)
Training
Parrado (2002); Jutla et al. (2002); O'Connel (2003); Saidi and Yared (2003); infoDev (2002); EIPA (2005); Basu (2004); Kim and Bretschneider (2004); Millard (2004); Final Panel Report (2005); Vriens and Achtenbergh (2004); ULB (2003); Borgonovi and Mele (2003); Banerjee and Chau (2004); Webocracy (2002); Criado et al. (2003); Deloitte Report (2000); ASPA Report (2001); Riley (2002)
Rewarding individual initiatives
IDEA Knowledge (2005); Accenture (2004); Roadmap for Egovernment (2002); OECD (2003b); Riley (2004)
Staff input/opinion/innovations
Kim and Bretschneider (2004); ULB (2003); Millard et al. (2004); Criado et al. (2003); Mak (2001); PremNote (2005); NECCC (2001)
Staff support
EIPA (2005); Basu (2004); Borgonovi and Mele (2003); Millard et al. (2004); Criado et al. (2003); Heeks (2001); Mak (2001); ASPA Report (2001); PremNote (2005); NECCC (2001); Scholl (2002)

3.3.4. Partnership and Resources

Due to its very nature of networking, e-Government is a complex set of inter-government partnerships as well as public-private partnerships. Even some researchers go farther so as to claim that the most suitable environment for e-Government is the partnership-based settings (Jutla et al., 2002). The type of partnership depends on the interoperability of the relationships throughout the all levels. With the term inter-governmental partnership, it is meant both horizontal and vertical collaborations between organizations at the same level of government and public administration or between different levels of government and public administration. These partnerships are vital so as to provide maximized efficiency, avoid duplication, and effective service delivery (Lau, 2004). Public-private partnerships are essential to raise funds in e-Government projects (Leitner, 2003; KEeLAN, 2003a). And what's more about this is to access skills and products, and to reduce risks (Lau, 2004). The monitoring and allocations of the scarce resources should be done constantly so as to accomplish efficient service-delivery. Janssen and Wagenaar (2004) and other papers discussed the cost-efficiency of shared service centers along with flexibility and functionality. What are meant with legal issues are privacy aspects, disclaimers, status of email and digital signatures (KEeLAN, 2003a; Millard et al., 2004). The use of standards provide governments the opportunities of interoperability in a cost-efficient and fast scaled way (KEeLAN, 2003a; Turner and Higgs, 2003; Working Paper beyond 2005, 2004; Millard et al., 2004). For a broader perspective on the related problems check out the table 3.4. below.

Table 3.4. Key Element "Partnership and Resources" in E-Government with References

TOPICS RELATED TO E-GOVERNMENT ISSUE PARTNERSHIP AND RESOURCES
Inter-governmental
KEeLAN (2003a); Leitner (2003); Lau (2004);Davison et al. (2005); Millard et al. (2004); APEC Paper (2004); Prefontaine et al. (2000); Millard (2002); Net Impact (2005); Riedl (2001)
Public-private
Leitner (2003); Lau (2004); KEeLAN (2003a); Kim and Bretschneider (2004); Ni and Bretschneider (2005); Millard et al. (2004); Working Paper Beyond 2005 (2004); Benamou (2004); Faya (2001); Brack and Nobel (2001); APEC Paper (2004); Prefontaine et al. (2000); Webocracy (2002); Dawes and Prefontaine (2003); Gant (2003)
Cost-benefit analysis
KEeLAN (2003a); Leitner (2003); Millard et al. (2004); APEC Paper (2004); Stowers (2004); Kertesz (2003); High Payoff (2003); Cresswell (2004); Audit Report (2004); FY2004-FY2008 Report (2003); Commonwealth of Kentucky (2001); Pardo et al. (2002); NECCC (2004); NetImpact (2004); Darche (2001)
Use of standards
KEeLAN (2003a); Turner and Higgs (2003); Working Paper: Beyond 2005 (2004); Millard et al. (2004); Commonwealth of Kentucky (2001)
Shared service centers
KEeLAN (2003a); Benamou (2004); Janssen and Wagenaar (2004); Janssen and Veenstra (2005); Corradini et al. (2005); Cresswell et al. (2005)
Legal issues
KEeLAN (2003a); Working Paper: Beyond 2005 (2004); Millard et al. (2004)

3.3.5. Processes

All government activities are comprised of a variety of different processes; internally as well as externally. Through processes get the organizations their business done so as to generate increasing value for both customers as well as other stakeholders (EFQM, 2001). Most often the very term of e-Government is misunderstood and simplified into electronic service delivery on the web. However the efficiency and effectiveness are gained through the reengineering of the existing processes. Digitalization of these reengineered processes creates the difference in e-

Government framework (Janssen and Veenstra, 2005; Millar et al., 2004; Borgonovi and Mele, 2003; infoDev, 2002). KEeLAN (2003a) handles processes issue under certain topics like project management, online proactive service delivery, e-procurement, outsourcing of operations, site usage monitoring, citizen participation / e-democracy, middlewares (front-back office integrations), customer relationship management, client communications and client support.

E-Government processes are built up by external and internal workflows (horizontal and vertical) on ICTs, and e-democracy (Palkovits et al., 2002). A basic scanning of the corresponding literature on this issue based upon topics has been given below in the table 3.5.

Table 3.5. Key Element "Processes" in E-Government with References

TOPICS RELATED TO E-GOVERNMENT ISSUE PROCESSES
Project management
KEeLAN (2003a);EIPA (2005); APEC Paper (2004); OECD (2003b); Borgonovi and Mele (2003); Prefontaine et al. (2000); Webocracy (2003); NECCC (2000); Mak (2001); Parrado (2002); Homburg and Bekkers (2002); Chidurala et al. (2001); Nevlud et al. (2002); Kudo (2004); Cresswell et al. (2005)
Online proactive service delivery
KEeLAN (2003a);Riedl (2001); Langford and Harrison (2001); Millard et al. (2004); Teicher et al. (2002); Kunstelj and Vintar (2004); APEC Paper (2004); Moon and Welch (2004); Timmers (2004); Stojanovic et al. (2006); ISC Report (2003); Flatley and Lazarides (2005); ResourceBook (2003); EIPA (2005); Antony (2001); Workshop Report (2004); Accenture (2004)
e-Procurement
KEeLAN (2003a);Riedl (2001); Kjeldgaard and Nielsen (2003); Zulfiqar et al. (2001); Artman and Markensten (2005); Somasundaram and Damsgaard (2005); Tonkin (2003); Wescott (2003); Lee et al. (2005); Gansler et al. (2003); DTI SBS Report (2005); 18. VN/INTOSAI SEMINAR South African Report (2005); OECD (2003b); e-GP Road Map (2002); Makarem-Saab (2006); Mukherjee (2001)
Outsourcing of operations
KEeLAN (2003a);Riedl (2001); Patumtaewapibal (2004); Chen and Perry (2003); Ebner (2004); Corradini et al. (2005); Choudrie et al. (2005); Zulfiqar et al. (2001); Griffin and Halpin (2002); Ni and Bretschneider (2005); Borgonovi and Mele (2003); ULB (2003); Dawes and Prefontaine (2003); Gant (2003); Hugunin Report (2004); Prefontaine et al. (2000); EuroCities (2004); Webocracy (2002); Gershon (2004); NECCC (2000); Hu et al. (2004)

Site usage monitoring
KEeLAN (2003a); AG Checklist (2004); Fariss and Love (2004); West (2004); Eddowes (2004); Hu et al. (2004); Siegel (2002); Merkuryeva et al. (2005)
Citizen participation/e-democracy
KEeLAN (2003a);Riedl (2001); West (2004); Siau and Long (2005); Choudrie et al. (2005); Basu (2004); Shackleton et al. (2004); Torres et al. (2005); Chadwick and May (2003); Jansen (2005); Norris (2003); Saxena (2005); Pavlichev (2004); Snider (2001); Xeniakis and Macintosh (2004); Macintosh (2004); Kraemer and King (2003); Brack and Nobel (2001); Riley (2001); Alexander and Grubbs (1998); Clarke (1994); Clift (2000); Hagen (1997); Wilson (1998); Okot-Uma (2001); Bort (2003); Loader and Keeble (2004); Caldow (2004); Kearns et al. (2002); Riley (2003); Kolachalam (2002); Komito (2005)
Middleware (front-back office integrations)
KEeLAN (2003a); Castellano et al. (2005); TiG/MTW (2003); Themistocleous et al. (2004); Gammeri et al. (2005); Janssen and Cresswell (2005); DIP Annual Report (2004); Drache (2001); OECD (2003b); Backus (2001); Bovaird (2002); Janssen and Veenstra (2005); Scholl (2002)
Customer relationship management/ Client communications and client support
KEeLAN (2003a); Langford and Harrison (2001); Ebrahim and Irani (2005); Davison et al. (2005); Kunstelj and Vintar (2004); Herron (2003); Sood (2001); ULB (2003); Themistocleous et al. (2004); Hewson Report Ex.Sum. (2002); APEC Paper (2004); Villaplana (2003); Wagner et al. (2003); CRM Gap (2003); Schellong (2005); Webocracy (2003); Schellong and Mans (2004); Richter et al. (2004); Local e-gov (2004); Deloitte Report (2000); Miranda (2000); Hernandez (2002); Shine (2002); CRM Accenture (2001); Xue et al. (2003); Karimi et al. (2001); CRM Guide (2002); NetImpact (2004); Dailey (2004)

3.3.6. Regional Context

The KEeLAN consortium added up this key element so as to cover the corresponding dimension on this aspect of local e-Governments. The aim of this key element is to find out whether "the local governments operate as part of present and/or future sustainable digital economy strategies, in order to produce appropriate models and roadmap for electronic government development at local level in Europe" (KEeLAN Proposal, 2001:4). This section covers the distinction two-folded (KEeLAN, 2003ab:7):

- " The articulation between the regional, national and municipal levels and their efforts to stimulate developments and involvement of private sector partners.
- The impact of the EU regional policy instruments on the development of the local/regional governments' strategy."

The project report (KEeLAN, 2003ab) enunciates the collaboration between various levels of authorities in the Member Countries as one of the success factors in local e-Government issue. That's why it adjudicated the type of relationships or partnerships exists on both local and regional level in the conception, initiation and implementation of e-Government and innovation policies.

Traditions of administrations vary considerably among the Member States: KEeLAN (2003b) distinguishes the governments into certain categories under which Germany and Scandinavian countries represents decentralized systems; whereas Spain constitutes different levels of central government examples, autonomously independence for domestic purposes; and Italy, recently experiencing decentralization while in countries such as France, the focus is respectively central.

Through online benchmarking and in-depth interviews by site visiting, under the process of e-Government initiatives, either towards upstream or downstream, the collaboration did not exist or hardly exist. The project (KEeLAN 2003ab) could cover only a group of 28 municipalities so as to draw 8 distinguishing good-practice models. Those models are given below, in the table 3.6., according to their typology and the origin of the source:

Table 3.6. KEeLAN Best Practice Models and their Typology of Sources and Origins

Model Name / Characteristic	Typology of source(s)	Origin
Partner network based comprehensive e-service delivery	1 mid-size, distributed authority 1 small, distributed authority	Northern EU
Shared back-offices by multiple authorities	1 small, distributed authority	Northern EU

Multiple service access points	1 mid-size, distributed authority	Western EU
Complete e-integration of back- and front-offices	2 large, compact authorities	Western EU
Uniform architecture for e-service delivery	2 large, compact authorities	Central EU
Combining the internal and external perspectives of e-Government	2 large, compact authorities	Central EU
Single back-office for multiple access channels	1 large, compact authority	Southern EU
Outsourcing of ICT and e-service delivery	2 large, compact authorities	Southern EU

Source: KEeLAN (2003a:8)

A general perspective of the related literature on regional context has been given in the 2nd chapter of this research concluding not only the theoretical but also the empirical dimension of this issue.

IV. RESEARCH METHODOLOGY

The flowchart of the research given below started with identifying the local authorities' websites through the help of some websites provided on Internet

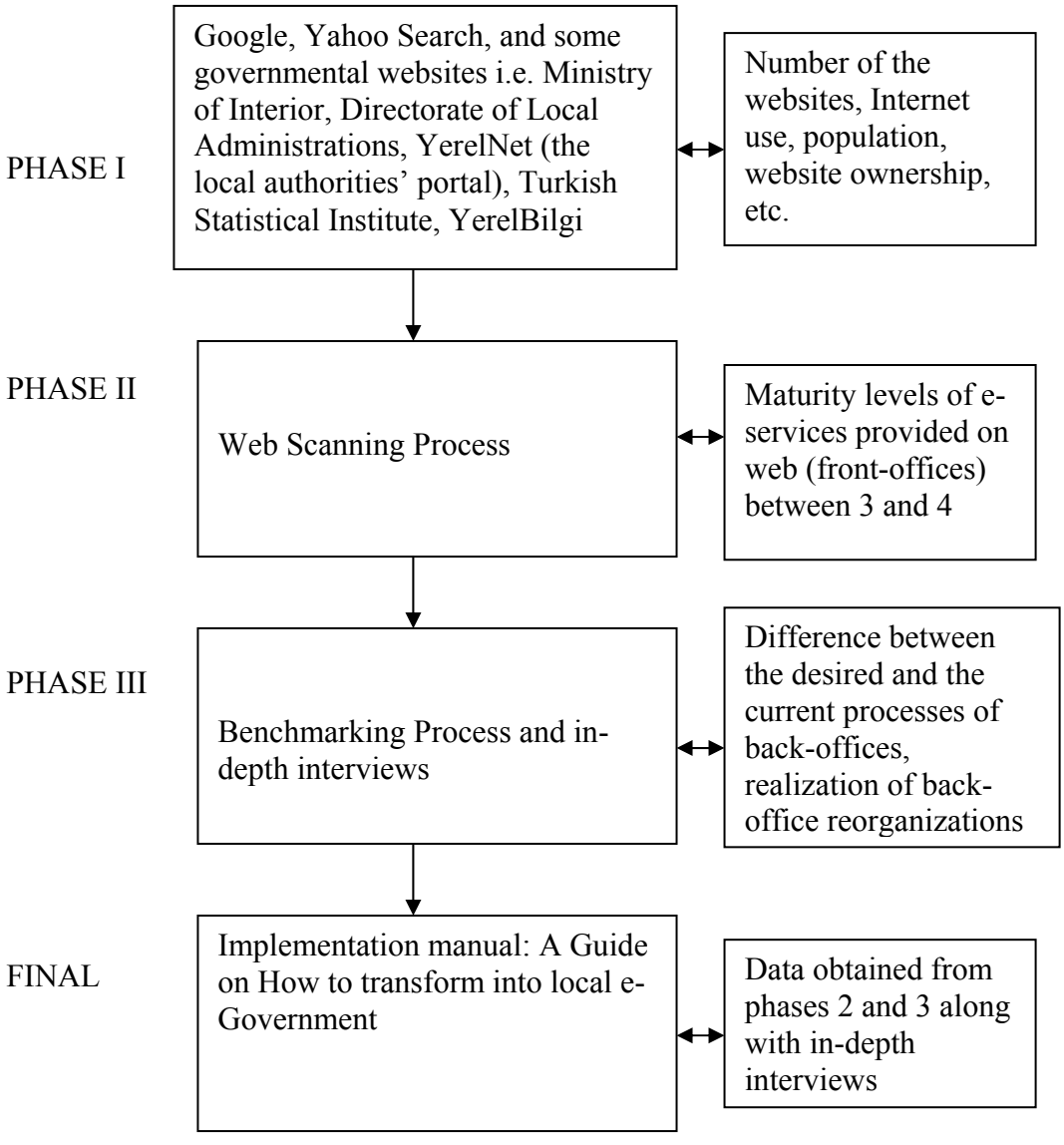


Figure 4.1. The Flow Chart of the Research

4.1. Purpose of the Research

This study is an extension of and a contribution to the KEeLAN project. Although in national level and likewise in European context by implementation of the e-Europe 2005 Action Plan, e-Government is one of the main concerns of the "Information Society" program of Turkey. But somehow relevant issues to support and reinforce the role of municipalities, provinces and regions in the implementation of the e-Europe 2005 Action Plan has been often neglected. Lack of coordination and cooperation among the actors both horizontally as well as vertically, duplication of individual efforts, lack of qualified personnel, islands of automation in the regional context and some more obstacles are playing a great role in the local level of e-Government initiatives of Turkey. Likewise, the academic extension also lacks in this prospect and scant examples of papers rather theoretical do exist in the same field. Even in the process of the research, related authorities were asked whether cooperation exists with academia, none came up with a positive answer respectively. Thus, to fulfill this space in the academic world as well as to support the local administrations on their way to transform themselves into e-administrations, this research is unique in that sense. In the age of "globalization and localization" (Finger and Pécaud, 2003:6) KEeLAN and similar projects will pave ways to become alternative channels of improving the local government and democratic mechanism in our country.

The objectives of this research are threefold:

The first phase comprises the recent situation of the Turkish local authorities on e-Government. The basic research of this phase is organized under the topics given below;

- Distribution of municipalities by their legal status,
- Number of Local Administrations in Turkey,
- The Current Status of Turkish Local e-Governments by Population Group, Internet Access, Website Ownership, IT Department Ownership, and E-services,
- Progress of the Turkish Local e-Governments between years 2001-2006,
- Change of Internet Access from 2001- 2006,
- Change of IT Department Ownership from 2001- 2006,
- Internet Access Types of the Turkish Local Governments
- The Current Status of Turkish Local e-Governments by Political Backgrounds
- Internet Access Types of the Turkish Local Governments by Political Parties

The second phase is based on the performance of the service delivery on the web (front-office) under the context of 9 basic services agreed by e-Europe. Consequently, 20 best practice cases are determined by their service maturity at levels 3 and 4 for further benchmarking process.

The third and the last phase covers the degree of change in their back office organizations of these local authorities through EFQM (European Foundation for Quality Management the Excellence Model) based Key Elements.

Meanwhile, the findings are benchmarked against the Member Countries' results to set up a ground and performance for the Turkish authorities.

Some minor though equally important contributions were made into the literature. Through the study we'll like to:

- Communicate the results and findings to the related audience.
- Raise awareness in Turkish regional and local public administrations with regard to administrative change or renewal through the use of ICTs and the adoption of new models and roadmaps for integrated local governments.
- Identify other Turkish initiatives with a stake in the development of integrated e-Government throughout Europe and establish new channels of communication and collaboration with them.
- Build some common bench learning methodologies at Turkish level to improve web front offices and modernize the public administration.
- To fulfill the gap of research on local administrations because all the research dissemination is based on central governments or on agency levels.
- Consider how local government is responding to the new culture of e-governance by examining how it is meeting both public and government demands.

In the end, we are going to form up an "**implementation model**" derived either from the prior researches in the literature or from our interactions with the local administrations by organizing our findings in a lucrative way.

The tools and different methodologies used in this research are disseminated on KEeLAN website for the ones who determine to make similar research in the same fields. This research is unique in the sense that a similar project has not been carried out so far. We expect this will open up a wide range of opportunities for the Turkish local governments to see their standpoints against their counterparts in Europe and to provide them the best-practice cases to exploit the time they had already lost. By avoiding the errors of the others and the handicaps committed, they will accelerate and close the gap.

4.2. Limitations

During the research process to obtain secondary data and probes to acquire any sources related to this field became a demanding task. Even cooperation with the local authorities turned out to be a dead end sometimes due to reluctant and over-loaded leaders. The academic researches and papers published by the Turkish scholars were scarce limited in 5 – 6 in amount. Therefore, most of the secondary data is based on evidences collected from different sources in the world. The sources related to Turkish local authorities are scarce and diverted into various branches of government. Directorate of Local Administrations' website from Ministry of Interior along with YerelBilgi and TurkStat were very useful to gather important data about Turkish Local Administrations. To sum up, basic limitations in this study are as follows:

- Due to time constrain and overload, the tools used in the study were filled by different authorities from different levels of hierarchy.

- The comparisons with Member States, unfortunately, do not reflect the current situations of those countries because the KEeLAN project took place in 2003. Thus, only the data supplied from that time period has been used for the benchmarking of the Turkish Local Authorities.

4.3. Sampling, Data Collection and Assessment Tools

4.3.1. Sampling and Data Collection of Phase 1

The initial step of the whole research started with collecting basic statistical data and information through scattered resources from different institutions and Internet. The basic resources are as follows:

a. Directorate of Local Administrations website (www.mahalli-idareler.gov.tr)
b. YerelBilgi (LocalInfo) website (www.yerelbilgi.gov.tr)
c. TurkStat (Turkish Statistical Institution) website (www.tuik.gov.tr)
d. YerelNet (Local Net) website (www.yerelnet.org.tr)
e. Google, yahoo search engines.

Lack of a coordination entity of local units in general was the main obstacle during the demanding task of collecting data. Even the same data was kept differently among these resources like the numbers of municipalities. There were different numbers ranging from 3215 to 3228. After painstaking procedures and endless e-mail/phone exchanges it was decided to use the sampling number of 3228 supplied by TurkStat. According to Tuncer and Kasapbaş (2000) the distribution of

the Turkish municipalities by their status are given in the below table. However, his data about the number of these municipalities were also different than the others. So, although it was adapted, some minor corrections were made accordingly to reach the exact number of 3228.

Table 4.1. Distribution of Municipalities by their Status

Distribution of Municipalities by their Status	
Metropolitan	16
Metropolitan District	58
Metropolitan Lower-tier	31
Provincial centers	65
Districts	792
Counties	2266
TOTAL	3228

Source: Tuncer and Kasapbaş (2000). Revised through recent TurkStat data.

It should be kept in mind that the selections of local administrations were only limited by municipal entities. The other local government bodies are not taken into consideration because through the view of efficiency, subsidiary and some other additional factors not only did villages become over pacified; the SPAs as well lost their entity of locality and became the extensions of central governments (Aydemir, 2003).

Totally, there are 39634 units of local governments in Turkish Republic out of which 3228 are the municipalities and form the base sampling framework of this

study. The table below highlights the distribution of these local administrations according to their entities.

Table 4.2. Number of Local Administrations in Turkey

81	SPAs
3228	Municipalities
35232	Villages
1079	Local Administration Unions
14	Municipal Associations
39634	TOTAL

Adapted from YerelBilgi, YerelNet, Directorate of Local Administrations, and different sources

The Internet connections and types of connections of the municipalities are disseminated on YerelBilgi's website. Though started by goodwill, it really requires a lot of effort and time to collect this information. Even quick psychomotor skills should interfere through the search on the website. It took just one month and 5-6 hours of demanding and patient time each day to gather the related information and not all the local administrations had filled the data which they have been asked for. So, in that case, search engines or if possible, the website of the local entity, were searched to reach the data.

4.3.2. Sampling and Data Collection of Phase 2

After determining the basic sampling framework, phase 2 were commenced. But at first the web-scanning tool was studied thoroughly so as to avoid any errors and to find out if any corrections were required accordingly. Although there were

969 websites, only the ones who offer e-service provisions (104) were taken as samples to overcome the time limitation and to accelerate the pace.

The analysis of the front-office was performed by means of a web-scan check list, while screening and assessing the back-office (database accessible from the Internet and level of integration), the middle office (networking with other administrations, civic and community networks, presentation and management of the territory through Geographic Information Systems-GIS), as well as the European and global office (links with the rest of the world, trans-national projects and international networks etc.) The adoption of e-Government to support service delivery influences the organization of governments (Zulfiqar et al., 2001; Millard and Iverson, 2004; KEeLAN, 2002). The application of e-Government involves more than the implementation of ICT technology; it concerns the reorganization of structures and workflows of the governments (KEeLAN, 2002). The answers to the questions which make up the web-scan tool provide insight of the level of interactivity of the website in supporting service delivery. More importantly, they provide insight of the level of maturity of e-Government of the local authority. That's why 20 of the most productive local authorities on maturity levels 3 and 4 (the most sophisticated levels requiring reorganization of structures and workflows) have been selected for further benchmarking. The web-scan tool provided by the KEeLAN authorities is based on the 20 basic public services identified by the European Commission for the e-Europe benchmark; however, few are delivered in all European countries by local authorities because in some areas they are delivered either by central governments or by the subsidiaries of central governments in local level. So, to avoid the possibility of partial web-scan results and limited insights in

related best-practices, **nine basic** public services (Table 4.3.), have been defined and included in the web-scan tool by KEeLAN consortium (KEeLAN, 2002:12). Moreover, the researcher of this paper adapted sources in the appendices section to supply some basic checklist required by the local authorities during their process of e-Government transformation. Of these nine services, at least four will be relevant public services offered by any local government in Europe including Turkey. Furthermore, the basic public services were divided into sub-services. (See the table below). If a single sub-service is included in the website, the corresponding service can be stated to be covered by the website of the local authority. The services and sub-services are identified and defined so as to evade any overlapping in service delivery (KEeLAN, 2002:12).

Table 4.3. The Basic Services which the Web-Scan Tool is based on.

1. policy making The service on 'policy making' involves the degree in which stakeholders are involved in the decision making process by the local authority / council, supported by the website.
2. economic development (for companies) This service on 'economic development' involves support for companies and consists of the following sub-services: ▪ finding employees ▪ finding buildings / properties ▪ finding companies in the area ▪ finding and applying for grants ▪ submitting/querying* tax declaration ▪ online payment*

3. personal documents

This service on 'personal documents' involves application for documents / life-events and consists of the following sub-services:

- requesting passport
- requesting driver's license
- requesting ID card
- requesting/ querying * birth / marriage certificate

4. credits and loans; financial support (for citizens)

This service on 'credits and loans' involves financial support for citizens and consists of the following sub-services:

- applying for unemployment benefits
- applying for child allowance
- applying for student grants
- applying for financial support for medical costs
- submitting/querying* tax declaration
- online payment*

5. education

The service on 'education' involves support for students on enrolment and monitoring of results and consists of the following sub-services:

- enrolment in schools
- enrolment in university
- monitoring exam results

6. building permits

This service on 'building permits' involves support for companies and citizens in acquiring permits, and consists of the following sub-services:

- monitoring planning
- applying for building permission
- querying for cadastral planning*

7. environment The service on 'environment' involves support for companies and citizens in applying for permits and controlling their waste-management and consists of the following sub-services: ▪ applying for permits ▪ waste management ▪ pollution control
8. culture and leisure This service on 'culture and leisure' involves information for all stakeholders of the local authority on requesting and applying for this issue, and consists of the following sub-services: ▪ information on culture and leisure within the local authority ▪ access to/ querying* public library ▪ information on, and access to sports facilities
9. information The service 'information' involves (requesting) information on issues other than the defined services (like opening hours of town hall, important telephone numbers etc.), and submitting information.

Adapted from KEeLAN (2002) (* Additions by the researcher)

The questions slightly differ for each of these elements, but an important group is agglomerated by subject to state certain important distinguishing issues, and is repeated for each of the key-issues / sub-services (KEeLAN, 2002:4):

- **Request / Application**: covers level of interactivity of the website of the local authority by addressing issues related to uploading and downloading of information / application forms, availability of information and modalities of interaction, etc.

- **Handling**: covers response to external demand by addressing issues related to reply time and modality of reply to a request, accessibility of databases (editing and monitoring of data), etc.
- **Help**: covers level of interactivity and modalities of support.
- **Modality of appearance**: user-interface features of the website supporting service delivery.

The foundation of e-Government stages of maturity used in KEeLAN (2002) project was adopted from PWC Consulting, the European Commission and CGEY, comprised of six incremental stages where 5th is the highest level indicating degree of change to the organization of the local authority:

(i) e-Government as 'enabler'

This is the early stages of maturity; there is no requirement for redesigning services. According to KEeLAN (2002:9) research this stage covers three different generations:

- **Generation 0: not online**. No web presence of local authority through a proprietary website.
- **Generation 1: information**. Basic information is provided online on public services and relevant themes for interested parties / stakeholders, such as citizens, enterprises and visitors.
- **Generation 2: one-way interaction**. One-way electronic exchange of information (communication) enabled by stand-alone system not linked to the back-office. The website enables downloading of information and forms to apply for services, which can be submitted off-line (by ordinary mail or fax).

(ii) e-Government as 'transformer'

The following stages of maturity comprise redesign of the process of service delivery. The processes of e-Government are embedded into the authority's organization. Once again there are three stages (KEeLAN, 2002:9-10):

- **Generation 3: two-way interaction**. Two-way electronic exchange of information (communication) enabled by means of a website which is linked to the back-office. The website and the back-office organization enable electronic processing of forms to apply for services. Examples include:

  - electronic communication (sending e-mail and receiving electronic reply, participating in an on-line chat session / discussion forum);

  - on-line submitting of application forms for services and on-line access to personal data.

- **Generation 4: transaction**. Online service delivery enabled by means of a secured website which is linked to the back-office. The website and the back-office organization enable electronic case handling (decision and delivery, including payment) supported by authentication technologies. Examples include (on-line) access to database with the possibility to view and modify personal data and to monitor (track and trace) service delivery.

- **Generation 5: service integration**. Online service delivery enabled by means of a secured network linked to various back-offices / service modules. The website of the local authority enables on-line access and application of services of other organizations, including electronic case handling (decision and delivery, including payment) supported by authentication technologies. Examples include:

- (on-line) access to database of various other organizations, with the possibility to view and modify personal data and to monitor (track and trace) service delivery;

- access to centralized database of forms shared by different local authorities.

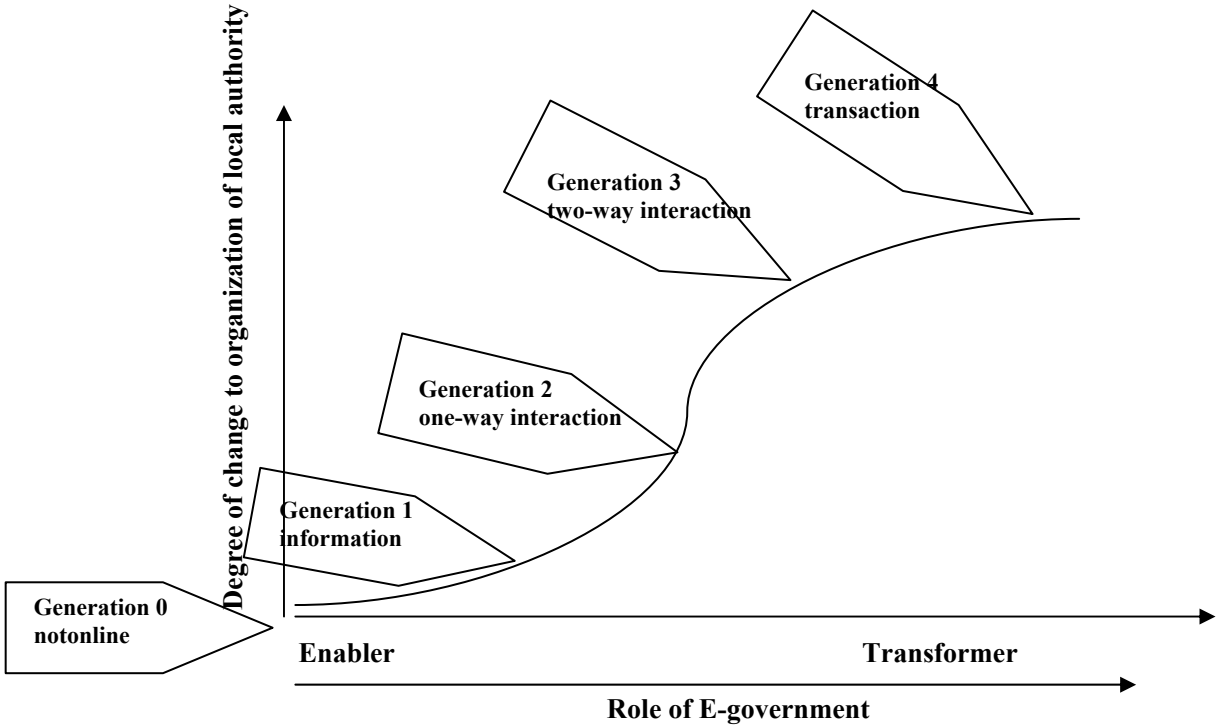


Figure 4.2. E-Government Growth Curve; Stages of Maturity
Adapted from KEeLAN (2002:10)

4.3.2.1. Computation of "Generation" and "Score" by the Web Scanning Tool

Although the stages of maturity are calculated automatically which corresponds to "generations" by the web-scan tool, it also calculates through the

answers a 'score' to distinguish the difference among the levels of quality of services within each generation (KEeLAN, 2002).

The methodology of the computation for generations and scores are based on some simple matrix calculations (KEeLAN, 2002:62). Among the multiple choices one answer should be picked up which corresponds to a certain *score(Table 4.4.)*. This *score* is multiplied with a **weight for generation** (different for each generation), resulting in a **score for generation**. The **weight for generation** differs between 0 (not relevant) and 5 (very relevant), depending on the importance of the question for a specific generation. The **sum** of all the **score for generations** is calculated for each different generation. If it exceeds the **threshold**; the website is of that **generation.** Meanwhile the related **sum** pinpoints the level of quality of service delivery for its generation. There might be more than one exceeding thresholds, than the highest generation will be taken. If no threshold is exceeded, the website is of **"Generation 1"**. The consortium provided this tool in excel format calculating automatically when the option boxes are checked by the correspondent. (Check http://www.keelan.ie for the web-scan tool)

The table on the next page describes the methodology in detail. Meanwhile in the example, the website of the local authority is of **"Generation 3"**.

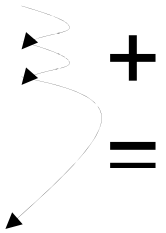
Table 4.4. The Methodology of Computation for Weights and Scores of Generations

Question	value				score
	0	*1*	*2*	*3*	
Information on local news, events, ongoing and upcoming projects is:	not available	available, updated each month or longer	available, updated each week	available, daily updated	2
Is it possible to receive personalized information/subscription service for stakeholders (dynamic information (requires log-in function):	no / not applicable			yes	3

question	weight for generation			
	1	*2*	*3*	*4*
Information on local news, events, ongoing and upcoming projects is:	3	4	2	1
Is it possible to receive personalized information/subscription service for stakeholders (dynamic information (requires log-in function):	0	0	0	5

weight for generation					score		score for generation			
1	*2*	*3*	*4*				*1*	*2*	*3*	*4*
3	4	2	1	X	2	=	6	8	4	2
0	0	0	5		3		0	0	0	15

	score for generation			
	1	*2*	*3*	*4*
	..	..	..	..
	..	..	..	..
	6	8	4	2
	0	0	0	15
	gen 1	gen 2	gen 3	gen 4
sum	48	39	37	57
threshold	0	34	35	60
max	51	78	69	84
min	0	0	0	0



Adapted from KEeLAN (2002:63)

4.3.2.2. Range of the Web-scanning Exercise

With the term "local governments" in this research, generally, it is meant municipalities. Of course, in Turkish administration system, municipalities are not the only institutions that exist as it was stated previously. There are Special Provincial Administrations and villages along with different unions of these local representatives. But through the view of efficiency, subsidiary and some other additional factors not only did villages become over pacified; the SPAs as well lost their entity of locality and became the extensions of central governments (Aydemir, 2003). Additionally, the websites of these institutions are rather rare and the ones with websites have nothing in peculiar. So, the scope of this research will be based on municipalities. All the terms used in this study like "local governments; local

authorities etc. will always refer to municipalities.

Out of 3228 local governments in Turkey, only 969 have a website (as of March 31). Within the framework of the research, to narrow the range and for the sake of interactivity, the ones that claim to offer e-service/e-municipality were subject to the scanning process so as to identify 20 best-practices on front-office service delivery.

A website of a local authority contains several pages, to be accessed by different internal and external links. It has been decided that the scanning will be limited to the following modalities of a website (KEeLAN, 2002:11):

- local authority's website (for example www.localauthority.xx) and all its internal links (such as for example www.department.localauthority.xx or www.localauthority.xx/ department/…)
- all external links (for example www.organisation.xx) if one of the statements underneath is applicable:
- the website is of an organization which is part of the local authority

  - the website is of an organization which is involved in service delivery which is part of the service delivery of the local authority (it is the 'legal obligation' of the local authority to provide that kind of service, the local authority 'owns' the service delivery process)
  - if the website is owned by the local authority

The information to decide if an external link should be scanned is deduced from the site itself or the disclaimer. In all other cases (of external links) different than mentioned above, the website is not scanned.

Before the start, a 15-minute preparation was given for each site so as to gain some acquaintance with the content. Then, roughly one or two hours were spent for the scanning exercise for every site. And on a daily basis, 2-3 websites were scanned. It was assumed not to exceed five minutes for each question in the tool. When nothing was found within five minutes, the answer was negative.

4.3.3. Sampling and Data Collection of Phase 3 by the Benchmarking Tool version 1.1.

The sampling size of the 20 best-practices was selected with most frequent occurrences between maturity levels 3 and 4 for each authority accordingly. This was to prevent the unexpected results experienced by KEeLAN authorities when they took only occurrences of one or two cases between maturity levels 3 or 4 for each municipality. Hence, following benchmarking process for those with only 1 or 2 cases between maturity levels 3 or 4 didn't prove much lucrative results about reorganizations of structures or workflows. They found this might be misleading.

The third task of the study involves the analysis of the organization behind the front-office of the 20 best-practices on front-office performance of service delivery by means of a benchmarking tool. It is assumed that (KEeLAN, 2002:9)

reorganization of structures and workflows are realized at the maturity levels of 3 and 4. An in-depth investigation on the issues like business model adopted, transformation of workflows, responsibilities and work processes and financial, legal, social and cultural considerations, has also been executed. The benchmarking tool v.1.1 is also provided by KEeLAN consortium and disseminated on their website for the further utilization of any researcher in the related field. This tool is comprised of key elements adapted from EFQM model rather than developing a new framework. First of all, the EFQM model represents a widely accepted way to describe the key elements of an organization in relation to **quality improvement as well as the degree of change**. What is more and of specific interest to the KEeLAN study, this model was actually tried in and proven applicable to the public sector of which the stakeholder community of local authorities makes part.

The benchmark tool was divided into 6 parts all of which excluding one, was inspired by the EFQM model 'enabling' criteria;

- Leadership,
- Policy and Strategy,
- People,
- Partnerships and Resources,
- Processes,
- Regional Context added by the KEeLAN consortium.

The specific points were reformulated by e-Government related statements aiming to capture both the enabling features as well as the achieved results. To allow a systematic comparison, the respondents were to score their perception of a) each

statement's the desired situation, as well as b) current situation. A 10-point scale from 0 (low/not at all) to 10 (high/very much so) was employed to record the answers. Thus, statements and scoring mechanism, taken together, function as indicators for assessment of an authority's organization in the e-Government context. The questionnaire was translated into Turkish. The Turkish version was checked by linguistic experts on comprehension level and some points were corrected accordingly. Then, through the help of some officials in local governments, I like to thank to Mr. Fatih TOGAY here because of his generous attitude to devote his precious time and effort, the Turkish version of the tool was test proven and additional corrections were completed. Mr. TOGAY is an EFQM inspector for local authorities in Turkey and as well as a high official in Kadıköy municipality. He is the director of Public Affairs and Public Health Division in the same district.

When the tool was ready, it was sent to these 20 local authorities by means of e-mail. But prior to and after the mails, related contacts were established in the same authorities. The feedbacks showed that due to some technical problems, the original tool prepared through excel macros proved to be useless and then it was decided to prepare the same tool on Internet as an html page (†).

(†). The benchmarking tool resided on http://eyerel-yonetimler.orgfree.com/ till the responses were taken.

4.4. Analysis and Findings

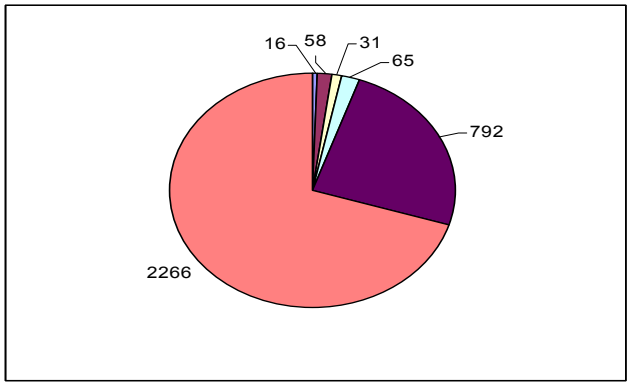
The analysis and findings of the research are divided as usual into three phases and although holistic in nature, each of the phases can be considered as unique to some degree.

4.4.1. Analysis and Findings of Phase 1

The secondary data related to local administrations of Turkey was collected and organized so as to make the data understandable and usable. But even this process took a year of painstaking work and patience. To give a broader picture of local governments in Turkey see the tables below. First table indicates the legal status of the main sampling frame as it was given earlier. The second one shows the types of local governments comprised of 39634 units in Turkey. Out of which only municipalities were taken as the main sampling size due to efficiency, subsidiary and some other additional factors not only did villages become over pacified; the SPAs as well lost their entity of locality and became the extensions of central governments (Aydemir, 2003). Additionally, the websites of these institutions are quite rare and the ones with websites have nothing in peculiar.

Table 4.5. and Figure 4.3. Distribution of Municipalities by their Legal Status

Distribution of Municipalities by their Status	
Metropolitan	16
Metropolitan District	58
Metropolitan Lower-tier	31
Provincial centers	65
Districts	792
Counties	2266
TOTAL	3228



Source: Tuncer and Kasapbaş (2000); Revised through recent TurkStat data

Table 4.6. Number of Local Administrations in Turkey

81	SPAs
3228	Municipalities
35232	Villages
1079	Local Administration Unions
14	Municipal Associations
39634	TOTAL

Adapted from YerelBilgi, YerelNet, Directorate of Local Administrations, and different sources

Table 4.7. The Current Status of Turkish Local e-Governments by Population Group, Internet Access, Website Ownership, IT Department Ownership, and E-services

Population Group	Municipalities	%	Population	%	Internet Access	%	Website Ownership	%	IT Dept Ownership	%	E-service	%
0 – 2000	354	10,97	594.619	1	251	70,90	30	8,47	10	2,82	1	0,28
2001 – 5000	1.656	51,30	5.141.683	7	1257	75,91	286	17,27	77	4,65	17	1,03
5001 – 10 000	558	17,29	3.772.290	5	441	79,03	172	30,82	44	7,89	7	1,25
10.001 – 20.000	274	8,49	3.768.825	5	237	86,50	144	52,55	47	17,15	9	3,28
20.001 – 50.000	181	5,61	5.712.281	8	164	90,61	147	81,22	80	44,20	17	9,39
50.001 – 100.000	83	2,57	5.778.321	8	79	95,18	74	89,16	51	61,45	8	9,64
100.001 – 250.000	61	1,89	9.812.365	13	58	95,08	58	95,08	55	90,16	21	34,43
250.001 – 500.000	40	1,24	13.972.866	19	38	95,00	38	95,00	36	90,00	12	30,00
500.001 +	21	0,65	26.942.386	36	20	95,24	20	95,24	19	90,48	12	57,14
Total	3228	100,00	75.495.636	100	2545	78,84	969	30,02	419	12,98	104	3,22

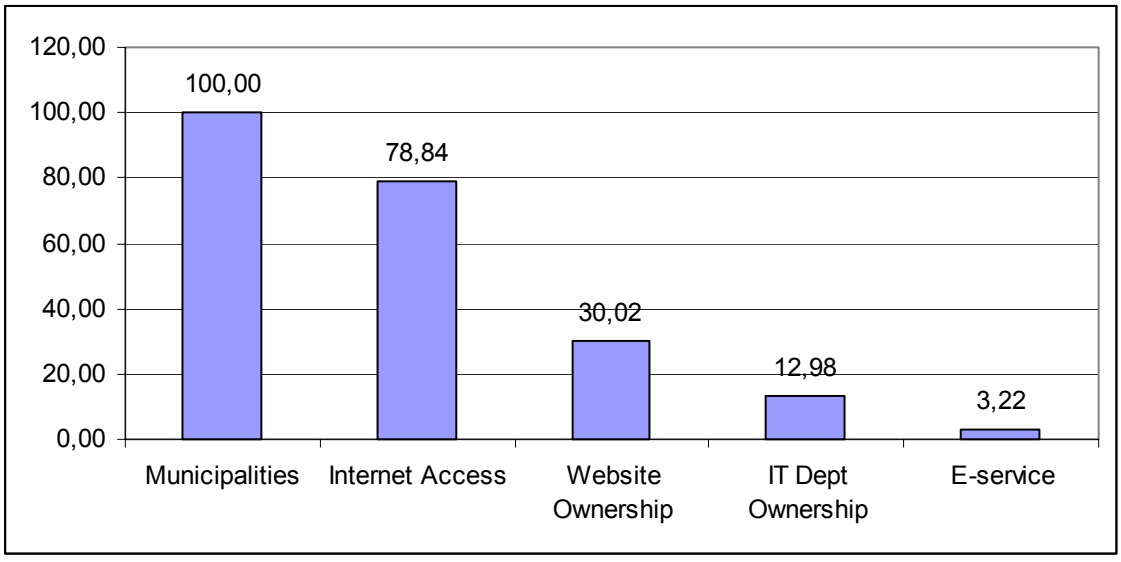


Figure 4.4. The Current Status of Turkish Local e-Governments by Population Group, Internet Access, Website Ownership, IT Department Ownership, and E-services

Comparing some basic statistics with the previous research of Güler (2001) will give a picture of the progress of the Turkish local governments have made recently. Look table below;

Table 4.8. The Progress of the Turkish Local e-Governments between years 2001-2006

YEARS / Variables	2001‡	2006	Progress
Mun. With Internet Access	467	2545	545 %
Mun. With IT Dept OS	381	419	11 %
Mun. With Website OS	150	969	626 %

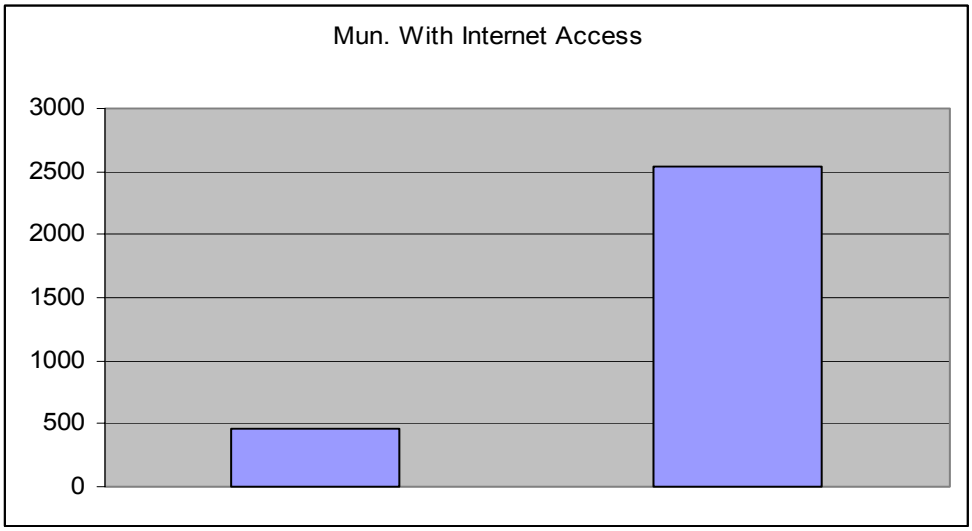


Figure 4.5. Change of Internet Access from 2001- 2006

‡ . **Data of year 2001 was adapted from Güler's (2001) study.**

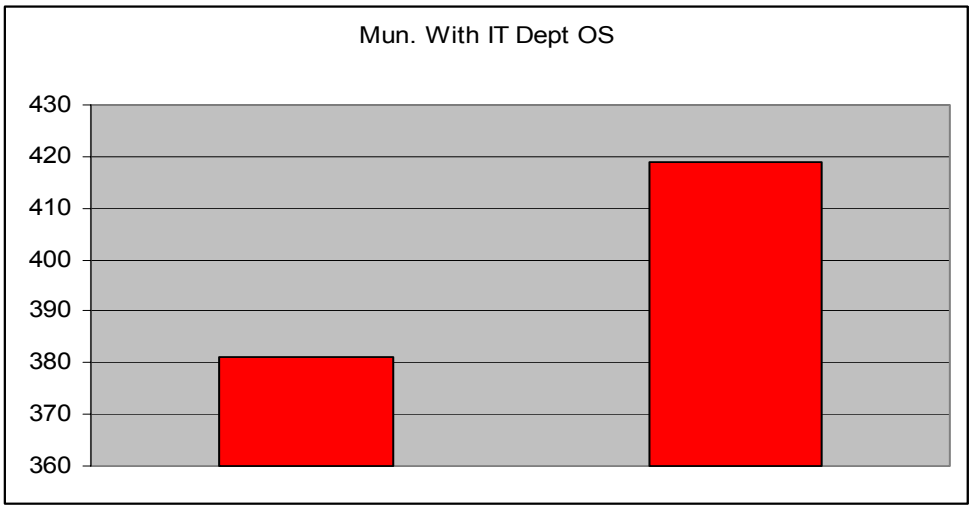


Figure 4.6. Change of IT Department Ownership from 2001- 2006

It is really impressive to see the amount of progress achieved by the local administrations in such a short period of time. When asked, some compelling factors were given; i.e. decrease of the cost of computers and related media, enthusiasm of the younger generation working in those local governments, pressures by citizens, companies and mass media as well as globalization issues like integration with both into national level and international level.

Recent numbers indicate that Internet access reached to 78,84 % and meanwhile the website ownership of these local governments reached up to 30,2 %. It is interesting however to see the Internet access ratio is higher than the website ownership. Because it is assumed that the both ratios should be in parallel with each other. When the reason for this was asked to authorities, interesting replies came up. Most agreed that the project of YerelNet which aims to supply a static website with basic facts for each local administration was seen as adequate. This view is also supported when YerelBilgi datasets were examined. Most of the local authorities

gave the URL addresses of themselves with the extension of “YerelNet.gov.tr” or “yerelnet.tr”.

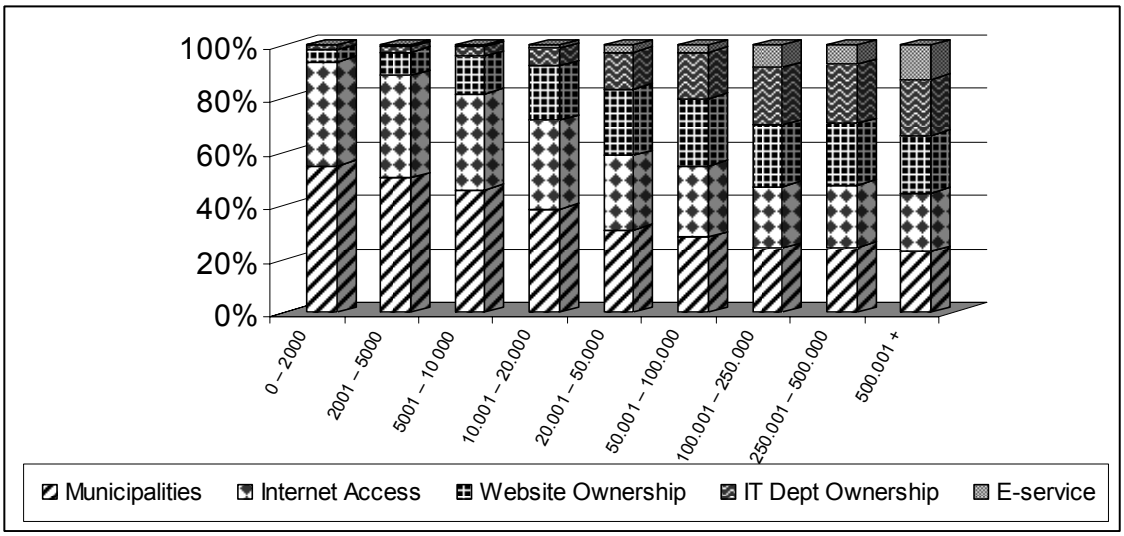


Figure 4.7. The Recent Status of Turkish Local e-Governments, by Population Group

However, there are significant discrepancies among local governments with regard to the level of implementation of e-Government initiatives. For example, the size of local jurisdiction is strongly associated with having a website (Figure 4.7.). According to table 4.9., around 95 % of local jurisdictions with the population 100,001 – 250,000 has websites, while this number decreases to 30,82 % - 17,27 % - 8,47 % for jurisdictions with population of 10,000 or less. It is striking though, to see the biggest municipal group (2001-5000 and 51,30 %), has almost the least website ownership (17,27 %) whereas in contradiction, one of the two smallest municipal group (500,000 + and 0,65 %) owns almost all of the websites in local level (95,24 %). Similar high percentages are also observed in the other ingredients like Internet access (95,24 %), IT department ownership (90, 48 %) and e-service provisions (57,14 %).

These findings are also consistent with the literature (Moon, 2002; Criado et al., 2003; Norris and Demeter, 1999; Holden et al., 2003; Norris and Kraemer, 1996; Norris and Campillo, 2003; Kaylor et al., 2001; West, 2000 and 2001)

As for the type of connections of these local administrations see the table below to gather some general information about their connections.

Table 4.9. Internet Access Types of the Turkish Local Governments

Population Group	Municipalities	%	Internet Access Types									
			ADSL	%	56K	%	LEASED LINE	%	CABLE NET	%	FRAME RELAY	%
0 – 2000	354	10,97	18	5,08	233	65,82	-	-	-	-	-	-
2001 – 5000	1.656	51,30	247	14,92	1007	60,81	-	-	3	0,18	-	-
5001 – 10 000	558	17,29	216	38,71	224	40,14	-	-	1	0,18		
10.001 – 20.000	274	8,49	144	52,55	93	33,94	-	-	-	-	-	-
20.001 – 50.000	181	5,61	115	63,54	49	27,07	-	-	-	-	-	-
50.001 – 100.000	83	2,57	56	67,47	23	27,71	-	-	-	-	-	-
100.001 – 250.000	61	1,89	53	86,89	3	4,92	2	3,28	-	-	-	-
250.001 – 500.000	40	1,24	33	82,50	1	2,50	2	5,00	2	5,00	-	-
500.001 +	21	0,65	17	80,95		0,00	1	4,76	1	4,76	1	4,76
Total	3228	100	899	27,85	1633	50,59	5	0,15	7	0,22	1	0,03

Source: YerelBilgi, Google, TurkStat

That it is striking to see 27,85 % of the municipalities have broadband access is really impressive. There are even examples of some advanced broadband connections, hard to see in European countries, like leased lines, cable net, frame relay. And the upward tendency to get connected in the near future gives signs of accelerations when asked in face-to-face sessions.

When we look at the political background of the local governments according to the local elections of the year 2004, some interesting point of views can be observed through the following tables.

Table 4.10. The Current Status of Turkish Local e-Governments by Political Backgrounds

PARTY NAME	Total Municipalities	%	Internet Access	%	Website Ownership	%	IT Dept Ownership	%	E-service	%
AKP	1778	55,08	1416	79,64	564	31,72	257	14,45	59	3,32
CHP	468	14,50	377	80,56	140	29,91	68	14,53	26	5,56
DYP	382	11,83	271	70,94	88	23,04	26	6,81	7	1,83
MHP	248	7,68	201	81,05	68	27,42	24	9,68	3	1,21
ANAP	101	3,13	85	84,16	40	39,60	18	17,82	7	6,93
SHP	67	2,08	53	79,10	19	28,36	13	19,40	1	1,49
SP	60	1,86	53	88,33	12	20	5	8,33	-	-
INDEPENDENT	55	1,70	39	70,91	15	27,27	3	5,45	-	-
DSP	32	0,99	26	81,25	14	43,75	5	15,63	1	3,13
GP	13	0,40	8	61,54	4	30,77	-	-	-	-
BBP	12	0,37	8	66,67	3	25	-	-	-	-
YTP	7	0,22	5	71,43	-	-	-	-	-	-
ÖDP	2	0,06	1	50	1	50	-	-	-	-
BTP	1	0,03	1	100	-	-	-	-	-	-
DP	1	0,03	1	100	1	100	-	-	-	-
UNKNOWN	1	0,03	-	-	-	-	-	-	-	-
TOTAL	3228	100	2545	78,84	969	30,02	419	12,98	104	3,22

AKP seems to be the leading political party in 2004 local elections representing the majority of the whole population. It is satisfying to see however, that not only AKP in this sense, as well as the bulk of other political parties come to realize the importance of being online. Somewhat the e-service provisions tend to increase slowly, doesn't mean it has been neglected. Because both the Internet access and the IT Department ownership are the main ingredients of transforming into a local e-Government in the near future.

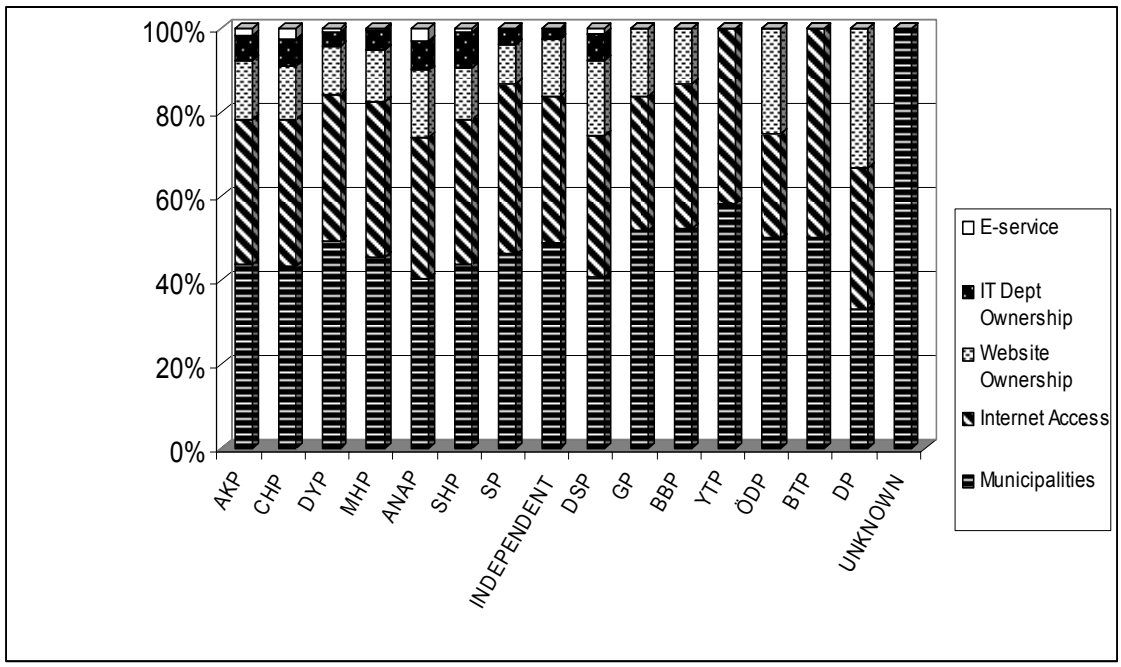


Figure 4.8. The Current Status of Turkish Local e-Governments by Political Backgrounds

When the types of connections are examined, once again AKP leads first row both in broadband (Asymmetric Digital Subscriber Line-ADSL, Leased Line, Cable Net, Frame Relay) and dialup (56K). Except Yeni Türkiye Partisi (Turkish for New Turkey Party-YTP), almost all parties seem to be aware of the importance broadband connection. Thus, gradually there is a tendency to switch from dialup to broadband Internet connection. During the face-to-face interviews, authorities highlighted the strategic importance of being online to cope up with the rest of the world. The similar curve is also observed in the Turkish local governments; first, main departments (Finance, personnel, etc.) are interconnected so as to build a Local Area Network (LAN) in the house. Meanwhile, one computer or a server is also connected to Internet. An "eager-beaver" or a "champion" builds a static website. Actually, it is

a “brochureware”, usually consisting of static information pages, sometimes downloadable forms, and e-mail.

Table 4.11. Internet Access Types of the Turkish Local Governments by Political Parties

PARTY NAME	Municipalities	%	Internet Access Types									
			ADSL	%	56K	%	LEASED LINE	%	CABLE NET	%	FRAME RELAY	%
AKP	1778	55,08	505	28,40	903	50,79	5	0,28	2	0,11	1	0,06
CHP	468	14,50	135	28,85	241	51,50	-	-	1	0,21	-	-
DYP	382	11,83	90	23,56	179	46,86	-	-	2	0,52	-	-
MHP	248	7,68	65	26,21	135	54,44	-	-	1	0,40	-	-
ANAP	101	3,13	32	31,68	52	51,49	-	-	1	0,99	-	-
SHP	67	2,08	32	47,76	21	31,34	-	-	-	-	-	-
SP	60	1,86	12	20,00	41	68,33	-	-	-	-	-	-
INDEP.	55	1,70	11	20,00	28	50,91	-	-	-	-	-	-
DSP	32	0,99	11	34,38	15	46,88	-	-	-	-	-	-
GP	13	0,40	2	15,38	6	46,15	-	-	-	-	-	-
BBP	12	0,37	1	8,33	7	58,33	-	-	-	-	-	-
YTP	7	0,22	-	-	5	71,43	-	-	-	-	-	-
ÖDP	2	0,06	1	50	-	-	-	-	-	-	-	-
BTP	1	0,03	1	100	-	-	-	-	-	-	-	-
DP	1	0,03	1	100	-	-	-	-	-	-	-	-
UNKNOWN	1	0,03	-	-	-	-	-	-	-	-	-	-
TOTAL	3228	100	899	27,85	1633	50,59	5	0,15	7	0,22	1	0,03

Source: YerelBilgi, Google, TurkStat

4.4.2. Analysis and Findings of Phase 2

Having finished the basic statistics and determined the sampling size to proceed further with web scanning process, it took more than a year to finish the whole work of the second phase.

Before the start, a 15-minute preparation was given for each site so as to gain some acquaintance with the content. Then, approximately one or two hours were spent for the scanning exercise for every site. And on a daily basis, 2-3 websites were scanned. It was assumed not to exceed five minutes for each question in the tool. When nothing was found within five minutes, the answer was supposed to be negative. The tool automatically calculated each score. Answers were checked by a mouse click. (See Data Collection section for further details about how the tool functions.)

The main sample was comprised of 104 local governments claiming e-service so as to select 20 best practice cases for further benchmarking process. But out of 104 e-service provisions only 63 website fulfilled the promised elements at the time of the scanning period.

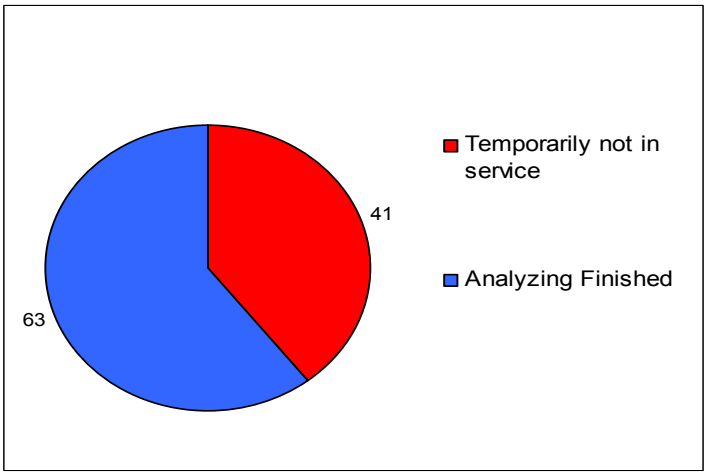


Figure 4.9. Situation after Completion of 2nd Phase

To choose the best 20 best practice case, 63 municipalities were put into table and through the help Microsoft© excel automation the most frequent occurrences were counted. As mentioned before, the authorities which had at least from 5 services /sub-services maturity levels of 3s and 4s were selected. Once again, the reason of these selections lied in the fact that the more sophisticated the service/sub-service is, the more likely the authority is to change/reorganize its back-office. The selected best practice cases with average scores and occurrences of the generations are given in the following table. For the rest of the scores see Appendix 6.3.

Table 4.12. 20 Best Practice Case Selected for 3rd Phase

MUNICIPALITY	Average		Generations				
	GENERATION	SCORE	1	2	3	4	TOTAL
SİLİVRİ	26	579	0	0	2	5	**7**
NİLÜFER	26	501	0	0	2	5	**7**
KADIKÖY	25	553	0	1	1	5	**6**
ŞİŞLİ	22	490	1	0	3	3	**6**
ALANYA	21	443	0	0	3	3	**6**
KEÇİÖREN	22	350	0	1	4	2	**6**
İSTANBUL METROPOLITAN	23	555	0	0	1	4	**5**
ÜSKÜDAR	23	521	0	0	1	4	**5**
KAĞITHANE	21	495	0	1	1	4	**5**
BEYLİKDÜZÜ	21	481	0	1	1	4	**5**
TUZLA	21	476	1	1	2	3	**5**
BAHÇEŞEHİR	19	455	1	0	2	3	**5**

BURSA METROPOLITAN	19	445	0	1	3	2	**5**
KARATAY	21	438	1	1	2	3	**5**
İZMİR METROPOLITAN	22	435	0	2	2	3	**5**
EYÜP	19	408	0	0	1	4	**5**
BEYKOZ	19	347	0	0	1	4	**5**
GAZİ	19	335	0	1	3	2	**5**
ÖMERLİ	18	335	1	0	3	2	**5**
KONAK	19	299	0	1	3	2	**5**

Some interesting findings on the authorities are stated below:

- Each municipality, except one, has an IT department.
- 20 of the local authorities have broadband (ADSL) connections. In addition to ADSL connection, two municipalities have a leased line and a cable net connection.
- Out of 20 best practice cases, 12 are from Istanbul province. Two from Bursa, two from Izmir, one form Ankara, one from Antalya, one from Konya and one from Samsun.
- The population of 18 authorities is above 20000, whereas one's is below 5000.
- Two local governments have 7 occurrences from 10 services/sub-services on maturity levels 3 and 4. These are indications of highly sophisticated back-offices.

4.4.2.1. Key Findings of Phase 2

With the help of a radar-chart that plots the average generation per service as defined before, the average level of maturity of e-Government has been presented

generally, indicating through the level of interactivity and the quality of service delivery supported by Internet applications (usability) in the Member states of the European Union and Turkey. For clarity concerns and to see from a wider perspective, the absolute number of websites as well as the absolute number of occurrences of a generation per country is introduced. The second table (4.13.) describes the relative occurrence of scanning of a specific service for all the scanned websites in percentage. The conclusions drawn from the radar-chart are supported or even verified with the help of a pie-chart describing the overall occurrence of generations (generations scored for all the scanned websites for a specific country). All the results are taken exactly from the KEeLAN website (KEeLAN, 2002).

According to the KEeLAN study (2002:18) the level of service delivery of the best websites in the European Union Member States; 'Culture & Leisure', 'Information' and 'Policy Making' are scanned most often whereas for Turkey, our findings show, 'Information', 'Policy Making', 'Credit & Loans' and 'Economic Development' the most often. For both clusters 'Education' is scanned almost never; for Turkey, additionally, 'Environment' is also scanned never.

Table 4.13. Overall Results for both Turkey and EU Members

Absolute occurrence of a generation / Absolute number of websites scanned						
generation	**1**	**2**	**3**	**4**	**Websites**	
# occurrence TURKEY	29	65	101	153	# scanned	63
# occurrence EU	594	1208	1129	472	# scanned	694
Service					**Percentage [%] of the websites scanned on the specific service**	
					TURKEY	**EUROPEAN UNION MEMBER STATES**

Usability	100	100
Policy making	98,41	75
Information	100	75
Culture & leisure	58,7	81
Economic development	79,37	23
Personal documents	14,29	41
Credits & loans	96,83	17
Education	0	5
Building permits	15,87	37
Environment	0	31

EU Results are adapted from KEeLAN (2002)

The average level of maturity of the scanned services lies between Generation 2 and Generation 3 for EU, whereas for Turkey this is between 3 and 4 (Figures 4.10. and 4.11.).

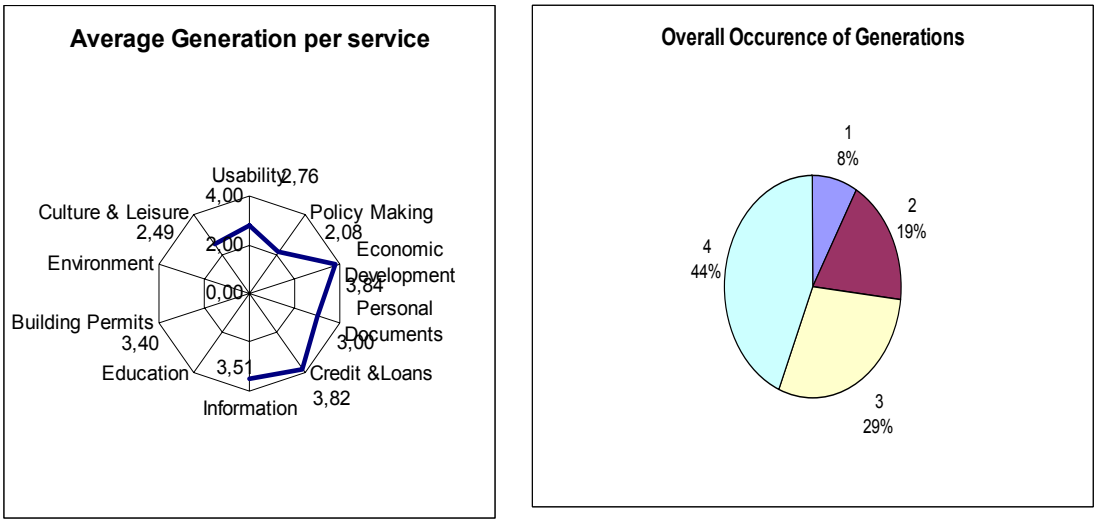
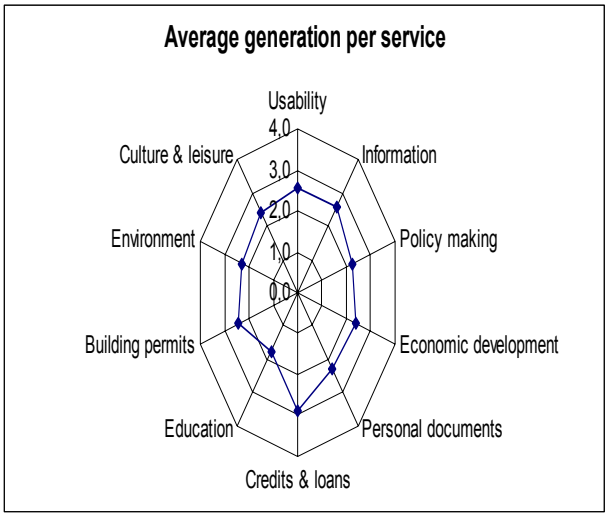


Figure 4.10. Average Generation per service and Overall Occurrence of Generations in Turkey



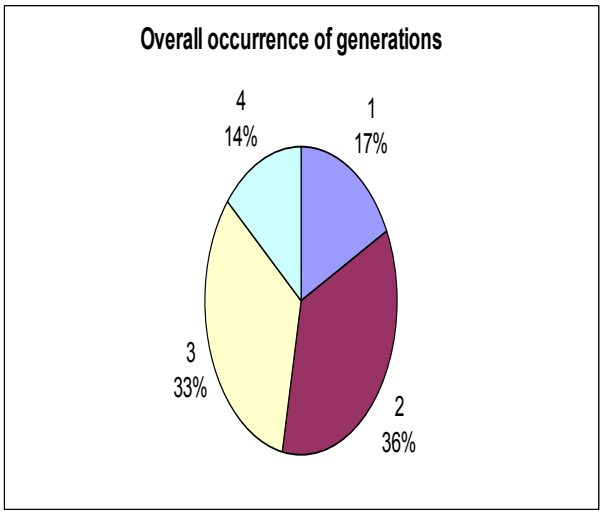


Figure 4.11. Average Generation per service and Overall Occurrence of Generations in EU

Source: KEeLAN (2002; 19)

KEeLAN study (2002:19-20) concludes no correlation between size of local authority and generation, which means that bigger does not automatically mean better. Similar output is also observed in Turkish local authorities. Among the 20 best-practices of local governments there are smaller ones like Nilüfer, Gazi, Alanya and Karatay. Moreover, the variation in generations is high in Italy, France and Belgium, showing that there are big differences in level of service delivery between the different local authorities' services (KEeLAN, 2002:18). The case is similar for Turkey (See Appendix 6.4.). Furthermore, the variation is low in Sweden, Denmark and Luxemburg (low spread) indicating small differences in level of service delivery between the different local authorities for the scanned services.

In order to widen the perspective from different dimensions for each of the services/sub-services summary tables are given for further analysis. Turkish local government scores are compared with the European counterparts. However, it should

be kept in mind that in KEeLAN the scanned websites per country have not been selected randomly from the total population of websites but with the highest level of maturity of e-Government (at least Generation 3) in order to select the best practice case studies for the benchmarking phase. Meanwhile, our study chose the highest scores according to their frequency of occurrences. And at least with 5 services/sub-services at generation 3 or 4 were put into order so as to reach the amount of 20. This implies that the results presented in the following paragraphs do not describe the status of e-Government for a specific EU Member State. The results indicate (the level of maturity of) e-Government of the 'top' websites in a specific country (i.e. websites with the highest level of interactivity and quality of service delivery). This means that the results of a specific country cannot be compared (easily) with the results of another Member State. Graphics are given for only to determine how we have proceeded in the local administrations and how the European countries did well in return.

Moreover, one should consider the fact that it is not likely that the level of maturity of the websites in a specific country is distributed equally over the different generations according to a (standard) normal distribution or that the distribution is equal for any of the countries. This connotes that if a comparison is required for the status of e-Government in Europe over the different Member States including Turkey, the websites should be scanned randomly for each country (KEeLAN, 2002).

The figures below are given in the order of table 4.3. starting with services on Policy Making.

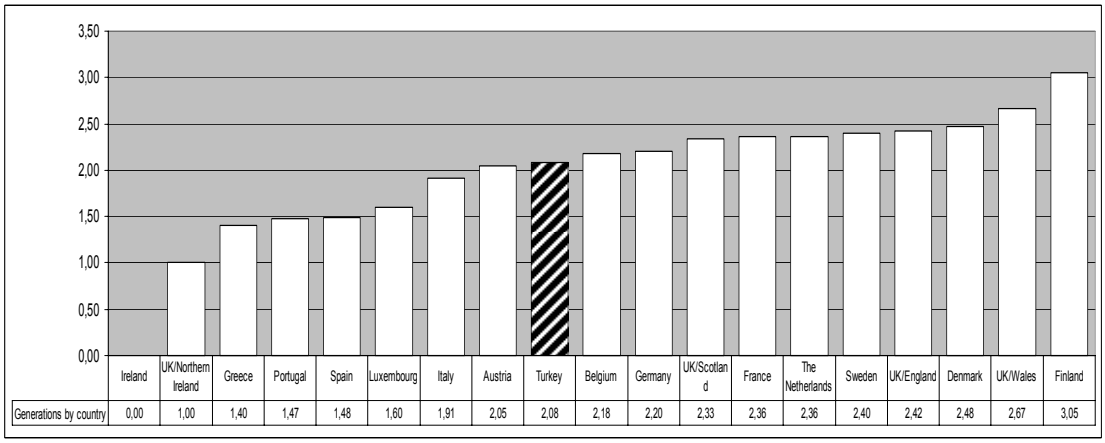


Figure 4.12. Service on Policy Making Status of the European Countries and Turkey

Although it is rather difficult to derive direct results due to the given reasons before, it can be concluded that the promise of democracy through e-Government in Turkish local administrations requires quite a long way to be realized. Two points of view were eminent during the interview sessions; most of the authorities stated the fact about digital exclusion in their jurisdictions (low computer usage), some expressed the general unwillingness of the public interest into regional politics and pacifism. This situation reminds Moon's (2002) theory about the 5th stage in evolution of e-Government. The last stage is representing participative democracy.

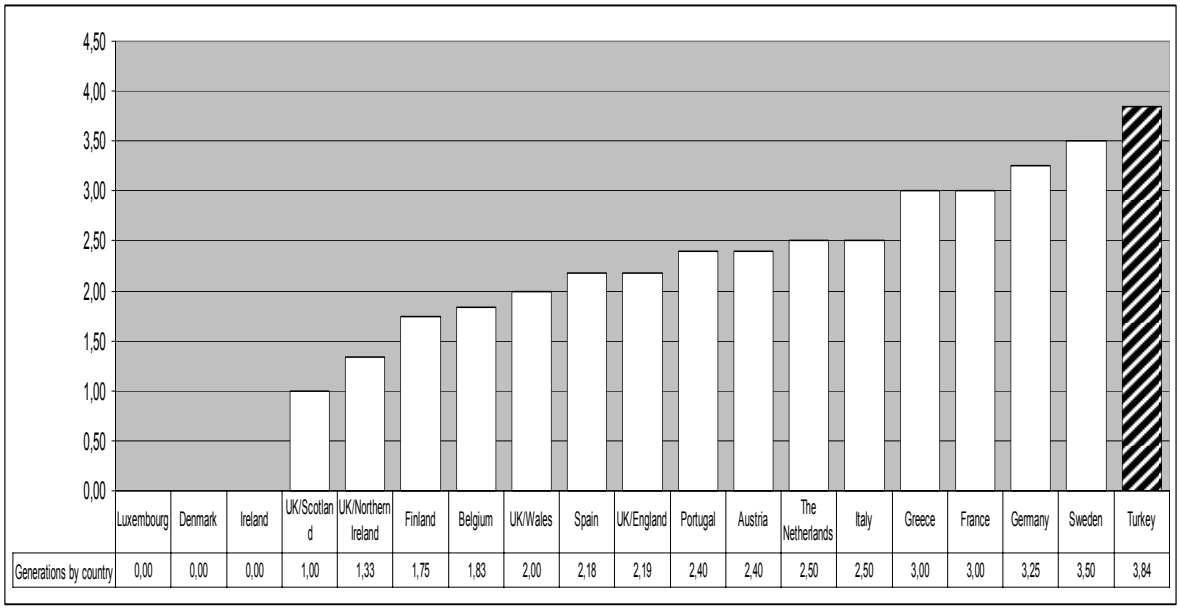


Figure 4.13. Service on Economic Development Status of the European Countries and Turkey

It is quite interesting to see the highest score for Turkey in the services on economic development. But when asked to the key personnel in the local administrations what the motivation was for e-Government initiatives almost all of the people who were interviewed agreed that the main motivator for commencing such projects was economic rather than the pressure down-to-top. So, it will not be surprising to see the other services/sub-services related to economy will also higher scores.

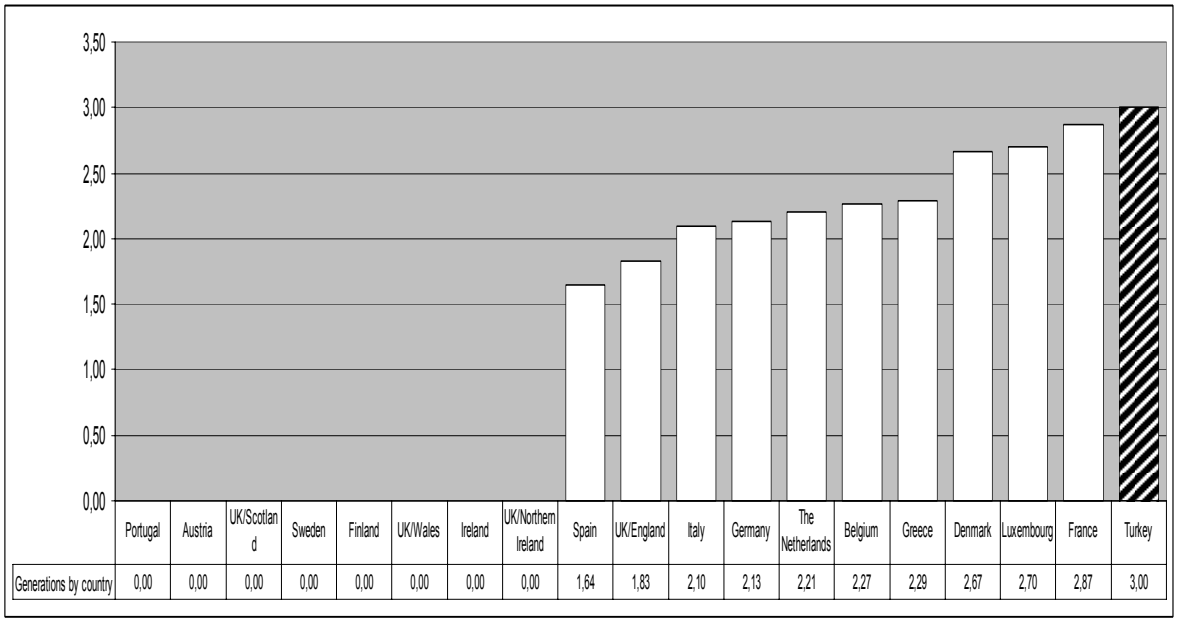


Figure 4.14. Service on Personal Documents Status of the European Countries and Turkey

Although the highest in this service, the average score tended to be maximum of 3rd generation. The question whether to put all the forms online was asked to the e-Government initiatives in the local administration. All replied they have been waiting the legal status of e-signature to realize this. However, it is interesting to see the closest generation to Turkey's is France's, one of the most centralized countries in Europe like ours. It is assumed that the reasons for low rates or non-existence of personal documents' lie in the fact that either the most of the countries are not obliged to supply personal documents in the local level (KEeLAN, 2002) or there seem to be problems of trust and privacy with the use of e-signatures (KableNet News, 2006).

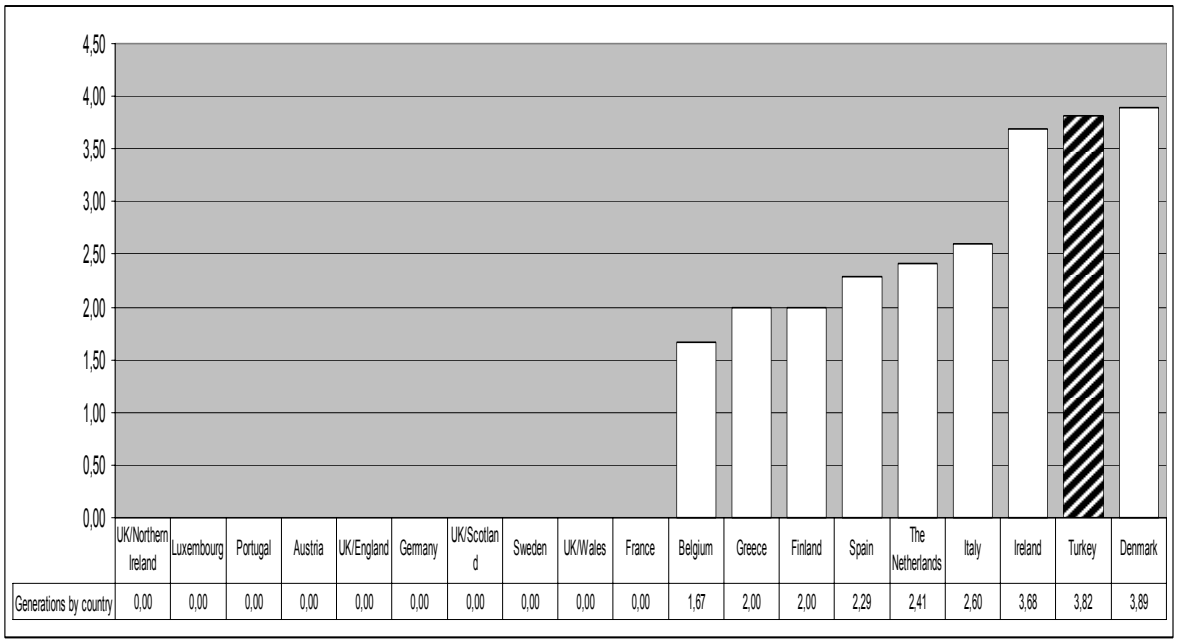


Figure 4.15. Service on Credit and Loans Status of the European Countries and Turkey

The findings indicate that mostly due to economic concerns, e-Government initiatives in Turkey particularly used the economic factors like cost savings on data collection and transmission. Efficiency improvements in processing tasks and administrative operations, improving business processes and services were the second important concerns following economic ones.

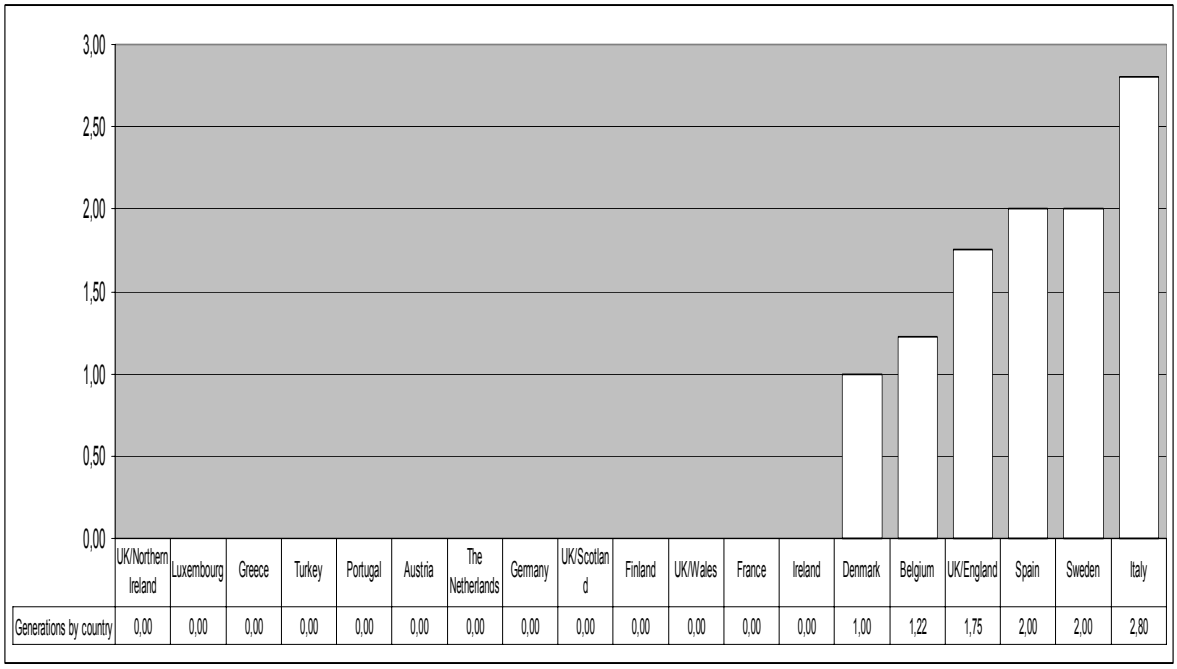


Figure 4.16. Service on Education Status of the European Countries and Turkey

Naturally, due to legal obligations of central government, the score on educational services was not available. Italy leads the top country in that element. But, there still exist some areas of close relationships on local level between central government subsidiaries and municipalities in the framework of e-Government waiting to be explored by both parties like shared portal opportunities querying for nearest schools, types of schools, number of teachers, students per class, schools' capabilities, etc.

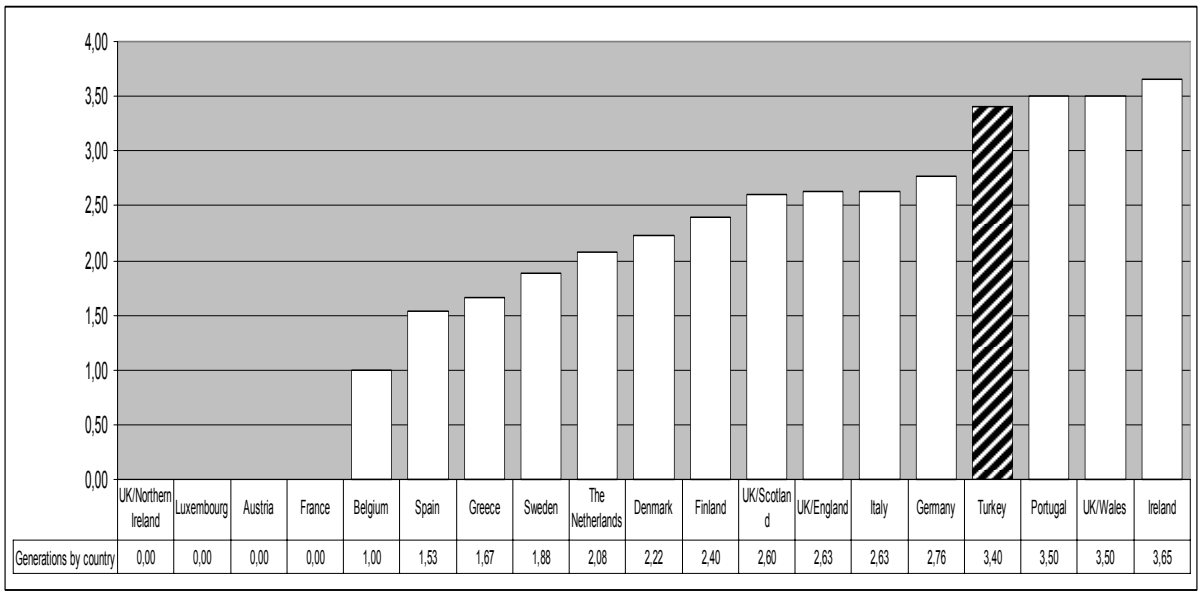


Figure 4.17. Service on Building Permits Status of the European Countries and Turkey

Recently, only detailed querying services are available in the Turkish local e-Government. There are still ongoing efforts of a common framework for data-sharing among the related parties like municipalities, subsidiaries of central government initiatives on cadastral issues and General Command of Mapping. According to a recent research by TurkStat on Municipal City Information System Research (TurkStat, 2006b) among the Turkish municipalities showed that an amount of 21 % of these municipalities uses GIS in their jurisdictions. Differences in software packages as well as the legal implementation of e-signatures are the main obstacles before the full realization of these services online. But, the authorities interviewed were optimistic in the exploitation of this field in the near future.

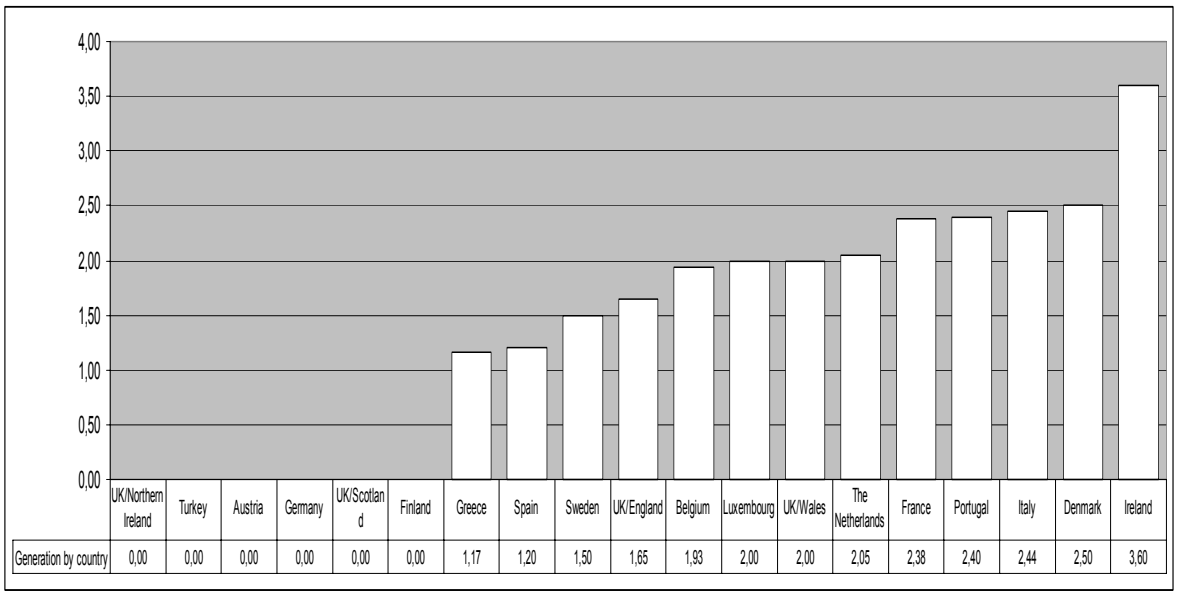


Figure 4.18. Service on Environment Status of the European Countries and Turkey

So far, unfortunately, no occurrences were highlighted separately within the environmental issues online for the Turkish local e-Governments. However, some specific issues like waste water and solid waste (from homes and industries; organic/inorganic, chemicals, medical, etc.) are dealt within the frameworks of intermixed events. For example waste water events are processed through the general water topics and in parallel, even the payments along with applications is made online in this context. Hence, a single topic on environment was hard to find during the web scanning phase. Applications about any wastes are done both by phones and e-mail/e-forms to clearing desks (Blue or white whatever the color).

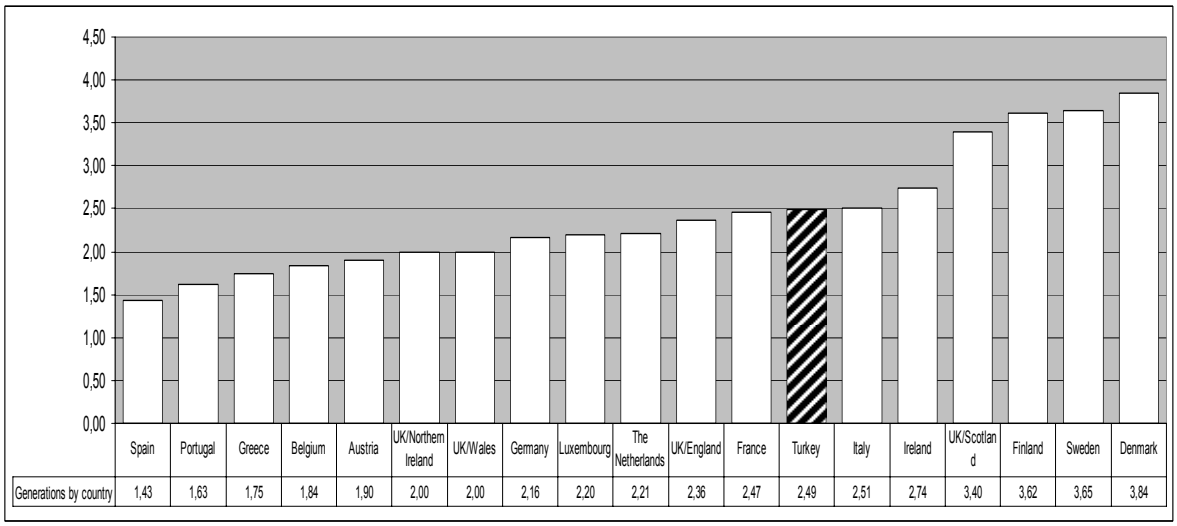


Figure 4.19. Service on Culture and Leisure Status of the European Countries and Turkey

Confronting with not advanced online cultural issues was quite common among the Turkish authorities. As mentioned before, the primary concern to become an e-Government administration was economic rather other reasons like democracy or cultural. Although there were quite good examples of cultural matters like querying of books in public libraries (District of Kadıköy, İstanbul Metropolitan), reserving and paying for theatre plays online (İstanbul Metropolitan) there is still a long way to be covered by the Turkish local authorities. When asked to those municipalities the pushing effect behind these cultural activities online, all told that the push came from down-to-top, from the citizens.

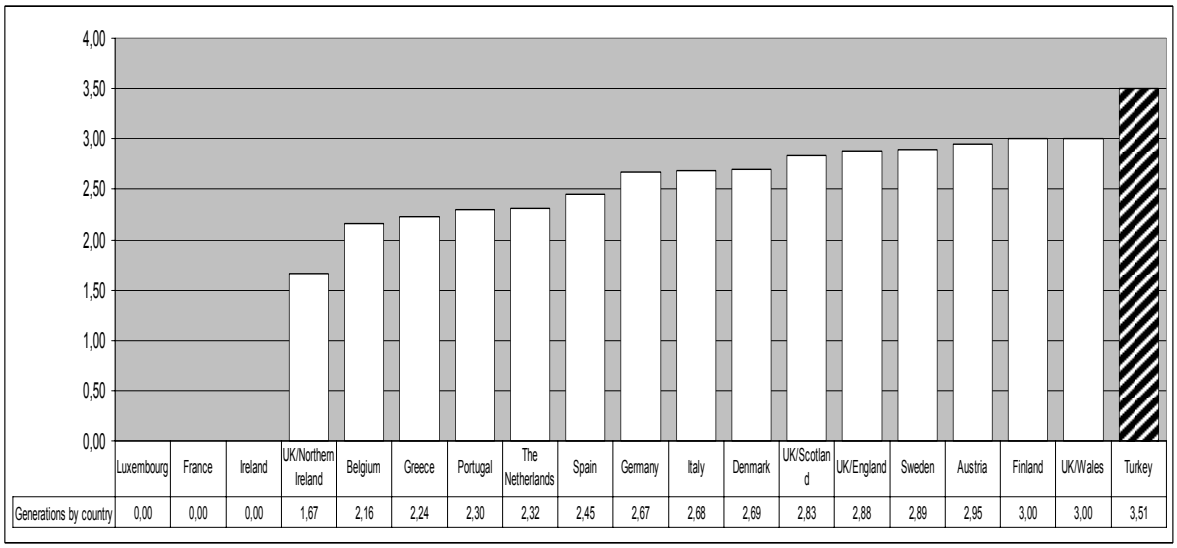


Figure 4.20. Service on Information Status of the European Countries and Turkey

Information provided by websites was the most common feature among the basic services of the Turkish local authorities due to their very nature. From the start of any website information is the initial step. Generally, being a political entity, there is a high tendency of using the web as a propagandistic tool almost in every municipal organization around world and Turkey is not an exception. One of the main encouraging factors is the law on information freedom which obliges every public entity to provide related information when applied properly. Another reason is the high rate of updating information on the websites of the Turkish local initiatives. Out of 63 scanned websites, 44 (68, 94 %) updates their content on a daily basis. Similar result came from TurkStat research (2006b); among 424 municipalities 260 (61,32 %) declared that updates on content occurs on daily and weekly basis. Thus, it is not contradictory to see the highest score on Information stemmed from the Turkish local authorities.

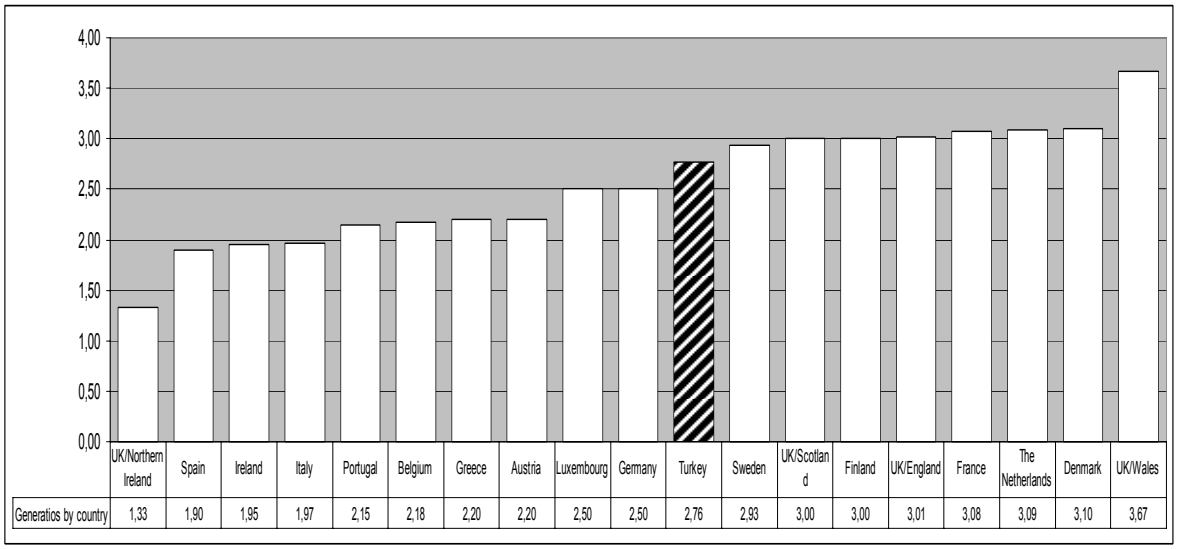
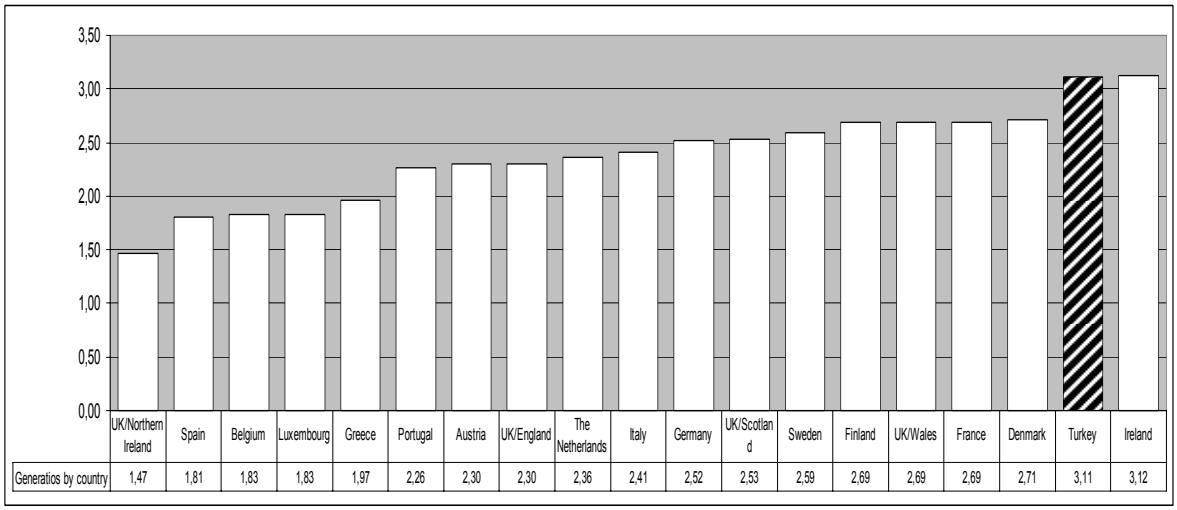


Figure 4.21. Usability Status of the European Countries and Turkey

Although not included as a service in the context of e-Europe Basic Services, usability is also one of the most important features of being online (Website). It focuses on and addresses logic-design of software applications and services so as to ease of mental comprehension for all type of users; even these practices become good accessibility practices (Criado and Ramilo, 2003; FrontEnd.com, 2005). It is one of the "highly significant issues and need due consideration in the planning, development and implementation process of e-Government" (Choudrie et al., 2005:582). But unfortunately, this time, the Turkish local administrations obtained an average score from this element. The main reason for the Member Countries' high scores on usability lies in the fact that usability and accessibility issues are covered among the primary ingredients of their national strategies for e-Government websites (England, Scotland, Finland) (See related websites of those countries for their international strategies). Almost all of the scanned websites have problems on

usability as much as accessibility. The reason for the prominence of these factors is digital divide. Impaired and older citizens, children, and women are not totally considered during the design procedures of the websites, given to the fact that websites are the front offices of the local governments.

Eventually, to give a broader point of view about the whole services at all and the standpoint of the Turkish local governments against her counterparts in European Member States, the graph of the means of generations are given below.



	UK/Northern Ireland	Spain	Belgium	Luxembourg	Greece	Portugal	Austria	UK/England	The Netherlands	Italy	Germany	UK/Scotland	Sweden	Finland	UK/Wales	France	Denmark	Turkey	Ireland
Generatios by country	1,47	1,81	1,83	1,83	1,97	2,26	2,30	2,30	2,36	2,41	2,52	2,53	2,59	2,69	2,69	2,69	2,71	3,11	3,12

Figure 4.22. The Summary Graph of the Means of Generations, by all Countries

Turkish local authorities did quit well in overall picture about the scores of Electronic Local Authorities Networks, yet, considering 3228 municipalities altogether, there is a substantially long way still to be covered.

4.4.3. Analysis and Findings of Phase 3

20 best practice cases selected for further benchmarking process and from the invited 20 local authorities, eventually 15 benchmark questionnaires were obtained that could be subjected to the subsequent analysis. As expected given different e-Government maturity levels and the interpretation aspects of scales and baselines inherent to a self-assessment, the scores of the individual authorities varied widely. However, averaging and a subsequent focus on the relative, rather than the absolute, (differences in) scores was employed to limit these effects. See the table below.

Table 4.14. Comparison of the Benchmarking Means

#	RESULTS - TABLES	European Local Authorities			Turkish Local Authorities		
	Theme of Investigation	Average Desired	Average Current	Average (Des,Cur)	Your Desired	Your Current	Your (Avg,Your)
	Leadership	**8,7**	**6,3**	**2,4**	**9,3**	**7,1**	**2,2**
	Policy and Strategy	**8,2**	**6,1**	**2,1**	**9,4**	**7,2**	**2,2**
	People	**8,0**	**5,2**	**2,8**	**9,4**	**6,7**	**2,7**
	Partnerships and Resources	**8,3**	**6,0**	**2,3**	**9,4**	**7,0**	**2,4**
	Processes	**8,4**	**5,7**	**2,7**	**9,3**	**6,6**	**2,6**
	Regional Context	**8,1**	**5,1**	**3,0**	**9,1**	**5,1**	**4,0**

Before proceeding with the interpretation of the data statistical analysis were done by SPSS. Because of the sample size is small and the data is not-normally distributed Wilcoxon Signed Ranks Test was used. The summary results were punctuated in the order of 6 topics (key elements of EFQM) of groupings starting

with leadership, policy and strategy, people, partnership and resources, processes, and regional context. First group of six is European local authorities' analysis, whereas the following group of six belongs to the Turkish local e-Government initiatives accordingly.

4.4.3.1. Analysis of the European and the Turkish Local Authorities

Tables 4.15. and 4.16., given below, display results of statistical analysis of benchmarking phase for both authorities.

Table 4.15. Summary of Test Statistics of Key Elements in General for European Local Authorities

		N	Mean	Z	Asymp. Sig. (2-tailed)
Leadership	Desired	7	8,6143	-2,371(a)	,018 *
	Recent	7	6,1286		
		N	Mean	Z	Asymp. Sig. (2-tailed)
Policy and Strategy	Desired	13	8,0308	-3,185(a)	,001*
	Recent	13	6,0308		
		N	Mean	Z	Asymp. Sig. (2-tailed)
People	Desired	6	7,8667	-2,207(a)	,027*
	Recent	6	5,0333		
		N	Mean	Z	Asymp. Sig. (2-tailed)
Partnership and Resources	Desired	13	8,2615	-3,184(a)	,001*
	Recent	13	6,0077		
		N	Mean	Z	Asymp. Sig. (2-tailed)
Processes	Desired	15	8,2867	-3,410(a)	,001*
	Recent	15	5,5400		
		N	Mean	Z	Asymp. Sig. (2-tailed)
Regional Context	Desired	3	8,0000	-1,604(a)	,109
	Recent	3	5,1000		

(*) p< 0,05 significant except for the group of regional context

Table 4.16. Summary of Test Statistics of Key Elements in General for Turkish Local Authorities

		N	Mean	Z	Asymp. Sig. (2-tailed)
Leadership	Desired Recent	7 7	9,2429 7,0714	-2,410(a)	,016*
		N	Mean	Z	Asymp. Sig. (2-tailed)
Policy and Strategy	Desired Recent	13 13	9,3846 7,2154	-3,187(a)	,001*
		N	Mean	Z	Asymp. Sig. (2-tailed)
People	Desired Recent	6 6	9,3833 6,6833	-2,201(a)	,028*
		N	Mean	Z	Asymp. Sig. (2-tailed)
Partnership and Resources	Desired Recent	13 13	9,3767 6,9846	-3,181(a)	,001*
		N	Mean	Z	Asymp. Sig. (2-tailed)
Processes	Desired Recent	15 15	9,2600 6,6133	-3,410(a)	,001*
		N	Mean	Z	Asymp. Sig. (2-tailed)
Regional Context	Desired Recent	3 3	9,1000 5,1333	-1,604(a)	,109*

(*) p< 0,05 significant except for the group of regional context

What is striking here is the p values of both local authorities; 0, 109. Even the Z values are the same; -1, 604(a). It can be concluded that both the European and the Turkish local authorities' p values are greater than the significance level of 0,05. In other words both values are non-significant only in this key element: Regional Context.

4.4.3.2. Analysis of the Averaged Scores

Table 4.17. EFQM Criterion: Leadership

#	RESULTS - TABLES	European Local Authorities			Turkish Local Authorities		
	Theme of Investigation	Average Desired	Average Current	Δ Average (Des,Cur)	Your Desired	Your Current	Δ Your (Avg,Your)
	LEADERSHIP	**8,6**	**6,1**	**2,5**	**9,3**	**7,1**	**2,2**

1	The municipality leaders have a clear vision on the role of e-Government within the context of the municipality	8,8	6,4	2,4	9,4	7,5	1,9
2	Top level leaders are involved in the development of a vision on e-Government in the municipality	8,8	6,3	2,5	9,5	7,6	1,9
3	Responsibilities for implementation of e-Government are at top management levels of municipality	8,8	7,0	1,8	**8,7**	6,8	1,9
4	Leaders are regularly enquiring on the progress of e-Government projects and take appropriate action	8,5	5,9	2,6	**8,8**	6,5	2,3
5	Leaders are aware of what target groups expect from e-Government in their municipality	**8,3**	5,7	2,6	9,4	7,5	1,9
6	Leaders promote the use and benefits of e-Government to the staff of the local government	8,7	5,9	**2,8**	9,6	7,1	**2,5**
7	Leaders are aware of the issues that staff have in relation to e-Government	**8,4**	5,7	**2,7**	9,3	6,5	**2,8**
	SD	**0,2**	**0,5**	**0,3**	**0,3**	**0,5**	**0,4**

Source: EU Results are adapted from KEeLAN (2002)

Given the overall high score for "**desired**", resulting from a consistent high score of each of the constituting sub-criteria and low standard deviation, "**leadership**" is widely seen as a rather important element by both Turkish and European authorities (Table 4.18.). But ideas about items # 3 and # 4 among the Turkish authorities on top management responsibilities and direct interference to e-Government projects somewhat differ.

When comparing the differences between "**desired**" and "**current**" [D(Des,Cur)], there is still considerable ground to be covered. Particularly with statements # 6 and #7, regarding the leadership-staff interactions, there seems to be a lack of coordination between the actors. This view is also supported by the European counterparts.

Table 4.18. EFQM Criterion: Policy and Strategy

RESULTS - TABLES		European Local Authorities			Turkish Local Authorities		
	Theme of Investigation	Average Desired	Average Current	Δ Average (Des,Cur)	Your Desired	Your Current	Δ Your (Avg,Your)
	POLICY AND STRATEGY	**8,0**	**6,0**	**2,0**	**9,4**	**7,2**	**2,2**
8	An e-Government vision has been developed containing statements on role of the internet in the municipality	8,5	6,9	1,6	9,7	7,1	2,5
9	The vision on e-Government is integrated in an overall vision on the development of the municipality	8,5	6,4	2,1	9,2	7,3	1,9
10	The e-Government vision contains references on where the municipality expects to stand in the medium term (end of 2004)	8,4	6,6	1,8	9,5	7,5	1,9
11	Specific goals for e-Government are formulated in policy documents of the municipality, and are derived from the vision	8,2	6,1	2,1	9,3	7,4	1,9
12	Input from target groups has been used in strategy definition	8,0	5,6	2,4	9,5	7,7	1,8
13	External existing knowledge has been used in the definition of an e-Government strategy	**7,7**	6,8	0,9	**8,6**	6,8	1,8
14	e-Government goals and targets are consistently reached	8,1	6,2	1,9	9,7	7,5	2,2
15	Feasibility studies have been carried out to support definition of e-Government policy	**7,3**	5,4	1,9	9,5	6,9	2,6
16	Studies have been carried out to evaluate effectiveness of e-Government policy and required updates	**7,3**	5,2	2,1	9,7	6,8	**2,9**
17	e-Government induced organizational change is managed considering other development programs in the organization	8,8	6,1	**2,7**	9,3	7,1	2,3
18	Structured methods have been developed/used to aid in deployment of e-Government projects	**7,3**	5,1	2,2	9,2	7,0	2,2
19	Communication with the target group takes place on a regular basis	8,2	5,9	2,3	9,5	6,5	**3,0**
20	Communication with the municipality's staff takes place on a regular basis	8,1	6,1	2,0	9,3	8,2	1,1
	SD	**0,5**	**0,6**	**0,4**	**0,3**	**0,5**	**0,5**

Source: EU Results are adapted from KEeLAN (2002)

The element "**Policy and Strategy**" (Table 4.19.) is also widely seen as an important element, given the overall high score for "**desired**" for both jurisdictions, although opinions differ more as evidenced by the higher sigma values. The importance and the willingness to practice methodological issues (#15, #16, and #18) for the European local governments seem to be lower than their Turkish counterparts. The only coherence is based upon the item # 13 on the disagreement of the use of external knowledge. Furthermore, for the Turkish authorities the overall score is particularly influenced by the low scores for statements #13, 16 and 19, all having a relation with a methodical approach to implementation of e-Government principles except #13 on the use of external existing knowledge. When asked to the officials the reasons they don't rely on external knowledge particularly universities, replies were based on the lack of external sources, and the quality of the scarce ones. The non-existence of the best practice models was also mentioned.

As for the European governments, low scores arise for statements # 15, 16 and 18, all indicating; once again, insufficient use of methodological approaches.

When comparing the differences between "**desired**" and "**current**" [D(Des,Cur)], there is still ground to be covered for both parties. In the Turkish side, a marked positive outlier in this respect is statement #20 on the vertical communication, though somewhat contradicting the Leadership issues of statements #6 and #7. What is considered as critical in this key element is item # 19: regular communication with target groups. This high difference is also confirmed by the statement # 16 which assesses the implementation of methodologies on effectiveness of the policies and as well as the update requirements based on target feedbacks and

study results. This arise the questioning of the widely discussed matter of customer centric approach. The tendency of centralized management still evolves among the local authorities.

As for the European side, there seems no particular high difference except, in some extent, item # 17, on change caused by e-Government in the organization. The pace for change in the back-offices is rather slow in this respect. A marked positive outlier is visible on #13 about the usage of external knowledge. The desired status was low, as well as the current situation.

Table 4.19. EFQM Criterion: People

RESULTS - TABLES		European Local Authorities			Turkish Local Authorities		
Theme of Investigation		Average Desired	Average Current	Δ Average (Des,Cur)	Your Desired	Your Current	Δ Your (Avg,Your)
	PEOPLE	**7,8**	**5,1**	**2,8**	**9,4**	**6,7**	**2,7**
21	e-Government related tasks are clearly defined in job descriptions	**7,3**	**4,4**	2,8	9,7	7,3	2,4
22	People at management level have adequate knowledge on e-Government related issues	8,4	5,2	**3,2**	**8,8**	6,5	2,3
23	e-Government training and development program are available and made use of by the employees of the municipality	8,3	5,5	2,7	9,3	6,5	2,9
24	Individual employees are encouraged to take the initiative in developing new e-Government activities	7,8	5,3	2,5	9,5	**6,3**	**3,1**
25	The opinion of the employees related to e-Government developments is monitored on a frequent basis	**7,2**	**4,3**	2,8	9,5	6,5	**3,0**
26	Development of e-Government is supported by the employees of the municipality	8,2	5,5	2,6	9,5	7,0	2,5
	SD	**0,5**	**0,5**	**0,2**	**0,3**	**0,4**	**0,3**

Source: EU Results are adapted from KEeLAN (2002)

The element "**People**" (Table 4.20.) is seen as important, albeit that the overall score for "**desired**" is influenced negatively by statement #22, regarding the necessity of adequate knowledge of the management level. For the current situation, item # 24 indicates rather low score about the encouragement circumstances for the employees. But for the European local governments, there are two issues to be considered, items # 21 and 25. It won't be wrong to articulate that e-Government in job descriptions and the regularly monitoring of the staffs' opinions are somewhat problematic among the authorities. Given the low scores at the current situations on both items, this assumption is confirmed.

When analyzing the differences between "**desired**" and "**current**" [D(Des,Cur)], there is still substantial ground to be covered. Marked negative outliers in this respect are statements #24 and # 25 on the motivation factors of the champions in the organizations and on the opinion monitoring of the staff regularly. Apparently, the lack of communication on vertical basis seems to be a continuous issue among the Turkish local authorities.

As for the European counterparts, the only issue to be considered seriously should be statement #22, regarding the necessity of adequate knowledge of the management level. Formidably high score signals a problematic outcome.

Table 4.20. EFQM Criterion: Partnerships and Resources

RESULTS - TABLES	European Local Authorities			Turkish Local Authorities		
	Average	Average	Δ Average	Your	Your	Δ Your
Theme of Investigation	Desired	Current	(Des,Cur)	Desired	Current	(Avg,Your)

	PARTNERSHIPS AND RESOURCES	8,3	6,0	2,3	9,4	7,0	2,4
27	The municipality participates actively in inter-government partnerships in the field of e-Government	8,6	6,3	2,3	9,4	6,5	2,9
28	The municipality participates actively in public-private partnerships in the field of e-Government	**7,6**	5,2	2,5	9,1	**6,1**	**3,0**
29	In the municipality's ICT budget, e-Government activities are displayed as a specific item	**6,2**	**4,6**	1,6	9,6	**5,1**	**4,5**
30	Cost and yield are monitored for each e-Government project	7,8	5,4	2,4	9,5	**6,2**	**3,3**
31	Hosting and maintenance of the website is carried out by qualified people	9,2	8,1	1,0	9,7	8,1	1,6
32	Procurement of e-Government systems is done in coherence with e-Government policy	8,7	7,4	1,4	9,1	7,5	1,6
33	Hardware and software maintenance is carried out by qualified people	9,1	8,3	0,7	9,8	8,6	1,2
34	(Open) data interchange standards are used as much as possible	8,9	6,7	2,2	9,0	7,7	1,3
35	It is ensured that knowledge is opened up to citizens and employees through electronic means	8,8	5,3	**3,5**	9,3	7,4	1,9
36	All e-Government projects are described and evaluated in a structured manner	**7,8**	**4,5**	**3,3**	9,5	7,1	2,3
37	A content management system is used to structure information for publishing	8,1	**4,9**	**3,2**	9,5	**6,1**	**3,3**
38	A detailed information architecture exists containing existing and desired elements of information functions of systems and their coherence	7,9	5,1	2,8	9,5	7,3	2,2
39	All legal aspects related to e-Government have to be accounted for	8,7	6,3	2,4	**8,9**	7,1	1,7
	SD	**0,8**	**1,3**	**0,9**	**0,3**	**1,0**	**1,0**

Source: EU Results are adapted from KEeLAN (2002)

To generalize, as in all the other elements, "**Partnership and Resources**" (Table 4.21.) are again seen as quite important, much higher for the Turkish authorities. Here, along with the following key element "**Processes**", the standard

deviations are most prominent, indicating different opinions among the stakeholders. The average "**desired**" situations of European authorities particularly at statements #28, 29, and 36, regarding public-private partnerships, discrete specification of e-Government budget items and as well as structured evaluation methods receive a marked low average score. It is most likely that this relates to the specificity of the situation, authorities not engaged in such partnerships tend to aggregate lower scores. Noteworthy is that all other sub-average scoring statements have a strong relation to methodical approaches or prerequisites for evaluation. All the assumptions are confirmed by the relevant low scores of the same items' current situations. On the other hand, maintenance related statements #31 and 33 are widely considered of the utmost importance. These scores are even higher in the Turkish case. It is assumed that one of the reasons for the Turkish authorities is due to the persons asked to fill the benchmarking exercises mostly coming from a technical background, either engineers or engineering related jobs. Meanwhile, there seem to be one negative outlier for the Turkish governments at the "**desired averages**" sprang from legal aspects of e-Government implementation. Similar outlook is manifesting itself among the sub-average scoring statements in the Turkish side regarding the relatively high standard deviation for the outliers of the "**current**" situation, items # 28, 29, 30, and 37, which have strong and obvious relation to methodical approaches or prerequisites for evaluation. The budget and the funding of e-Government initiatives pinpoint a serious issue. Almost none of the local authorities benchmarked and interviewed reported separate e-Government item in the budget. Corroborated by the interviews as well, only 3 out of 20 selected cases reported either financial or performance evaluations.

When comparing the differences between "**desired**" and "**current**" [D(Des,Cur)], on average there is still considerable ground to be covered, although again the variation in the sub-criteria scores is significant. The European local authorities seem to be scrambling for issues like supply of information through electronic means (#35), structured evaluation methodologies (#36) and content management systems (#37). For the Turkish side, however, somewhat similar, the highest differences are observed among the outliers #28, 29, 20, and 37 respectively.

Furthermore, there seems a correlation between other high differences and statements having a strong relation to methodical approaches. On the other hand, the lowest differences correspond to maintenance related statements, suggesting that in general this is considered to be well taken care of already. This is true for both parties to conclude. Not surprising, this case was also evident during the face-to-face interviews, local authorities assumed the most obvious aspects of e-Government, notably client focus of e-communication and feedbacks, security and maintenance of websites, hard- as well as software, of the highest priority. But except the latter, client focus integration of the projects was not evidenced in the recent implementation status. It seems that the local authorities have the same tendency about neglecting the other aspects of e-Government while focusing only on ICTs as was corroborated in the literature (Jansen, 2005; Faya, 2001). This attitude may have solid grounds if directed to quick wins by pilot projecting on repetitive volumes so as to acquire support.

Table 4.21. EFQM Criterion: Processes

RESULTS - TABLES		European Local Authorities			Turkish Local Authorities		
	Theme of Investigation	Average Desired	Average Current	Δ Average (Des,Cur)	Your Desired	Your Current	Δ Your (Avg,Your)
	PROCESSES	**8,3**	**5,5**	**2,8**	**9,3**	**6,6**	**2,6**
40	Role of e-Government processes are established in process models	7,9	**4,9**	**3,0**	9,3	6,7	2,5
41	Workflows related to e-Government processes are clearly described	8,2	5,3	2,9	9,4	6,3	**3,1**
42	Implementation of a document management system is a basic necessity for e-Government	8,8	5,5	**3,3**	9,5	6,5	2,9
43	e-Government process responsibilities are clearly established	8,7	5,7	**3,0**	9,5	6,8	2,7
44	Outsourced operations are monitored and reported on	**7,2**	5,8	1,4	**7,5**	**4,8**	2,7
45	Site usage is monitored and results are used in improvement of service delivery	8,8	6,8	2,0	9,7	8,2	1,5
46	Online service delivery is based on client needs and meets client expectations	9,0	6,3	2,6	9,5	7,9	1,6
47	Citizen participation is encouraged by giving access to policy information and enabling interactivity in policy making	8,9	6,3	2,6	9,0	5,6	**3,4**
48	Intake of service requests is directed to a middle office where requests are redirected to back-offices of different departments	**7,0**	**4,6**	2,5	9,2	5,8	**3,4**
49	Organizational change leads to central back-office systems shared with other municipalities (for relevant services)	**6,3**	**3,0**	**3,3**	**8,7**	**5,0**	**3,7**
50	A comprehensive security architecture is in place to protect front- middle- and back-office systems and sensitive data	9,3	6,8	2,6	9,5	7,7	1,8
51	In e-Government, internet is considered as one channel among other channels	8,1	**4,7**	**3,4**	**8,9**	7,1	1,8
52	Client relations are managed in a structured system, enabling integrated service delivery and pro-active service delivery	7,6	**4,0**	**3,7**	9,6	6,1	3,5
53	Electronic communication is managed in a structured way	9,2	6,3	2,8	9,7	6,8	2,9
54	Error reports and complaints received from customers lead to process improvement	9,3	7,1	2,2	9,9	7,9	1,9
	SD	0,9	1,2	0,6	0,6	1,0	0,7

Source: EU Results are adapted from KEeLAN (2002)

The element "**Processes**" is also seen as important, once again, much more important for the Turkish authorities. Yet, by analogy with the former element, the variations by sub-criterion in the scores for "**desired**" are considerable for the European side. This is relatively stable for the Turkish authorities. To a distinctly greater extent, among the European local authorities, essentially situation specific statements, notably #44, 48 and 49 tend to get low scores; #49 even lowest. On the other hand, security and (follow-up of) e-communications, as expressed in statements #50, 53 and 54, respectively, are apparently aspects every authority can relate to in view of the high scores. Negative outliers #44, 48, and 51 indicate similar assumptions for the Turkish side at the "**desired**" scores. In addition to statements # 53, 54, unlike the European counterparts, the Turkish authorities appear to understand the importance of site usage and monitoring conveyed at #45.

When comparing the differences between "**desired**" and "**current**" [D(Des,Cur)], on average there is still substantial ground to be covered. Before processing with the assessment of the averages in particular, the standard deviations of the current situations for both local governments are significant as stated at the previous element. Given the high differences on statements #40 (process modeling), 42 (document management), 43 (dispersed responsibilities), 49(change in the back-offices), 51(alternative channels for communication), and 52(client relationship management), the European local governments are dealing with structural issues which can be translated into a clear need apparently felt to introduce such methodical aspects. They are just beginning to change their back-offices. Statement #52 on a structured system for client relations is also noteworthy in that its desirability is only moderate, whereas the average "**current**" situation is seen to be the farthest of. From

the Turkish perspective though, "**current**" situation is somewhat positive. Items #41(workflows), 47(policy making), 48(back and front offices integration), and 49(change in the back-offices) signals particularly high differences. Statement #47 is unique because given the lowest scores obtained during the web-scanning process of policy making in the same context confirms the benchmarking phase as well. It will not be wrong to conclude that unlike their counterparts, the Turkish authorities already commenced change and striving for it.

Table 4.22. EFQM Criterion: Regional Context

RESULTS - TABLES		European Local Authorities			Turkish Local Authorities		
Theme of Investigation		Average Desired	Average Current	Δ Average (Des,Cur)	Your Desired	Your Current	Δ Your (Avg,Your)
	Regional Context	**8,0**	**5,1**	**2,9**	**9,1**	**5,1**	**4,0**
55	Synergies with other municipalities and local actors in the region in the field of e-Government are created through continuous dialogue	8,4	5,8	2,6	9,0	5,6	**3,4**
56	A strong coherence exists between regional e-Government policy and local e-Government policy	7,8	4,9	2,9	9,0	**4,7**	4,3
57	Strong efforts from the regional level are made to promote e-Government at the local level	7,8	**4,6**	**3,2**	9,3	5,1	4,3
	SD	**0,4**	**0,6**	**0,3**	**0,2**	**0,4**	**0,5**

Source: EU Results are adapted from KEeLAN (2002)

The element "**Regional Context**" is seen as important, given the average "**desired**" scores, once again, rather higher for the Turkish authorities. However, when comparing the differences between "**desired**" and "**current**" [D(Des,Cur)], there is the most ground to be covered for this element, particularly with respect to

the more situation specific aspects as comprised in statements #55 and 57 for both sides. During the interviews, one of the most compelling arguments was about the regional context. Six of the authorities articulated the impeding efforts of central government either directly or through its subsidiaries on the local level. When asked if any cooperation desired in that sense, negative replies were the most. For both local governments, there seem to be a substantial gap in the regional cooperation and coordination.

4.4.3.3. Key Findings of Phase 3

All of the 20 selected best practices have broadband Internet connection. Except one, 19 of these authorities built and run an IT department.

As expected to occur, either induced or facilitated by e-Government initiatives, the actual and concrete back-office reorganizations have been encountered significantly less than was expected on basis of the web-scan. Though worded earlier, obtaining an average of 3 or 4 from the services/sub-services should indicate a change or initiation of change in the organizations. However, this was not the case. Overall, about 1 in 10 local authorities had already significantly modified their back-offices as a result of increased demand orientation. Yet, the majority of the remaining authorities indicated that their back-office reorganization was about to be realized in the near future. Establishing a solid web presence was often referred to as a catalyst to achieve back-office reorganization, which suggests that the website in fact is likely to be ahead of the development, in turn explaining the expectations raised by the web-scan.

Thus far, the vast majority of e-Government initiatives have a strong focus on improving the quality of service delivery. Cost efficiency is always indicated to be an important goal as well, albeit a more long term one, with some authorities apparently seeing quality improvement as a prerequisite to subsequently realize cost advantages. This attitude was also supported by the quality improving activities commenced at the same time within almost every municipality, with e-Government initiatives. There were only 7 exceptions out of 20 which declared nothing about their intentions of quality assurance efforts planned in the near future. What is interesting however is that 5 out of 13 local governments expressed Total Quality Management (TQM) initiatives in their jurisdictions, the efforts for TQM commenced along with e-Government projects translating interconnected functions. Hence, quite a small number, 3 of those authorities recognize the concrete benefits of cost efficiency supplied by e-Government efforts. One of those authorities, obtained EFQM local and regional prize in Europe in 2004, a special prize for Excellent Progress in the development of e-services for citizens.

Only 3 of the authorities interviewed have conducted an actual and systematic cost-benefit analysis based on impact or performance indicators. As a rule, the issue is considered but just dealt with randomly. Therefore, since no indicator values are determined beforehand, it will be very difficult to determine improvements, except in these 3 authorities, notably in terms of cost efficiency, afterwards. Furthermore, all of the local authorities offering e-Government somewhat outsourced the hardware maintenance as well as software development. There were only 4 of them which stated in-house software development. Even the in-house software developers were

acquiring outsourced support from private companies. But the running and the maintenance of the systems are done in-house.

Most authorities have preferred a “trial and error” / “learning-by-doing” approach to e-Government implementations, which is not always coherent. Indications were found that (over)enthusiasm, perhaps combined with opportunistic sentiments, through e-Government champions, is likely to be a prime reason for less planned initiatives as well.

All 20 local authorities said “yes” to outsourcing support, both for equipment and consulting. There are almost no signs of any cooperation with academia, due to partly unwillingness and non-existence of such a tradition countrywide and partly scant sources available for those authorities to be utilized fully. Even academic institutions were blamed for disinterest in this field. During the interviews only 1 municipality stated cooperation with an academic institution.

Local authorities from AKP representatives use clearing desks on their confrontations with citizens. The names may vary depending on the locations like white/blue/service desks but the functions remain the same. They all act as middle-offices for one-point-contacts. And 15 of the selected cases use this type of one-contact points.

One of the main motivating factors of e-Government was being online due to concerns about globalization according to the interviewed authorities, but somewhat contradictory; only 2 authorities used an additional language besides Turkish.

During the interviews, 5 of the authorities stated that they have launched EU Bureaus so as to coordinate the relations with European counterparts and manage the candidacy period arrangements. For example Istanbul Metropolitan Municipality applied for the EU Funds to fulfill its projects on local agenda within the adaptation framework of EU. And the coordination mechanism was delegated to its EU Bureau during these processes.

Albeit the wide gaps between the "**desired**" and the "**current**" scores of the "**regional context**", this was not totally evidenced by the interview results. The authorities gave interesting examples of collaboration and shared projects related to local e-Government structures. Table 4.24. gave examples of this collaboration among the actors on the regional level.

Table 4.23. Examples of Collaboration among the Regional Actors
In-depth Interview Results

Local Government	Regional Partners from Local Governments	Regional Partner from Central Government	Types of Collaboration
Istanbul Metropolitan	Metropolitan District and Lower-tier Municipalities	Cadastral District Office, Tax Office, Police	- Sharing GIS and CIS databases both online and off line. - Disaster and Crises Coordination Center
	TEDAŞ and BEYEDAŞ (Electricity		Sharing GIS and CIS databases both

	Suppliers), Turkish Telecom, Superior Council of Monuments		online and off line for the infrastructure services.
Nilüfer	Metropolitan, Metropolitan District and Lower-tier Municipalities, Neighborhood Headmen	Cadastral District Office, Tax Office, Police	Sharing GIS and CIS databases both online and off line.
Kadıköy	Metropolitan, Metropolitan District and Lower-tier Municipalities, Neighborhood Headmen	Cadastral District Office, Tax Office, Police	Sharing GIS and CIS databases both online and off line.
Silivri	Metropolitan, Metropolitan District and Lower-tier Municipalities, Neighborhood Headmen	Cadastral District Office, Tax Office, Police	- Sharing GIS and CIS databases both online and off line. - Disaster Crises Center - Mernis, blood groups, impaired citizen inventory
Gazi	Samsun Metropolitan, Atakum District	Cadastral District Office, Tax Office	- Sharing GIS and CIS databases both online and off line.

V. DISCUSSION AND CONCLUSION

E-Government is not just a technical term eligible for the circles of engineers. Nor is it a" hype", a temporary trend which cannot be neglected. It both enables and requires a radical change in the way local authority staff and members think and work; in the organization, structure and systems within and between authorities, as well as with other agencies and organizations. It will also impact on the relationship local authorities have with their local communities.

The most important risks lie on having no-collaboration and no-coordination which comprises the lack of coherence in the initiatives, likely to increase of digital-divide, the usage of incompatible standards; missing of interoperability among systems, the absence of exchanging experiences, risk of duplication (Borgonovi and Belle, 2003).

Given to the formidably high scores at the maturity of the online services along with the assumption that indicates sophisticated back-office organizations, local authorities are looking for ways to decrease the cost of providing services while simultaneously increase their efficiency. In fact most of them were aware that fruitful gains will come after reorganizing their organizations. This is rather logical and

justified through their cases because local governments are facing more constraints in their attempts to implement e-Government initiatives than central governments.

Thus, in addition to being more susceptible to economic downturns, they are also facing the problem of having less qualified personnel in technical fields. They are striving against bulge of barriers like interoperability issues between agencies, technology and organizational incompatibility, security, regulations, culture, legality, etc. Often, having a website was considered as enough or worst, only online presence was seen as e-Government itself.

The risks of digital exclusion were undervalued into not owning or not knowing to use the computers as well as the Internet. But usability and accessibility problems observed during the web-scan process were so evident. Physically impaired, elders, and children were not taken into consideration during the design processes.

Albeit some academicians' arguments that e-democracy being the last stage of maturity curves (Moon, 2002), the Turkish authorities somewhat neglected and underestimated the power of electronic policy making contrary to their counterparts in Europe. Similar situation was also observed with cultural matters. Yet positive signs come from the authorities who exhibited highly sophisticated examples of online services on these areas (Istanbul, Kadıkoy) after saturated enough at e-services.

The new law encouraging the establishment of CIS influenced rapid developments of e-Government initiatives, a view affirmed by the most personnel during the interviews.

Recent research has demonstrated that Turkish local e-Government initiatives develop at a rapid pace and begin to affect profoundly such dimensions of **efficient, inclusive, transparent public administrations**. However, recent research has also demonstrated that there are wide discrepancies among municipalities with regard to the scope and the quality of e-Government initiatives as well as with regard to the demand for municipal e-Government services. Another striking fact was about the motivating factors behind the e-Government efforts among the Turkish local authorities. The primary reason, as was stated in the literature earlier by Ho (2002), rather internal; the focus was on managerial operating efficiency and enhancing internal communication through ICTs.

There is a need for an urgent coordination mechanism for the local authorities so as to guide them during the process of e-Government projects. Yet, some institutions assumed this role but the way they handle and lead is questionable. They also lack in qualified personnel, funding, and in the terms of available sources (Directorate of Local Administrations, YerelBilgi-LocalInfo, YerelNet-Local Net).

Both the web-scanning phase as well as the benchmarking process translated into interesting and successful implementation examples. When compared to their counterparts in the Member Countries, the Turkish local authorities performed very well on either of the phases. The most prominent ones were, unlike European

authorities, on the key elements "**economic development**" and "**credit and loans**". Despite the low number of authorities owning websites, the ones that offer e-services on their websites fulfill the promises. Out of 104, 63 functioned properly and all reached at least at one level to the maturity levels 3 or 4.

The future is bright. The velocity to transform and reform on the local level is high. The energy of the e-champions in those authorities is promising against all the obstacles. This is affirmed by the very high change rate of Internet site ownerships as well as broadband Internet connections.

With this research we;

- built some common bench learning methodologies at Turkish level to improve web front offices and modernize the public administration.
- contributed to fulfill the gap of research on local administrations because all the research dissemination is based on central governments or on agency levels.
- explored how local government is responding to the new culture of e-governance by examining how it is meeting both public and government demands.

Additional research in this area is necessary to shed more light on the subject and to examine the process in certain periods. The future research also needs to expand to supply local authorities with some more concrete guidance and methodologies from multi-disciplines. Particularly, the citizen side is a fertile area waiting for the relevant researchers.

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VII. APPENDICES

6.1. Implementation Manual: a Guide on How to transform into an Local e-Government

Founded on the famous Deming's PDCA cycle, four phases has been adapted into a model to constitute procedures on business change including implementation of new or revised e-service delivery processes in a local e-Government context (KEeLAN, 2003a:16-22). Some minor though corresponding changes were made after the interviews with the local representatives to map the overall framework of interoperability to the Turkish local governments. The actual assumption is that the organization is already online (i.e. built a brochureware) but has a tendency to initiate a local e-government project.

Plan: Design or revise business process components to improve results

The first four steps, i.e. before the actual definition of an implementation project, are not necessary sequential, but rather more iterative and are thus better executed in

parallel. And try to focus on quick wins. To achieve this, concentrate particularly on high-volume repetitive or revenue-generated services.

A. Assess current position

1. Analyze organization:

    a. Assess maturity of your Internet front-office with self-assessment tool[•]

    b. Assess relative organization quality with self-assessment tool[••]

    c. Assess change and e-government readiness of your organization

    d. Assess leadership support and vision

2. Analyze Partners & stakeholders:

    a. Identify key players and, among these, potential public and private partners

    - *Project manager/team*: those who will analyze, design, and build the e-government system.
    - *Supplier(s)*: those who will supply the technology and other resources required by the e-government system.
    - *Operators*: those who will be carrying out the activities/processes that make the e-government system work.
    - *Clients*: primary clients are on the immediate receiving end of what the e-government system does or outputs; there may also be secondary clients (possibly outside the organization) who will be affected indirectly by the system since they are served by the primary clients.
    - *Champion(s)*: the person (or group) who drives the project on and seeks to justify its implementation.
    - *Sponsor(s)*: the person (or group) who pays for the expense and effort required to develop the new e-government system.
    - *Owner*: the manager of the organization or department that will own and use the system, who is ultimately responsible for the system.
    - *Other stakeholders*: who have a significant influence on the project or on whom the project will have a significant influence.

[•] . Front-Office Maturity Assessment tool available at http:// www.keelan.ie.
[•] . Organisation Quality Assessment tool available at http:// www.keelan.ie.

You don't need as many stakeholders as this: the top four or so will probably do.

3. Analyze current services & opportunities:

a. Assess, describe and analyze the way the services are currently performed with the people involved (workflow - charts)

b. Perform a problem and opportunity analysis

B. Develop Strategy

1. Develop vision on e-services; align with general municipal, and appropriate regional/national vision and programs

2. Asses target groups in terms of e.g. citizen/company profiles, processes interaction with citizens, business communication channels, etc.

3. Assess need to be fulfilled by the e-service (e.g. through a customer survey)

4. Establish objectives and priorities; develop/define achievement indicators

5. Make an overall budget estimate as well as an inventory of funding options

6. Consider Procurement, Outsourcing, Shared Service Centers, (other) partnerships, etc.

7. Cost savings produced by back-office integration related efficiency gains are a funding source as well

C. Compare with and learn from other experiences

1. Options:

a. Perform a benchmark against similar services in similar organizations:

b. Find and review approaches, similar to your envisaged one, with web presence

c. Develop list of questions and test the selected sites accordingly

D. Involve key people

1. Identify key people involved in potential implementation project.

2. Set-up a cross-functional core team of knowledgeable and influential representatives at the moment the opportunity appears sufficiently real.

3. Assign responsibilities.

E. Define implementation project(s)

If primary driver is more or better service to citizen, use "Top-Down" definition; If primary driver is more organizational efficiency, use "Bottom-Up" definition

I. "Top-Down" definition

1. Conceptualize e-service to be delivered

2. Define front-office, i.e. the Internet website

3. Determine hard- and software related technical change consequences

4. Consider expandability and integration with other existing or to be implemented e-services

5. Determine overall ICT infrastructure related technical change consequences

6. Determine back-office organizational change consequences on a service-by-service basis, i.e. from a vertical process orientation

7. Contrary to technical consequences which are immediate, organizational change related consequences may be longer term, based on using website as catalyst for organizational change

8. Overall back-office strategy should be horizontally integrating all services/sectors

9. Calculate specific budget and back-office integration cost savings; establish applicable funding options and appropriate partners

II. "Bottom-up" definition

1. Conceptualize back-office organizational change to be achieved based on a strategy to horizontally integrate all services/sectors
2. Determine e-service change
3. Define front-office, i.e. the Internet website
4. Determine hard- and software related technical change consequences
5. Consider expandability and integration with other existing or to be implemented e-services
6. Determine overall ICT infrastructure related technical change consequences
7. Calculate specific budget and back-office integration cost savings; establish applicable funding options and appropriate partners

F. Conduct Feasibility study to obtain some idea of the potential success of (an) accordingly set-up implementation project(s)

1. Assess following aspects in an integrated way:
2. Technical aspects
3. Organizational aspects
4. Legal aspects (a/o privacy issues, security, ownership of digital content, legal framework for e-voting etc.)
5. Cost benefit

IF INFEASIBLE revise implementation project(s) (restart at "Define implementation project(s)") or even revise strategy (restart at "Develop Strategy"); IF FEASIBLE proceed to "DO" phase.

Do: Implement the plan and measure its performance

A. Prepare Internal & External Organization

1. Set-up project office

2. Establish responsibilities, assign tasks and roles

3. Refine Budget and secure funding for identified gaps

4. Select Project Management tools

5. Win / Increase staff support

6. Formalize relations with sponsors, suppliers and partners

B. Pilot Project (*Think big, start small, and scale fast*)

1. Select pilot project (geographical area, limited service area, trial site …).

2. Establish objectives and performance criteria; answer at least following questions:

3. Is adequate and appropriate service provided?

4. What is level of customer satisfaction? Compared to other modes of delivery?

5. What are unit costs for the e-service delivery? Compared to other modes of delivery?

6. Is organization capable of (learning to) operating the service?

7. What improvements are needed /wanted for wide scale implementation?

8. Internal marketing: Inform staff of plan and potential benefits

9. Train staff and roll out of pilot hardware and software system(s)

10. External Marketing: Inform customers of service and benefits, but stress experimental stage

11. Operate pilot e-service

12. Measure performance in terms of objectives (costs, time, quality etc)

13. Internal satisfaction: Staff survey (optionally: on-line)

14. External satisfaction: Customer survey of specific e-service (optionally: on-line)

IF UNSATISFACTORY ACHIEVEMENTS return to "PLAN" phase and revise strategy (restart at "Develop Strategy"): IF SATISFACTORY ACHIEVEMENTS do full implementation.

C. Full implementation

1. Internal marketing: Inform staff of pilot project results, resultant plan and potential benefits

2. Train staff and full-scale roll out of hardware and software system(s)

3. External Marketing: Inform customers of service and benefits

4. Operate e-service(s)

5. Measure performance in terms of objectives (costs, time, quality etc)[§]

6. Internal satisfaction: Staff survey (optionally: on-line)

7. External satisfaction: Customer survey of specific e-service (optionally: on-line)

Proceed to Check and Act Phases.

Check: Assess the measurements and report the results to decision makers

Act: Decide on the changes needed to improve the process

Actions to be taken in the Check and Act steps are highly dependent on the specificities of the situation. For general applicability therefore, only very generic

[§] . See Appendix 7.2. to gather some insight on the type of performance measures.

and obvious descriptions can be given which essentially are already captured in the step definitions themselves.

1. Develop a data collection system for operational performance of service, costs and benefits (for instance web hits, counts of use of specific services, customer satisfaction), and reporting intervals
2. Analyze performance data, costs and benefits, and compare with objectives of the e-service
3. Analyze organizational performance (impact of the innovation)
4. Report results to leadership
5. Perform periodic reviews with all relevant personnel and stakeholders involved
6. Decide on changes needed to improve the e-service delivery

Return to "PLAN" phase and assess feasibility of changes (restart at "Conduct Feasibility Study")

6.2. Example of Performance Measures Table

Table 6.1. Example of E-Government Performance Measures Table Adapted From Stowers (2004;p.38)

	Input Measures	**Output Measures**	**Outcome Measures**
Web/ Technology Measures	• Application development and hardware set-up – Staff costs – Other development costs – Other vendor costs – Staff time for application development – Other development time – Vendor time for development purposes	• Number of hits or user contact sessions • Number of downloads of documents • Time users spend on a site • Number of times transactions completed, or the times online forms have been accessed and completed • Dollar amounts processed through each site	• Accessibility of services – Number of site pages meeting accessibility criteria • Accuracy of the assistance or information as measured by percent accuracy rates in random fact checking • Adequacy of information as measured by staff and citizen surveys • Ease of use as measured by pop-up or other surveys • Citizen satisfaction with site itself

			Service Quality • Percent of time when website is down and not available • Minimal webpage errors **Efficiency** • Cost per transaction • Total cost per user session **End Outcomes** • Cost savings from e-Government • Staff time savings from e-Government
Service-Oriented Measures	• Maintenance and application improvement – Staff costs – Other maintenance costs – Other vendor costs – Staff time – Other improvement time – Vendor time	• Time required for e-mail response to inquiry • Number of e-mail messages sent to agency and/or officials • Number of e- mail messages returned to them • Number of e-mail requests successfully resolved • Number of	• Level of citizen satisfaction with e-Government services—measured by surveys • Usefulness of information—measured by surveys **Timeliness** • Response times to requests for information • Time required for e-mail response to inquiry

		applications developed and implemented • Number of e-permits processed • Number of times various maps and mapping applications have been accessed • Number of e-commerce applications accessed • Number of license and other applications processed • Number of times multimedia presentations are played • Feedback on multimedia presentations • Number of times databases are accessed • Information in databases that is accessed most frequently	**Service Quality** • Adoption rates within specified user groups • Number of referrals from other websites and government portals • For states and local governments, the number of agencies participating by providing information or services **Efficiency** • Cost of providing each service per user • Cost per service transaction **End Outcomes** • Cost savings from e-Government • Staff time savings from e-Government • Trust in government

6.3. The Overall Results of Phase 1

Table 6.2. The Overall Results of Benchmarking Phase

Population	MUNICIPALITY	Usability		Policy making		Economic development		Personal documents		Credits & Loans		Information		Education		Building permits		Environment		Culture & Leisure		Average		Generations				Occurrences
		GENERATION	SCORE	GENERATION	SCORE	GENERATION	SCORE	GENERATION	SCORE	GENERATION	SCORE	GENERATION	SCORE	GENERATION	SCORE	GENERATION	SCORE	GENERATION	SCORE	GENERATION	SCORE	GENERATION	SCORE	1	2	3	4	
25 188	GEREDE	2	31	1	13					3	49	4	67									10	160	1	1	1	1	2
37 804	SANDIKLI	2	29	4	49					2	28	3	37									11	143	0	2	1	1	2
267 879	SİNCAN	1	18	1	36	3	36			3	39	3	32									11	161	2	0	3	0	3
42 715	SULUOVA	2	32	3	50					3	40	3	37									11	159	0	1	3	0	3
478 623	BAHÇELİEVLER	3	34	2	41					4	73	3	54									12	202	0	1	2	1	3
63 363	BURDUR	2	26	3	36					3	46	4	55									12	163	0	1	2	1	3
19 375	GEDİZ	1	12	1	22	4	83					4	58							2	34	12	209	2	1	0	2	2
48 372	SEYDİŞEHİR	1	15			4	81			4	81	1	22							2	22	12	221	2	1	0	2	2
1 130 710	ADANA	2	25	1	25	2	38	1	16	3	43	3	52							1	16	13	215	3	2	2	0	2
215 436	BALIKESİR	3	48	2	35					4	127	4	57									13	267	0	1	1	2	3
7 816	BASMAKÇI	3	49	4	86			2	32			4	55									13	222	0	1	1	2	3
231 900	BEYOĞLU	3	38	2	39					4	89	4	56									13	222	0	1	1	2	3
3 203 362	ANKARA	3	58	2	33	3	47			2	26	4	78									14	242	0	2	2	1	3
482 793	ESKİŞEHİR	3	38	1	34					4	104	4	69							2	36	14	281	1	1	1	2	3
2 932	KARABURUN	2	42	1	35	3	56			3	62	3	52							2	30	14	277	1	2	3	0	3
29 804	BOR	1	12	1	22	4	66			4	66	3	33							2	22	15	221	2	1	1	2	3

3 851	GÖLTÜRKBÜKÜ	1	15	1	30	4	96			4	96	3	37							2	34	15	308	2	1	1	2	3
275 480	DENİZLİ	3	44	2	41	4	112			4	112	3	45									16	354	0	1	2	2	4
37 537	ALİAĞA	2	23	1	26	4	79			4	79	3	36							2	22	16	265	1	2	1	2	3
143 267	AYDIN	4	56	4	78					4	118	4	72									16	324	0	0	0	3	3
556 519	BAĞCILAR	3	38	2	47	4	94			4	124	3	54									16	357	0	1	2	2	4
208 398	BAKIRKÖY	3	38	2	33					4	124	3	54							4	80	16	329	0	1	2	2	4
28 423	OSMANCIK	3	38	1	34	4	115			4	130	4	63									16	380	1	0	1	3	4
216 382	TARSUS	3	50	2	47	3	60			3	60	3	51							2	34	16	302	0	2	4	0	4
25 257	ÇEŞME	2	39	1	26	4	63			4	63	4	66							2	36	17	293	1	2	0	3	3
2 849	HORSUNLU	2	28	3	44	4	90			4	124	4	70									17	356	0	1	1	3	4
438 430	KARŞIYAKA	3	35	1	35	4	64			4	64	3	37							2	18	17	253	1	1	2	2	4
166 665	KÜTAHYA	2	26	1	30	4	75			4	75	4	58							2	34	17	298	1	2	0	3	3
113 100	TOKAT	3	44	1	34	4	78			4	78	3	54							2	36	17	324	1	1	2	2	4
208 755	TEPEBAŞI	3	44	2	35	4	98			4	98	3	51							2	36	18	362	0	2	2	2	4
400 023	ALTINDAĞ	3	48	2	33	3	61	2	40	4	100	4	56									18	338	0	2	2	2	4
5 986	MORDOĞAN	3	41	2	29	4	68			4	68	3	51							2	36	18	293	0	2	2	2	4
2 946	ÖMERLİ	3	38	1	30					4	96	3	46			3	55			4	70	18	335	1	0	3	2	**5**
7 694	YALIKAVAK	3	45	1	30	4	111			4	111	4	67							2	34	18	398	1	1	1	3	4
391 128	BORNOVA	3	54	2	31	4	80			4	80	4	69							2	36	19	350	0	2	1	3	4
178 538	ADIYAMAN	2	26	1	36	4	72	3	45	4	72	3	37							2	18	19	306	1	2	2	2	4
19 018	BAHÇEŞEHİR	3	39	1	34	4	106	4	100	4	132	3	44									19	455	1	0	2	3	**5**
66 877	BALÇOVA	3	54	2	31	4	76			4	80	4	69							2	36	19	346	0	2	1	3	4
172 291	BEYKOZ	3	38	4	48	4	87			4	117	4	57									19	347	0	0	1	4	**5**
1 194 687	BURSA BB	3	41	2	31	4	128			4	128	3	51							3	66	19	445	0	1	3	2	**5**

235 116	EYÜP	3	56	4	51	4	115			4	130	4	56									19	408	0	0	1	4	5
148 262	GAZİ	3	53	3	46	4	78			4	78	3	48							2	32	19	335	0	1	3	2	5
658 756	G.PAŞA	4	49	3	36	4	96			4	96	4	56									19	333	0	0	1	3	4
195 699	KOCAELİ	3	44	2	35	4	66			4	66	4	72							2	32	19	315	0	2	1	3	4
781 363	KONAK	3	36	2	35	4	67			4	67	3	46							3	48	19	299	0	1	3	2	5
327 627	SELÇUKLU	3	47	2	31	4	71			4	71	4	69							2	36	19	325	0	2	1	3	4
10 262	ŞİLE	3	52	2	31	4	131			4	131	4	60							2	36	19	441	0	2	1	3	4
440 859	ÜMRANİYE	4	49	3	39	4	115			4	130	4	56									19	389	0	0	1	3	4
579 127	OSMANGAZİ	4	48	4	55					4	123	4	72			4	94					20	392	0	0	0	4	4
88 346	ALANYA	3	53	4	55	4	98			4	126	3	54			3	57					21	443	0	0	3	3	6
39 884	BEYLİKDÜZÜ	3	41	2	35	4	119	4	106	4	111	4	69									21	481	0	1	1	4	5
345 239	KAĞITHANE	3	44	2	39	4	152			4	134	4	56							4	70	21	495	0	1	1	4	5
183 677	KARATAY	3	44	1	32	4	95			4	95	3	54			4	82			2	36	21	438	1	1	2	3	5
742 690	KONYA BB	4	49	2	27	4	74			4	74	4	57							3	62	21	343	0	1	1	3	4
107 883	TUZLA	2	25	1	30	4	122			4	122	3	52			3	55			4	70	21	476	1	1	2	3	5
2 232 265	İZMİR BB	3	47	2	37	4	94	3	62	4	94	4	69							2	32	22	435	0	2	2	3	5
625 167	KEÇİÖREN	3	43	2	35	3	56	4	61	4	58	3	42			3	55					22	350	0	1	4	2	6
270 674	ŞİŞLİ	3	39	1	30	4	122			4	122	3	52			3	55			4	70	22	490	1	0	3	3	6
8 803 468	İSTANBUL BB	4	59	3	42	4	137			4	137	4	78							4	102	23	555	0	0	1	4	5
136 311	NİLÜFER	3	36	4	58	4	102			4	117	4	72			4	73			3	43	26	501	0	0	2	5	7
495 118	ÜSKÜDAR	4	63	3	39	4	152			4	126	4	71							4	70	23	521	0	0	1	4	5
663 299	KADIKÖY	3	50	2	51	4	124	4	63	4	130	4	56			4	79					25	553	0	1	1	5	6
44 530	SİLİVRİ	3	48	4	64	4	152			4	134	4	56			3	55			3	38	25	547	0	0	3	4	7

6.4. Comparison of the Results of Phase 2: Web-Scanning

Table 6.3. Comparison of the Results of Phase 2: Web-Scanning

Country	Number of Authorities Scanned	Usability	Policy making	Economic development	Personal documents	Credits & Loans	Information	Education	Building permits	Environment	Culture & Leisure
UK/Northern Ireland	4	1,33	1,00	1,33			1,67				2,00
Spain	68	1,90	1,48	2,18	1,64	2,29	2,45	2,00	1,53	1,20	1,43
Belgium	45	2,18	2,18	1,83	2,27	1,67	2,16	1,22	1,00	1,93	1,84
Luxembourg	10	2,50	1,60	0,00	2,70					2,00	2,20
Greece	20	2,20	1,40	3,00	2,29	2,00	2,24		1,67	1,17	1,75
Turkey	63	2,76	2,08	3,84	3,00	3,82	3,51		3,40		2,49
Portugal	20	2,15	1,47	2,40			2,30		3,50	2,40	1,63
Austria	20	2,20	2,05	2,40			2,95				1,90
UK/England	77	3,01	2,42	2,19	1,83		2,88	1,75	2,63	1,65	2,36
The Netherlands	45	3,09	2,36	2,50	2,21	2,41	2,32		2,08	2,05	2,21
Italy	90	1,97	1,91	2,50	2,10	2,60	2,68	2,80	2,63	2,44	2,51
Germany	90	2,50	2,20	3,25	2,13		2,67		2,76		2,16
UK/Scotland	6	3,00	2,33	1,00			2,83		2,60		3,40
Sweden	45	2,93	2,40	3,50			2,89	2,00	1,88	1,50	3,65
Finland	21	3,00	3,05	1,75		2,00	3,00		2,40		3,62
UK/Wales	3	3,67	2,67	2,00			3,00		3,50	2,00	2,00
France	90	3,08	2,36	3,00	2,87					2,38	2,47
Denmark	21	3,10	2,48		2,67	3,89	2,69	1,00	2,22	2,50	3,84
Ireland	20	1,95				3,68			3,65	3,60	2,74

6.5. Detailed Analysis of the European and the Turkish Local Authorities

EUROPEAN 1. KEY ELEMENT: LEADERSHIP

Table 6.4. Descriptive Statistics of Key Element Leadership for European Local Authorities

	N	Mean	Std. Deviation	Minimum	Maximum
Eu_L_A	7	8,6143	,21157	8,30	8,80
Eu_L_B	7	6,1286	,47157	5,70	7,00

Table 6.5. Wilcoxon Signed Ranks Test of Key Element Leadership for European Local Authorities

Ranks

		N	Mean Rank	Sum of Ranks
Eu_L_B - Eu_L_A	Negative Ranks	7[a]	4,00	28,00
	Positive Ranks	0[b]	,00	,00
	Ties	0[c]		
	Total	7		

a. Eu_L_B < Eu_L_A

b. Eu_L_B > Eu_L_A

c. Eu_L_B = Eu_L_A

Table 6.6. Test Statistics (b) of Key Element Leadership for European Local Authorities

	Eu_L_B - Eu_L_A
Z	-2,371(a)
Asymp. Sig. (2-tailed)	,018 *

a. Based on positive ranks.
b. Wilcoxon Signed Ranks Test

EUROPEAN 2. KEY ELEMENT: POLICY AND STRATEGY

Table 6.7. Descriptive Statistics of Key Element Policy and Strategy for European Local Authorities

	N	Mean	Std. Deviation	Minimum	Maximum
Eu_PS_A	13	8,0308	,49562	7,30	8,80
Eu_PS_B	13	6,0308	,57791	5,10	6,90

Table 6.8. Wilcoxon Signed Ranks Test of Key Element Policy and Strategy for European Local Authorities

Ranks

		N	Mean Rank	Sum of Ranks
Eu_PS_B - Eu_PS_A	Negative Ranks	13(a)	7,00	91,00
	Positive Ranks	0(b)	,00	,00
	Ties	0(c)		
	Total	13		

a. Eu_PS_B < Eu_PS_A
b. Eu_PS_B > Eu_PS_A
c. Eu_PS_B = Eu_PS_A

Table 6.9. Test Statistics (b) of Key Element Policy and Strategy for European Local Authorities

	Eu_PS_B - Eu_PS_A
Z	-3,185(a)
Asymp. Sig. (2-tailed)	,001*

a. Based on positive ranks.
b. Wilcoxon Signed Ranks Test

EUROPEAN 3. KEY ELEMENT: PEOPLE

Table 6.10. Descriptive Statistics of Key Element People for European Local Authorities

	N	Mean	Std. Deviation	Minimum	Maximum
Eu_Peop_A	6	7,8667	,52026	7,20	8,40
Eu_Peop_B	6	5,0333	,54283	4,30	5,50

Table 6.11. Wilcoxon Signed Ranks Test of Key Element People for European Local Authorities

Ranks

		N	Mean Rank	Sum of Ranks
Eu_Peop_B - Eu_Peop_A	Negative Ranks	6[a]	3,50	21,00
	Positive Ranks	0[b]	,00	,00
	Ties	0[c]		
	Total	6		

a. Eu_Peop_B < Eu_Peop_A

b. Eu_Peop_B > Eu_Peop_A

c. Eu_Peop_B = Eu_Peop_A

Table 6.12. Test Statistics (b) of Key Element People for European Local Authorities

Test Statistics[b]

	Eu_Peop_B - Eu_Peop_A
Z	-2,207[a]
Asymp. Sig. (2-tailed)	,027

a. Based on positive ranks.

b. Wilcoxon Signed Ranks Test

EUROPEAN 4. KEY ELEMENT: PARTNERSHIP AND RESOURCES

Table 6.13. Descriptive Statistics of Key Element Partnership and Resources for European Local Authorities

Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
Eu_PR_A	13	8,2615	,81908	6,20	9,20
Eu_PR_B	13	6,0077	1,29258	4,50	8,30

Table 6.14. Wilcoxon Signed Ranks Test of Key Element Partnership and Resources for European Local Authorities

Ranks

		N	Mean Rank	Sum of Ranks
Eu_PR_B - Eu_PR_A	Negative Ranks	13[a]	7,00	91,00
	Positive Ranks	0[b]	,00	,00
	Ties	0[c]		
	Total	13		

a. Eu_PR_B < Eu_PR_A

b. Eu_PR_B > Eu_PR_A

c. Eu_PR_B = Eu_PR_A

Table 6.15. Test Statistics (b) of Key Element Partnership and Resources for European Local Authorities

Test Statistics[b]

	Eu_PR_B - Eu_PR_A
Z	-3,184[a]
Asymp. Sig. (2-tailed)	,001

a. Based on positive ranks.

b. Wilcoxon Signed Ranks Test

EUROPEAN 5. KEY ELEMENT: PROCESSES

Table 6.16. Descriptive Statistics of Key Element Processes for European Local Authorities

Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
Eu_Proc_A	15	8,2867	,92263	6,30	9,30
Eu_Proc_B	15	5,5400	1,14380	3,00	7,10

Table 6.17. Wilcoxon Signed Ranks Test of Key Element Processes for European Local Authorities

Ranks

		N	Mean Rank	Sum of Ranks
Eu_Proc_B - Eu_Proc_A	Negative Ranks	15[a]	8,00	120,00
	Positive Ranks	0[b]	,00	,00
	Ties	0[c]		
	Total	15		

a. Eu_Proc_B < Eu_Proc_A

b. Eu_Proc_B > Eu_Proc_A

c. Eu_Proc_B = Eu_Proc_A

Table 6.18. Test Statistics (b) of Key Element Processes for European Local Authorities

Test Statistics[b]

	Eu_Proc_B - Eu_Proc_A
Z	-3,410[a]
Asymp. Sig. (2-tailed)	,001

a. Based on positive ranks.

b. Wilcoxon Signed Ranks Test

EUROPEAN 6. KEY ELEMENT: REGIONAL CONTEXT

Table 6.19. Descriptive Statistics of Key Element Regional Context for European Local Authorities

Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
Eu_RC_A	3	8,0000	,34641	7,80	8,40
Eu_RC_B	3	5,1000	,62450	4,60	5,80

Table 6.20. Wilcoxon Signed Ranks Test of Key Element Regional Context for European Local Authorities

Ranks

		N	Mean Rank	Sum of Ranks
Eu_RC_B - Eu_RC_A	Negative Ranks	3[a]	2,00	6,00
	Positive Ranks	0[b]	,00	,00
	Ties	0[c]		
	Total	3		

a. Eu_RC_B < Eu_RC_A

b. Eu_RC_B > Eu_RC_A

c. Eu_RC_B = Eu_RC_A

Table 6.21. Test Statistics (b) of Key Element Regional Context for European Local Authorities

Test Statistics[b]

	Eu_RC_B - Eu_RC_A
Z	-1,604[a]
Asymp. Sig. (2-tailed)	,109

a. Based on positive ranks.

b. Wilcoxon Signed Ranks Test

TURKISH 1. KEY ELEMENT: LEADERSHIP

Table 6.22. Descriptive Statistics of Key Element Leadership for Turkish Local Authorities

Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
Tr_L_A	7	9,2429	,35051	8,70	9,60
Tr_L_B	7	7,0714	,47859	6,50	7,60

Table 6.23. Wilcoxon Signed Ranks Test of Key Element Leadership for Turkish Local Authorities

Ranks

		N	Mean Rank	Sum of Ranks
Tr_L_B - Tr_L_A	Negative Ranks	7[a]	4,00	28,00
	Positive Ranks	0[b]	,00	,00
	Ties	0[c]		
	Total	7		

a. Tr_L_B < Tr_L_A

b. Tr_L_B > Tr_L_A

c. Tr_L_B = Tr_L_A

Table 6.24. Test Statistics (b) of Key Element Leadership for Turkish Local Authorities

Test Statistics[b]

	Tr_L_B - Tr_L_A
Z	-2,410[a]
Asymp. Sig. (2-tailed)	,016

a. Based on positive ranks.

b. Wilcoxon Signed Ranks Test

TURKISH 2. KEY ELEMENT: POLICY AND STRATEGY

Table 6.25. Descriptive Statistics of Key Element Policy and Strategy for Turkish Local Authorities

Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
Tr_PS_A	13	9,3846	,29678	8,60	9,70
Tr_PS_B	13	7,2154	,45064	6,50	8,20

Table 6.26. Wilcoxon Signed Ranks Test of Key Element Policy and Strategy for Turkish Local Authorities

Ranks

		N	Mean Rank	Sum of Ranks
Tr_PS_B - Tr_PS_A	Negative Ranks	13[a]	7,00	91,00
	Positive Ranks	0[b]	,00	,00
	Ties	0[c]		
	Total	13		

a. Tr_PS_B < Tr_PS_A

b. Tr_PS_B > Tr_PS_A

c. Tr_PS_B = Tr_PS_A

Table 6.27. Test Statistics (b) of Key Element Policy and Strategy for Turkish Local Authorities

Test Statistics[b]

	Tr_PS_B - Tr_PS_A
Z	-3,187[a]
Asymp. Sig. (2-tailed)	,001

a. Based on positive ranks.

b. Wilcoxon Signed Ranks Test

TURKISH 3. KEY ELEMENT: PEOPLE

Table 6.28. Descriptive Statistics of Key Element People for Turkish Local Authorities

Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
Tr_Peop_A	6	9,3833	,31252	8,80	9,70
Tr_Peop_B	6	6,6833	,38166	6,30	7,30

Table 6.29. Wilcoxon Signed Ranks Test of Key Element People for Turkish Local Authorities

Ranks

		N	Mean Rank	Sum of Ranks
Tr_Peop_B - Tr_Peop_A	Negative Ranks	6[a]	3,50	21,00
	Positive Ranks	0[b]	,00	,00
	Ties	0[c]		
	Total	6		

a. Tr_Peop_B < Tr_Peop_A

b. Tr_Peop_B > Tr_Peop_A

c. Tr_Peop_B = Tr_Peop_A

Table 6.30. Test Statistics (b) of Key Element People for Turkish Local Authorities

Test Statistics[b]

	Tr_Peop_B - Tr_Peop_A
Z	-2,201[a]
Asymp. Sig. (2-tailed)	,028

a. Based on positive ranks.

b. Wilcoxon Signed Ranks Test

TURKISH 4. KEY ELEMENT: PARTNERSHIP AND RESOURCES

Table 6.31. Descriptive Statistics of Key Element Partnership and Resources for Turkish Local Authorities

Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
Tr_PR_A	13	9,3769	,27735	8,90	9,80
Tr_PR_B	13	6,9846	,95293	5,10	8,60

Table 6.32. Wilcoxon Signed Ranks Test of Key Element Partnership and Resources for Turkish Local Authorities

Ranks

		N	Mean Rank	Sum of Ranks
Tr_PR_B - Tr_PR_A	Negative Ranks	13[a]	7,00	91,00
	Positive Ranks	0[b]	,00	,00
	Ties	0[c]		
	Total	13		

a. Tr_PR_B < Tr_PR_A

b. Tr_PR_B > Tr_PR_A

c. Tr_PR_B = Tr_PR_A

Table 6.33. Test Statistics (b) of Key Element Partnership and Resources for Turkish Local Authorities

Test Statistics[b]

	Tr_PR_B - Tr_PR_A
Z	-3,181[a]
Asymp. Sig. (2-tailed)	,001

a. Based on positive ranks.

b. Wilcoxon Signed Ranks Test

TURKISH 5. KEY ELEMENT: PROCESSES

Table 6.34. Descriptive Statistics of Key Element Processes for Turkish Local Authorities

Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
Tr_Proc_A	15	9,2600	,58407	7,50	9,90
Tr_Proc_B	15	6,6133	1,04462	4,80	8,20

Table 6.35. Wilcoxon Signed Ranks Test of Key Element Processes for Turkish Local Authorities

Ranks

		N	Mean Rank	Sum of Ranks
Tr_Proc_B - Tr_Proc_A	Negative Ranks	15[a]	8,00	120,00
	Positive Ranks	0[b]	,00	,00
	Ties	0[c]		
	Total	15		

a. Tr_Proc_B < Tr_Proc_A

b. Tr_Proc_B > Tr_Proc_A

c. Tr_Proc_B = Tr_Proc_A

Table 6.36. Test Statistics (b) of Key Element Processes for Turkish Local Authorities

Test Statistics[b]

	Tr_Proc_B - Tr_Proc_A
Z	-3,410[a]
Asymp. Sig. (2-tailed)	,001

a. Based on positive ranks.

b. Wilcoxon Signed Ranks Test

TURKISH 6. KEY ELEMENT: REGIONAL CONTEXT

Table 6.37. Descriptive Statistics of Key Element Regional Context for Turkish Local Authorities

Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
Tr_RC_A	3	9,1000	,17321	9,00	9,30
Tr_RC_B	3	5,1333	,45092	4,70	5,60

Table 6.38. Wilcoxon Signed Ranks Test of Key Element Regional Context for Turkish Local Authorities

Ranks

		N	Mean Rank	Sum of Ranks
Tr_RC_B - Tr_RC_A	Negative Ranks	3[a]	2,00	6,00
	Positive Ranks	0[b]	,00	,00
	Ties	0[c]		
	Total	3		

a. Tr_RC_B < Tr_RC_A

b. Tr_RC_B > Tr_RC_A

c. Tr_RC_B = Tr_RC_A

Table 6.39. Test Statistics (b) of Key Element Regional Context for Turkish Local Authorities

Test Statistics[b]

	Tr_RC_B - Tr_RC_A
Z	-1,604[a]
Asymp. Sig. (2-tailed)	,109

a. Based on positive ranks.

b. Wilcoxon Signed Ranks Test

6.6. Comparison of Turkish and European Authorities at the end Phase 3

Table 6.40. Comparison of Averages by Key Elements at the end of Phase 3

#	RESULTS - TABLES	European Local Authorities			Turkish Local Authorities		
	Theme of Investigation	Average Desired	Average Current	Average (Des,Cur)	Your Desired	Your Current	Your (Avg,Your)
	Leadership	**8,6**	**6,1**	**2,5**	**9,3**	**7,1**	**2,2**
1	The municipality leaders have a clear vision on the role of e-Government within the context of the municipality	8,8	6,4	2,4	9,4	7,5	1,9
2	Top level leaders are involved in the development of a vision on e-Government in the municipality	8,8	6,3	2,5	9,5	7,6	1,9
3	Responsibilities for implementation of e-Government are at top management levels of municipality	8,8	7,0	1,8	8,7	6,8	1,9
4	Leaders are regularly enquiring on the progress of e-Government projects and take appropriate action	8,5	5,9	2,6	8,8	6,5	2,3
5	Leaders are aware of what target groups expect from e-Government in their municipality	8,3	5,7	2,6	9,4	7,5	1,9
6	Leaders promote the use and benefits of e-Government to the staff of the local government	8,7	5,9	2,8	9,6	7,1	2,5
7	Leaders are aware of the issues that staff have in relation to e-Government	8,4	5,7	2,7	9,3	6,5	2,8
	Policy and Strategy	**8,0**	**6,0**	**2,0**	**9,4**	**7,2**	**2,2**
8	An e-Government vision has been developed containing statements on role of the internet in the municipality	8,5	6,9	1,6	9,7	7,1	2,5
9	The vision on e-Government is integrated in an overall vision on the development of the municipality	8,5	6,4	2,1	9,2	7,3	1,9
10	The e-Government vision contains references on where the municipality expects to stand in the medium term (end of 2004)	8,4	6,6	1,8	9,5	7,5	1,9
11	Specific goals for e-Government are formulated in policy documents of the municipality, and are derived from the vision	8,2	6,1	2,1	9,3	7,4	1,9
12	Input from target groups has been used in strategy definition	8,0	5,6	2,4	9,5	7,7	1,8

13	External existing knowledge has been used in the definition of an e-Government strategy	7,7	6,8	0,9	8,6	6,8	1,8
14	e-Government goals and targets are consistently reached	8,1	6,2	1,9	9,7	7,5	2,2
15	Feasibility studies have been carried out to support definition of e-Government policy	7,3	5,4	1,9	9,5	6,9	2,6
16	Studies have been carried out to evaluate effectiveness of e-Government policy and required updates	7,3	5,2	2,1	9,7	6,8	2,9
17	e-Government induced organizational change is managed considering other development programs in the organization	8,8	6,1	2,7	9,3	7,1	2,3
18	Structured methods have been developed/used to aid in deployment of e-Government projects	7,3	5,1	2,2	9,2	7,0	2,2
19	Communication with the target group takes place on a regular basis	8,2	5,9	2,3	9,5	6,5	3,0
20	Communication with the municipality's staff takes place on a regular basis	8,1	6,1	2,0	9,3	8,2	1,1
	People	**7,8**	**5,1**	**2,8**	**9,4**	**6,7**	**2,7**
21	e-Government related tasks are clearly defined in job descriptions	7,3	4,4	2,8	9,7	7,3	2,4
22	People at management level have adequate knowledge on e-Government related issues	8,4	5,2	3,2	8,8	6,5	2,3
23	e-Government training and development programs are available and made use of by the employees of the municipality	8,3	5,5	2,7	9,3	6,5	2,9
24	Individual employees are encouraged to take the initiative in developing new e-Government activities	7,8	5,3	2,5	9,5	6,3	3,1
25	The opinion of the employees related to e-Government developments is monitored on a frequent basis	7,2	4,3	2,8	9,5	6,5	3,0
26	Development of e-Government is supported by the employees of the municipality	8,2	5,5	2,6	9,5	7,0	2,5
	Partnerships and Resources	**8,3**	**6,0**	**2,3**	**9,4**	**7,0**	**2,4**
27	The municipality participates actively in inter-government partnerships in the field of e-Government	8,6	6,3	2,3	9,4	6,5	2,9
28	The municipality participates actively in public-private partnerships in the field of e-Government	7,6	5,2	2,5	9,1	6,1	3,0
29	In the municipality's ICT budget, e-Government activities are displayed as a specific item	6,2	4,6	1,6	9,6	5,1	4,5

30	Cost and yield are monitored for each e-Government project	7,8	5,4	2,4	9,5	6,2	3,3
31	Hosting and maintenance of the website is carried out by qualified people	9,2	8,1	1,0	9,7	8,1	1,6
32	Procurement of e-Government systems is done in coherence with e-Government policy	8,7	7,4	1,4	9,1	7,5	1,6
33	Hardware and software maintenance is carried out by qualified people	9,1	8,3	0,7	9,8	8,6	1,2
34	(Open) data interchange standards are used as much as possible	8,9	6,7	2,2	9,0	7,7	1,3
35	It is ensured that knowledge is opened up to citizens and employees through electronic means	8,8	5,3	3,5	9,3	7,4	1,9
36	All e-Government projects are described and evaluated in a structured manner	7,8	4,5	3,3	9,5	7,1	2,3
37	A content management system is used to structure information for publishing	8,1	4,9	3,2	9,5	6,1	3,3
38	A detailed information architecture exists containing existing and desired elements of information functions of systems and their coherence	7,9	5,1	2,8	9,5	7,3	2,2
39	All legal aspects related to e-Government have to be accounted for	8,7	6,3	2,4	8,9	7,1	1,7
	Processes	**8,3**	**5,5**	**2,8**	**9,3**	**6,6**	**2,6**
40	Role of e-Government processes are established in process models	7,9	4,9	3,0	9,3	6,7	2,5
41	Workflows related to e-Government processes are clearly described	8,2	5,3	2,9	9,4	6,3	3,1
42	Implementation of a document management system is a basic necessity for e-Government	8,8	5,5	3,3	9,5	6,5	2,9
43	e-Government process responsibilities are clearly established	8,7	5,7	3,0	9,5	6,8	2,7
44	Outsourced operations are monitored and reported on	7,2	5,8	1,4	7,5	4,8	2,7
45	Site usage is monitored and results are used in improvement of service delivery	8,8	6,8	2,0	9,7	8,2	1,5
46	Online service delivery is based on client needs and meets client expectations	9,0	6,3	2,6	9,5	7,9	1,6
47	Citizen participation is encouraged by giving access to policy information and enabling interactivity in policy making	8,9	6,3	2,6	9,0	5,6	3,4
48	Intake of service requests is directed to a middle office where requests are redirected to back-offices of different	7,0	4,6	2,5	9,2	5,8	3,4

	departments						
49	Organizational change leads to central back-office systems shared with other municipalities (for relevant services)	6,3	3,0	3,3	8,7	5,0	3,7
50	A comprehensive security architecture is in place to protect front- middle- and back-office systems and sensitive data	9,3	6,8	2,6	9,5	7,7	1,8
51	In e-Government, internet is considered as one channel among other channels	8,1	4,7	3,4	8,9	7,1	1,8
52	Client relations are managed in a structured system, enabling integrated service delivery and pro-active service delivery	7,6	4,0	3,7	9,6	6,1	3,5
53	Electronic communication is managed in a structured way	9,2	6,3	2,8	9,7	6,8	2,9
54	Error reports and complaints received from customers lead to process improvement	9,3	7,1	2,2	9,9	7,9	1,9
	Regional Context	**8,0**	**5,1**	**2,9**	**9,1**	**5,1**	**4,0**
55	Synergies with other municipalities and local actors in the region in the field of e-Government are created through continuous dialogue	8,4	5,8	2,6	9,0	5,6	3,4
56	A strong coherence exists between regional e-Government policy and local e-Government policy	7,8	4,9	2,9	9,0	4,7	4,3
57	Strong efforts from the regional level are made to promote e-Government at the local level	7,8	4,6	3,2	9,3	5,1	4,3