



**T.C.
YEDİTEPE UNIVERSITY
GRADUATE INSTITUTE OF SOCIAL SCIENCES**

**STRATEGIC STRUCTURAL COMPONENTS OF E-GOVERNMENT SYSTEM
IMPLEMENTATION: AN APPROACH FOR TURKEY**

by

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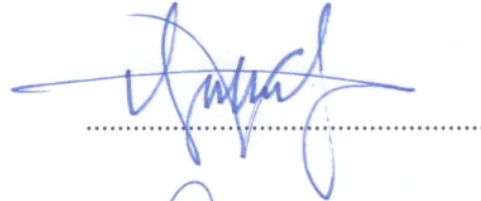
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LIST OF ABBREVIATIONS

CIO	Chief Information Officer
CRM	Customer Relationship Management
CSR	Corporate social responsibility
E-Government	Electronic Government
EU	European Union
HCI	Human-computer interaction
ICT	Information communication technology
IT	Information Technology
IO	Information office
M-Government	Mobile Government
NGO	Non governmental organization
PC	Personal computer
R&D	Research & Development
SMS	Short message service
SPO	State Planning Organization
SPSS	Statistical Package for the Social Sciences
TSI	Turkey Statistic Institution
TÜRKSAT	Türksat Satellite Communication, Cable TV and Operation Incorporation Company
UK	United Kingdom
US	United States
UN	United Nations
VCD	Visual Communication Design
WAP	Wireless Application Protocol
XML	Extensible Markup Language

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ABSTRACT

New developments in ICT have caused internet to become more of an issue. As internet makes individuals' lives easy in becoming information society, its usage constantly increases. Besides, its features of easing instant reach of information and speeding up information flow have made it a valuable part of business life. Its considerable internalization by daily life has created a new communication environment opportunity for the states, which have been going through constant problems with their citizens in term of communication and therefore have been trying to develop better ways to communicate with them. Consequently, internet has also been started to use in serving government services to citizens.

E-Government System, which means serving of government services to citizens in virtual environment, has been put into practice by many countries in the world. Those countries have been trying to figure out the standards of an ideal system implementation, which can be adapted to any country depending on its dynamics. Although Turkey is one of those countries, which has been trying to establish it, it is obvious that Turkey has been facing certain impediments and going through some difficulties.

The idea of this thesis is to reveal strategic components of E-Government System implementation, which can be adapted to any country according to its facts and resources. Besides, figuring out the problems, which Turkey has faced during E-Government System implementation and comparing Turkey's model with the models of some foreign countries, which are thought to be good examples, and submitting an E-Government System implementation approach for Turkey considering citizens' expectations.

Key words: E-Government, Information and Network society, ICT.

ÖZET

Bilgi iletişimi teknolojisindeki yeni gelişmeler sonucunda internet kullanımı önem kazanmıştır. Buna bağlı olarak internetin, bilgi toplumu olma yolunda günlük yaşantısında insanın hayatını kolaylaştırması nedeniyle kullanımı sürekli olarak artmaktadır. Ayrıca, bilgiye anında ve kolay erişim ve bilgi akışını hızlandırması gibi avantajlar sağlaması nedeniyle iş hayatının da vazgeçilmez bir unsuru haline gelmiştir. İnternetin kullanımının günlük hayatta bu derece benimsenmesi, vatandaşlarıyla iletişimde sorunlar yaşayan ve bu nedenle iletişimini sürekli olarak geliştirmeye çalışan devletler için yeni bir iletişim ortamı imkan yaratmış ve internet, devletlerin hizmetlerini vatandaşlarına sunmasında da kullanılmaya başlanmıştır.

Devlet hizmetlerinin elektronik ortamda sunulması olan E-Devlet Sistemi son yıllarda dünyada bir çok ülke tarafından benimsenmiş ve kullanılmaya başlanmış olup, halen ülkelerin kendi dinamiklerine göre adepte edilebilecek ideal bir system kurulumu standardı arayışları devam etmektedir. Türkiye’de E-Devlet uygulamasına geçmeye çalışan ülkeler arasında olmasına karşın, geçiş sürecinde çeşitli güçlüklerle karşılaştığı ve sorunlar yaşadığı gözlemlenmektedir.

Bu tezin amacı, herhangi bir ülkeye kendi gerçeklerine ve kaynaklarına göre adapte edilebilecek E-Devlet Sistemi kurulumunun stratejik yapısal bileşenlerini ortaya koymaya çalışmak ve aynı zamanda Türkiye’nin E-Devlet Sistemi kurulum sürecinde yaşadığı sorunları belirleyerek, iyi örnekler oldukları düşünülen bazı yabancı devletlerin modelleriyle Türkiye’deki modeli karşılaştırıp, vatandaşların da beklentileri doğrultusunda Türkiye için bir E-Devlet Sistemi kurulum yaklaşımı sunmaktır.

Anahtar kelimeler: E-Devlet, Bilgi ve Ağ Toplumu, Bilgi Haberleşme Teknolojisi

1. INTRODUCTION

As living systems, human societies are always in the process of structuring. Daily routines that occupy most of our lives shape and confirm our existence in societies. Having effected by globalization, postmodernism and neo-liberal economy in the era of knowledge society that we are in, technological developments precipitate certain pattern changes of life, some of which are found hard to adapt by some groups of people who comprise the society.

Society is thought to have gone through three phases over the years, which are so-called agricultural society, industrial society and the final one that we are in now is information or network society. According to Toffler, human society has gone through two major changing waves. Each of these waves changed previous cultures and civilizations and created new life styles as different as no one could ever imagine before. First wave was 'agricultural revolution'. It took almost two thousand years to come through. Second wave was 'industrial revolution'. It took almost three hundred years to realize. Toffler continues that today history goes by much faster. That is why it is most probably it will not take the third wave more than some ten years to come through. Third wave is more technological than previous wave and it is antagonistic to industry (Toffler, 2008:16-17).

Toward the end of the second millennium, several events of historical significance have transformed the social landscape of human life. A technological revolution, centered around information technologies, is reshaping, at accelerated pace, the material basis of society. Economies throughout the world have become globally interdependent, introducing a new form of relationship between economy, state and society, in a system of variable geometry (Castells, 1998:1).

Emerging of internet has brought about new terms for all of us that dramatically changed our lives over the time. Some of them are so called cyberspace, virtual reality and augmented reality. Consequently, individuals have gained new virtual identifications as to be exist in cyberspace. As Sherman and Judkins say:

‘Virtual reality allows you to explore a computer generated world by actually being in it’ (Sherman and Judkins, as cited in Frissen, 1999:40).

Frissen also says about it that it is not just a matter of simulating existing reality, as in flight simulators, but also creating new realities as in entertainment applications. An important consequence is that virtuality will become an increasingly relevant part of our lives and organizations. Technology-generated reality will become a realistic actuality with real consequences (Frissen, 1999:40).

As a result of sales of most of the products and services moving to cyberspace, patterns of doing business also have been changing dramatically causing internet has becoming an indispensable value of our lives. Doing most of the things, which we used to do going out to those places and buildings to be able to become face to face, became a click away sitting in front of a computer screen or even being done by touching the screen of a mobile phone or a portable device. Frissen states that the application of ICT in public administration is often instrumentally motivated. ICT can help to achieve the goal of modernization. With the help of technology, services and controls can be much more easily personalized. Policy ambitions are fed by the wide-scale availability of administrative information. Large-scale transaction systems coupled with intelligent systems produce profiles, discover patterns and changes and make fine adjustments possible. The greater transparency of policy domains encourages anticipatory policies. At the same time, ICT is also strengthening the development towards horizontal management and autonomy. The network character of social policy domains and their associated administrative configurations are supported and strengthened by electronic networks, materializing as it were a policy metaphor. However, networks have no centre, they know no hierarchy and they thereby compromise the political-administrative pyramid. ICT also lessens the relevance of 'territory' as the structuring principle of organization: the world may become a village, but similarly, every village becomes the world (Frissen, 1999).

Consequence of substantial developments in technology over the recent years technology has created its own culture as a subculture within societies. Frissen uses the term 'techno-culture' to indicate cultural actions – informing, communicating, image-creating – are the primary objectives of the technology and to place changes in codes of meaning at the centre of the analysis. We live in a technological culture more than ever. Technological culture has brought about some new concepts, from which we are thought to be effected.

The first one is so called *Digital Divide*: Digital Divide is not something that can be evaluated by physical access to computers and connectivity but by access to the additional devices that enable people to benefit from technology in general equally. It should be expected that any ICT project is complicated and can not be operated seamlessly. The highest attention is given to hardware and software related matters rather than human resources and social systems. That aspect needs to be changed for technology to make a difference. ICT requires education, social and institutional structure, literacy and human, digital and social resources to be taken into account rather than having internet connection and computers to be able to have a meaningful access to new technologies. ICT is not something came about from outside, but it rather exists in social systems and processes. The goal of using ICT along with marginalized groups is not to eliminate a digital divide, but rather to further a process of Social Inclusion (Warschauer, 2003).

The second one is *Technological Determinism*: It is all about the way human beings communicate, which shapes our existence and our culture. Cultural change is steered through inventions in communication technology. Human life is entwined with communication tools. As McLuhan says, more we shape communication tools, more they change us and our lives. All tools that we create are the extensions of the parts of our bodies. For instance, a book is considered to be an extension of the eye. A computer then could be thought as an extension of the hand. McLuhan defines Technological Determinism for the stand point of what each society that considers the crucial way to communicate. Truth is defined according to what communication tools are available in human beings' lives. The same content may have completely different meanings depending on the communication tools, which are used to convey it such as a book, a TV channel or a radio station.

Technological Determinism is focused on the medium, in which a message is sent. According to McLuhan, societies have gone through four ages driven by developments in communication tools: First one was the tribal age, in which the ear was to select the stimuli. Second age was the age of literacy, in which people learned how to read. Eye replaced the importance of the ear. So, people became thinkers. Third one was print age, in which invention of printing press made it possible to spread reading and writing. The fourth and the final one that we are still in is the electronic age, in which the Global

Village emerged. Instant communication in this age is the case. Importance of touch and sound has replaced the sight (Griffin, 1997).

The third one is *Technological Acceptance Model*: It is a theory that is interested in human beings' reactions and behaviors in terms of their use and acceptance when they come to term with a new technological product or development such as a new software package or a new technologic tool.

According to Davis and Arbor there are some variables that effect humans' attitudes towards a new technology product: Davis et al. state that those variables are perceived usefulness and ease of use. Perceive usefulness is thought to be the level that a person believe that a new technological product will increase his or her job performance. Accordingly, people decide whether to use it or not. Davis and Arbor also argues that perceived ease of use refers to the level, to which people believe that using a new technology is effortless. People definitely find a new technological product helpful, but they also find it hard for them to use it and adapt to it (Davis and Arbor, as cited in Alrafi, 2005).

The fourth one is *Social Inclusion*: It stands for communities and its layers in general, which are able to take part in society completely and control their lives taking into account a various factors related employment, education, health, housing culture and economic resources. Its concept does not ignore the role of social layers in a society but respects that as a wide range of variables enable shaping how class forces interact. In today's world, being able to access and create knowledge using new communication technologies and data are crucial in terms of social inclusion (Warschauer, 2003). The concept of social inclusion is all about people to participate in social transformations along with equal sharing of resources.

All technological developments, globalization and post industrialism have caused information to be needed instantly and everywhere more then ever. Reaching the information in time has become a tool for making difference in markets for competition. As a result of information has become the most important value, societies' structures have also been effected and evolved by that. The terms like Information Society, Network

Society, Post-Fordism and Post-Industrialism have started to be used for new structures of the societies.

Network Society and Post-Fordism entwined each other closely. It would not be wrong to say that concept of network society emerged from it. Amin states that the network society thesis is closely connected to the constellation of theories and analyses, which arose in the 1980s under the banner of Post-Fordism (Amin, as cited in Barney, 2006:10). Hall argues that Post-Fordism is a broader term, suggesting a whole new epoch distinct from the era of mass production, with its standardized products, concentrations of capital and its Taylorist forms of work organization and discipline. The debate still rages as to whether Post-Fordism actually exists and if it does, what exactly it is and how extensive it is, either within any single economy or across the advanced industrial economies of the West as a whole (Hall, 1997:224-225). Especially emerging of post-industrialism made generation of knowledge through information processing, service delivery of economic activities and high information and knowledge content occupations come forward. According to Castells, what is the most distinctive, in historical terms, between the economic structures of the first half of the twentieth century is the revolution in information technologies and its diffusion in all spheres of social and economic activity, including its contribution in providing the infrastructure for the formation of a global economy (Castells, 1998).

Advent of internet has also brought about some approaches for the societies such as network society, wired and wireless societies. Internet enables individuals and different societies to come together in interactive virtual environments regardless of time and space. Many networks through social media tools have been established accordingly and many of us have become members of them. Different information that we all have also keeps becoming connected via those networks and flowing amongst us with the highest speed. Networks constitute the new social morphology of our societies and the diffusion of networking logic substantially modifies the operation and outcomes in process of production, experience, power and culture.

While the networking form of social organization has existed in other times and spaces, the new information technology paradigm provides the material basis for its pervasive expansion throughout the entire social structure. This networking logic induces a social determination of a higher level than that of the specific social interests expressed through

the networks: the power of flows takes precedence over the flows of power in the global network of the new media at the roots of cultural expression and public opinion in the information age (Castells, 1998:469).

Networking has started with computers become wired as to be connected. Those wires enabled information to be transferred from one point to another easily. As a result of technological developments computers do not need wires to be connected now as they have wireless and broadband connections instead, which brought a lot of freedom to network societies along with enabling huge amount of information to be transferred in seconds. Thus, information flow is at its highest speed ever.

In the information age, patterns of economy and doing business have also been changed. Advent of internet bolstered by technological developments has caused most of the businesses to be moved to cyberspace being able to meet customers' demands and to reach them 24 hours a day. Priority, which had been given to goods production, has turned to service production in cyberspace over a short period of time.

Increasing demand in e-services has also caused governments to take the advantage of virtual environment to strengthen relations with their citizens establishing virtual government communication systems, which engenders human-computer interaction in communication requiring paying attention to its principles as to increase conversion rate through ease of use that leads to citizens' satisfaction.

All governments implementing E-Government Systems are in need of developing electronic services and their delivery ways to their citizens as to have an effective and an ideal E-Government System. Turkey is also in the process of implementing E-Government System like many other countries around the world. The main aim of this thesis to emerge strategic components of E-Government System implementation in general, which can be altered depending on cultural dynamics, availability of resources and expectations of a country where it could be established. Besides, analyzing Turkey's E-Government System as to be able figure out implementation problems that Turkey have been facing and to submit an implementation approach for Turkey accordingly. Consequently, some library researches have been carried out examining literature and reviewing formal reports along with articles published in various Turkish newspapers during the research. High-ranking

officials of public institutions have been interviewed. A survey regarding E-Government System and ICT usage has been conducted among Turkish Citizens over the internet. Some E-Government implementations of various countries have also been analyzed.

2. E-GOVERNMENT SYSTEM

Ever since human beings started to live together in social environments, governance of crowds has been a major concern of those, who have the power to rule them. According to Le Bon, the power of the crowd has been the only force that is insuperable ever since early history and its prestige has been increasing continuously. The age we are in is the “era of crowds” (Le Bon, 1931). Consequently, governments are accepted to have been looking for the best way to govern and especially to control their citizens along with making them participate in governing. In order to achieve that the governments have been trying to communicate better with their citizens as to understand their expectations to serve them better. Mills states that a government, which intends to be fine, is an organization of some part of the good qualities founded in the individual members of the society for the conduct of its collective affairs. The grater the amount of these good qualities, which enable a country’s institutions achieving in organizing, the better will be the Government. The quality of a governance can be assessed by its actions upon individuals and by its actions upon things; by what it makes of citizens and what it does with them; its tendency to improve or exacerbate the people themselves and the goodness or the badness of the work it realizes for them and by means of them (Mill, 1958).

All aforementioned improvements have made also governments started to move their services into cyberspace as to be able serve its citizens more effectively, more transparently and being more focused to their needs to shape those services accordingly. This new concept of virtual governance is so called E-Government, which is a communication system operating in cyberspace. E-Government System provides governments through its flexible structure with more democratic and participative management facilities, cost-cutting features on both operations and staff, information flow and sharing and control, establishing network systems, passing control to affiliated agencies. As it is said in UN’s report of E-Government Survey 2010, many countries are experiencing its transformative power in invigorating public administration, fostering participative leadership innovating public management and moving civil service towards higher efficiency, transparency and accountability. Those countries consider E-Government as a way of realizing the vision of a global information society (UN, 2010). Ever since aforementioned services started to be served in cyberspace over the internet,

governments have been trying to have the best E-Government Systems for their citizens. Each E-Government implementation of various countries has its some good and weak points.

2.1. From Traditional Government to Virtual Government

New technological developments have been changing many traditional patterns of doing things. Those developments enable us to facilitate our lives and save our time, which is generally accepted to be the most valuable asset of the age of information society. Burke and Briggs state that having to live in a new millennium, former problems have turned in to new opportunities. Governments act in more susceptible manner to inform their citizens. Especially organizations in private sector have got the most out of it and offered global scale products (Burke and Briggs, 2004:350).

Latest version of governance is computerized virtual government, namely E-Government, where most of the Government services can be reached going on line. E-Government System enables citizens and private sector to get closer to and to communicate better with the Government. Concept of E-Government System supports participative management. E-Government is not transferring all documents to virtual environment, but it is all about modernization of government and its services. E-Government System is not only IT related matter, but it concerns the Government as a whole. E-Government System is an opportunity to increase the quality of the services provided and makes the Government's operations efficient. E-Government System is a way to realize the target of an information society along with being more citizen-oriented, accountable and transparent. According to Andersen E-Government is a government model and all about gaining increase in speed, performance and productivity using technology on transferring of information, services and items among public associations, citizens and commercial associations targeting reduce costs (Andersen, 2001). The services provided through E-Government System need to be convenient, constantly reachable, simplified and easy to handle without having much computer skills (Table2.1).

Table 2.1 Comparison of traditional and E-Government (as cited in Şahin, 2008)

Traditional Government	E-Government
Passive citizen	Active Customer - Citizen
Paper-based communication	Electronic communication
Vertical / Hierarchical structuring	Horizontal-Coordinated network structuring
Data uploading of management	Uploading of citizen
Answer of employee	Automatic voice mail, call center
Help of employee	Helping yourself / Help of a specialist
Employee e-based auditing mechanism	Auditing via automatic data updating
Cash flow / Check	Electronic fund transfer
Monotype service	Individualized / Differentiated service
Departmentalized / Intermittent service	Holistic / constant / One stopped service
High transaction cost	Low transaction cost
Ineffective grow	Effectiveness management
One way communication	Interactivity
Nationality relationship	Participation relationship
Closed government	Open government

Some advantages of transition to E-Government are (Table 2.2);

- Increasing participation
- Increasing quality in services
- Facilitating accessibility to services
- Increasing productivity in government
- Diminish bureaucracy
- Controlling costs

Table 2.2 E-Government models and advantages (Andersen, 2001:85)

	Interactivity in E-Government	Advantages
From government to citizens	- Informing - Tax - Health - Education - Culture	- Wide access channel choices - Individualized speed and easy service - Transparency - Low transaction costs (In terms of government)
From government to commercial corporations	- Government programs - Advise and guidance - Regulations - Tax	- Quick and effective interaction - Less bureaucracy - Low transaction costs (In terms of government)
Government and suppliers	E-purchasing	- Increase in productivity - Low transaction costs
Public associations	- Communication between public associations - Communication between central and regional authorities	- Increase in productivity - Effective information sharing - Flexible work environment

Virtual environment and networking have eliminated the concept of territory at least as the primary rationale for the activities and design of public administration. Organizational boundaries disappear together with their physical locations. Consequently, functional differentiation and the virtualization of organization structures are the case. Virtualisation emphasizes the incremental manner of images and styles produced by ICT, of which changeability and transience stand for change in patterns of elements of social relations. Consequently, controlling gets harder and harder while ambiguity emerges, which requires a significant reorientation of public administration in virtual space. The concept of virtual government services encompasses many new and easy ways comparing concept of traditional government. The developed capacity of systems and applications makes it possible to minimize the need for centralization and specialization. Small, decentralized affiliated offices can be equipped considerably powerful. Moreover, feedback forms can be

directed to policy implementation. Networking simulates a pattern of horizontalization in and between organizations in the administration (Frissen, 1999).

New developments in technology and users tendency towards mobile devices drive new approaches in service innovation and its delivery through various channels. Inevitably concepts of E-Government and connected or network government have been entwining more and more every day. As a result, structure of governance system has been developing and evolving accordingly (Figure 2.1).

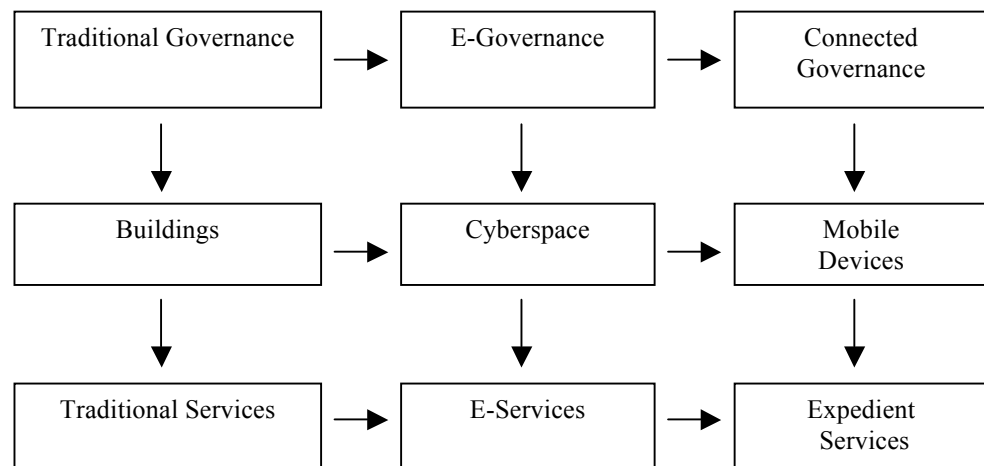


Figure 2.1 Evolution of governance system

Connected governance enables governments to benefit more from ICT in transactions and service delivery along with more collaborative work amongst agencies in terms of sharing information. Having achieved that, governments become ubiquitous for their citizens. There are certain potential internal and external benefits in achieving connected governance (Figure 2.2).

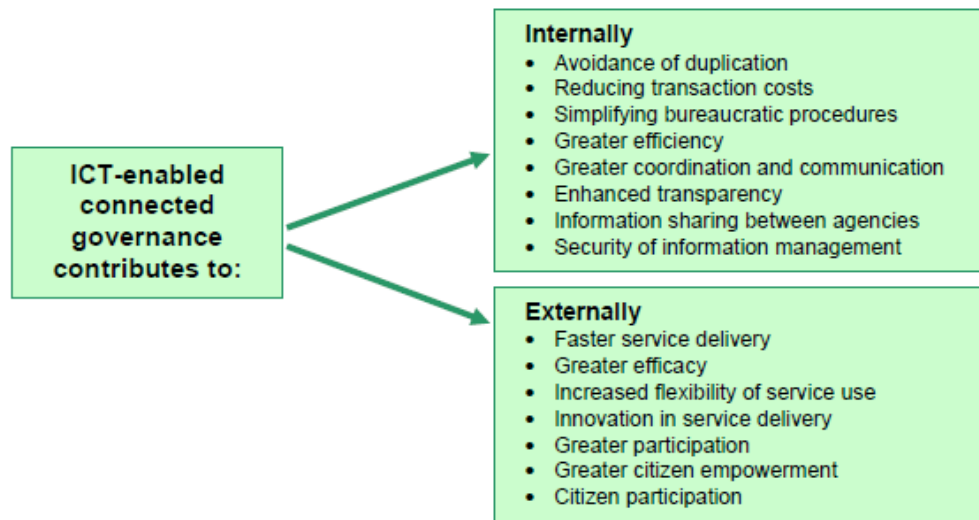


Figure 2.2 Contributions of connected governance (UN, 2008)

E-government System requires citizens to get in touch more with the government sharing more information, which raises some concerns about intervention to individual privacy, which can be referred to concept of Panopticon.

2.1.1. Concept of Panopticon

There are certain concerns regarding ICT intruding on personal privacy as well as ascending surveillance and control over people. Le Bon states that the constant increase in the power of the masses was realized at first through propagation of certain ideas, which have gradually placed themselves in men's mind (Le Bon, 1982). Therefore, concept of observation and control of their citizens has been a major issue for the Governments. According to the concept of Panopticon it has been succeeded through the Governments' institutions like schools and hospitals which are established to serve the citizens. Those institutions are operated as watch houses like prisons in the states and they exist to accomplish the mission of observation of citizens. The concept of those watch houses derives from detaining in custody, putting behind the bars, educating, forcing to work and isolating. Idea of Panopticon was created by Jeremy Bentham in nineteenth century and then developed by Foucault. The main concept of it is constant surveillance of citizens like inspecting prisoners, who are located in illuminated single cells in a prison, making each and every one of them visible to a jailer who stands in a watchtower located in the center. In other words it is sort of making citizens visible to the Governments. The main idea,

because of many reasons, is to make the citizens feel that they are watched or not to make them sure that they are not watched at all times. How well the people, who are supposed to observe citizens, do their job, institution's "x" aim is executed flawlessly. If it is the truth, each and every citizen is required to experience that undesired situation at all times. According to Bentham, in that sense all government institutions serve to realize this idea (Bentham, 2008).

Adapting this approach to today's world, internet has caused to emerge interactive multimedia tools, where E-Government Systems operate, creating a new public sphere for citizens enabling them to participate and make their voices heard more in governance and decision-making processes through certain applications and services in realizing pluralism and representative democracy, while it has created a great opportunity for governments to put their citizens under surveillance at all times as each of them leaves marks behind during their existence in cyberspace using the internet. It is much easier to keep them under control in internet based environments without forcing them to be there considering its attractive facilities that induce individuals to stay and even live in cyberspace as much as in real life, maybe more.

2.1.2. E-Panopticon: E-Government

The emergence of E-Government Systems and services have evolved the concept of Panopticon. It will not be wrong to call E-Government Systems as E-Panopticons as those systems control and organize personal information flow letting governments officials know the locations of their citizens.

Reciprocal approaches of Panopticon and E-Panopticon:

- According to the concept of Panopticon, all inmates' cells have windows and bars and those cells are illuminated together with their hallways in the prison as to make them visible for jailer's observation as well as preventing them from evading it. Today, internet protocol (IP) numbers are given to the users as to be able to track them and their activities when they are in cyberspace.

- As to halt prisoners to see each another, long walls between cells are built, which are so called division walls. We all are induced to establish virtual friendship networks in virtual environments, which make us antisocial individuals day by day. In that way we are kind of pushed gently to live in our homes rather than staying outside socializing.
- There is a connection system of metal tubes from surveillance tower to each cell, which enable the jailer to contact whichever inmate he wants to without letting others know. Inmates can only hear what is going on if they put their ears against the tube. In cyberspace, networks provide the same service as the metal tubes do in the concept of Panopticon. Authorities are able to reach and inform each or some citizens they want via networks using communication tools like computers or cell phones. Interested other citizens may also get involved in the matter if they wanted to through the internet realizing virtual screen to screen communication.

Whoever uses E-Government services live marks behind, which are easy to be tracked by the national government. In that way, it is much easier for the Governments than any former applications or systems to observe their citizens and find out where they are, what actions they have made and when. Frissen argues that information and communication technologies embody the functional rationality culture and they are employed in strategies of discipline, rationalization and control. In that sense, when information communication technology is adapted to bureaucracy, strengths the image that political power is in control (Frissen, 1999).

So, E-Government Systems can be accepted as innovative and useful tools for their governments to watch their citizens while citizen are happy using a modern system of simplified services living marks behind.

2.2. E-Government System Implementation

There are certain strategic components need to be put into practice to have an ideal E-Government System implementation along with achieving a successful transformation (Figure 2.3).

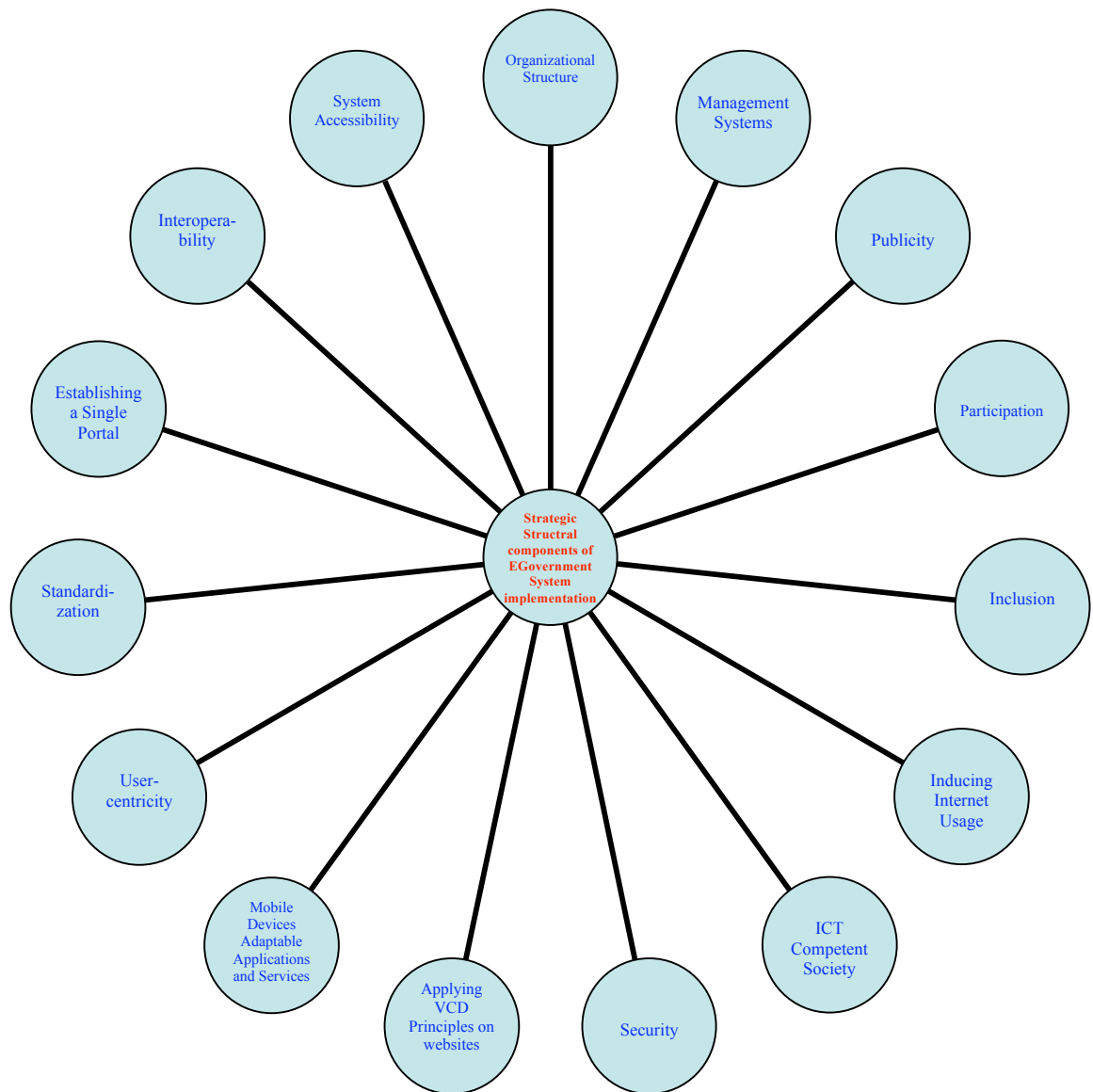


Figure 2.3 Strategic Structural Components of E-Government System Implementation

Those components will be analyzed under two main groups; management systems and other components.

2.2.1. Organizations and management systems

Organizations are also systems themselves. They operate as open systems, which are capable of nurturing through their environments enabling themselves capable of self-

maintenance. Environment as nurturing source encompass information, materials and energy, all of which are vital for the systems' survival. In other words, organizations depend on constant flows of resources, information and personnel from outside. Relations with external components are more important for organizations than internal elements. The open system is thought to be a system of interdependent activities, some of which are tightly connected, while others are loosely paired. All of those activities must be constantly motivated if the organization is to exist (Scott, 1998). Consequently, those interdependent activities need to be controlled continuously by management systems.

Management systems derive from set of procedures to be followed to ensure an organization's goals are achieved as effective as targeted, which are guided by defined vision and missions. Once vision and mission is set, through which members of the organization know where to run to, management systems provide organizations with planning, scheduling, controlling, observing and measuring indicators for in time corrective actions on ongoing operations, business processes and labor force as to gain and maintain sustainable performance and quality improvement ensuring customer satisfaction and optimum use of resources in hand.

There are certain management systems like Change Management, Strategic management, Project Management, Information Management, Performance Management and Communication Management that need to be put into practice as to succeed the strategic components of E-Government System implementation effectively. Applying those systems help implementation processes to be in control and observed at all times, which culminates in achieving optimum use of all kinds of resources (Figure 2.4).

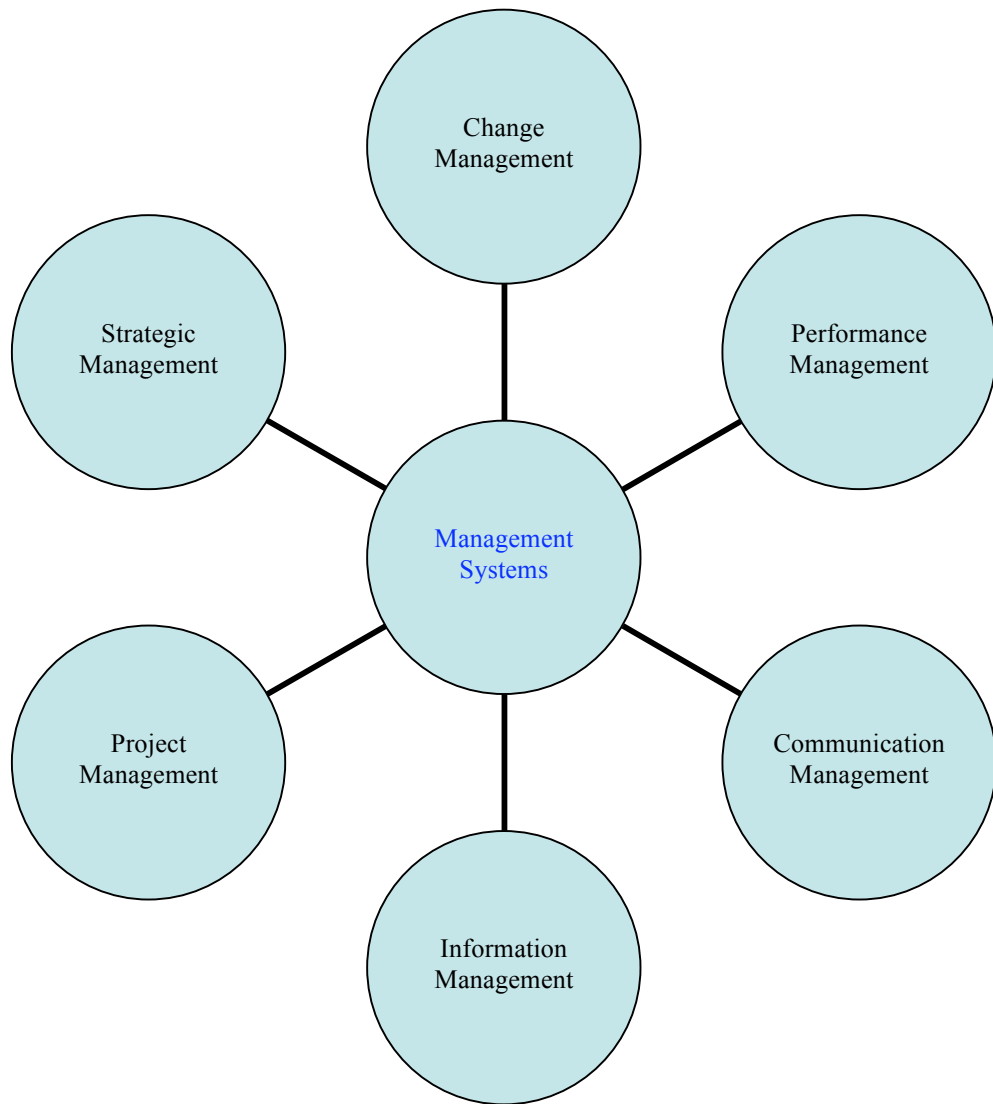


Figure 2.4 Management Systems required for E-Government System Implementation

Management activities need to be put into practice considering a hierarchy, which comprises long term and short term planning. Plans consist of programmed and non-programmed plans (Figure 2.5).

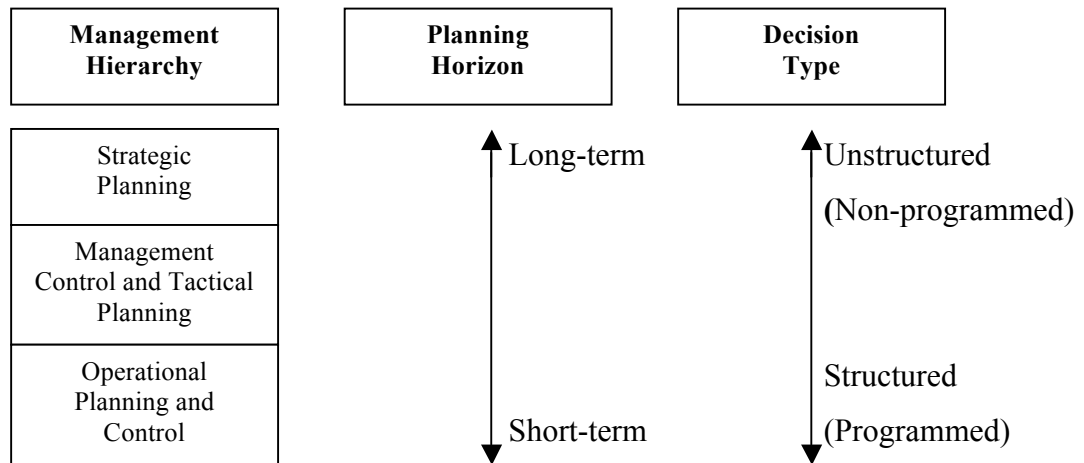


Figure 2.5 Planning horizons of management activities along with decision type continuum (Robson, 1997: 85-87)

2.2.1.1. Organizational structure of E-Government System implementation

A successful management and evaluation of an ideal E-Government implementation requires reaching the information in time. As to achieve that a new department or an office needs to be established, which is connected and reports directly to the Prime Minister and being responsible from information in general along with E-Government related issues. An executive needs to be appointed for the position of Chief Information Officer to lead the information department. Implementation processes of E-Government System implementation should be directly connected to CIO and to that office. There need to be some Implementation Boards, which are to work with CIO supporting and facilitating execution of decisions, decision-making and communication between affiliated agencies.

There should be an Executive Board, which drives from the highest ranking members of each Implementation Board as to achieve a flawless upward and downward communication and information flow reporting problems and needs to Executive Board and vice versa. CIO attends and leads Executive Board meetings.

Implementation Boards are responsible from service development, training requirements, security, performance evaluation, communication and publicity. Service Development Board takes care of modernizing and increasing the quality of existing services and eliminating ineffective ones according to users' feedbacks. General Infrastructure Board ensures the standardization of systems, websites and forms used and services provided by

government agencies in E-Government System. Training Requirements Board is responsible from provision and planning of over all training needs of citizens and government agencies' employees as to adapt them to transformation and to maximize their capacity and effectiveness. Some academicians should also be made to attend to Training Board as to figure out training needs and plan those activities. Security Board ensures that necessary legal infrastructure is prepared and laws are constituted for protection of personal information and secure transactions over the internet along with providing systems' general protection against malevolent attacks. Communication and Publicity Board makes sure that information is conveyed in time horizontally and vertically in terms of internal communication along with searching for best ways and putting those ways into practice to solicit users' feedbacks on forming services, their participation in governance and consulting them on various issues. Performance Evaluation Board is responsible from setting up performance assessment systems of projects and investments done by government agencies and all staff working in government agencies. Resource and Finance Board provides CIO and other boards with operation budgets along with providing all resources required by CIO and implementation boards within their budgets as to perform a seamless and a controlled implementation processes. Implementation Boards should comprise a few ministers or undersecretaries from the Government, some high-ranking public officials, some private sector representatives, some NGO representatives and some academicians especially for Training Board. It should also be considered to outsource some actions when needed.

ICT departments of government agencies should be connected to CIO as to realize affective use of resources such as time and money. Nowadays, some countries have extended CIO's responsibilities holding them responsible from some social and administrative works in addition to E-Government System and its implementation. E-Government System implementation needs a management structure explained above as to steer and to organize the implementation phases effectively (Figure 2.6).

CIO and Executive Board provide coordination between Implementation Boards, public institutions, private sector and the citizens and make sure their expectations are taken into account to ensure a seamless implementation and transformation. Establishing an information department and appointing an CIO will provide not only coordination to information flow in general, the project and organization between activities of involved

institutions, but also constant elaborated observation, during which best practices will be chosen and applied to all necessary institutions' operations preventing those institutions from investing on similar practices. In that sense, having the information office and CIO during implementation of E-Government System will then provide cost-cutting actions and effective use of restricted resources. Decision-making process usually takes a lot time during project implementations, having a CIO, an Executive Board and Implementation Boards for E-Government implementation will eliminate time losses for decisions. Motivation is another important issue which all involved parties need to have in achieving a successful implementation. CIO will also take care of that need. Therefore, the post of the executive or CIO is seen as one of the crucial elements of the success of E-Government implementation. The executive needs to have adequate responsibility and equal authorization to go along with it in order to be successful on the duty.

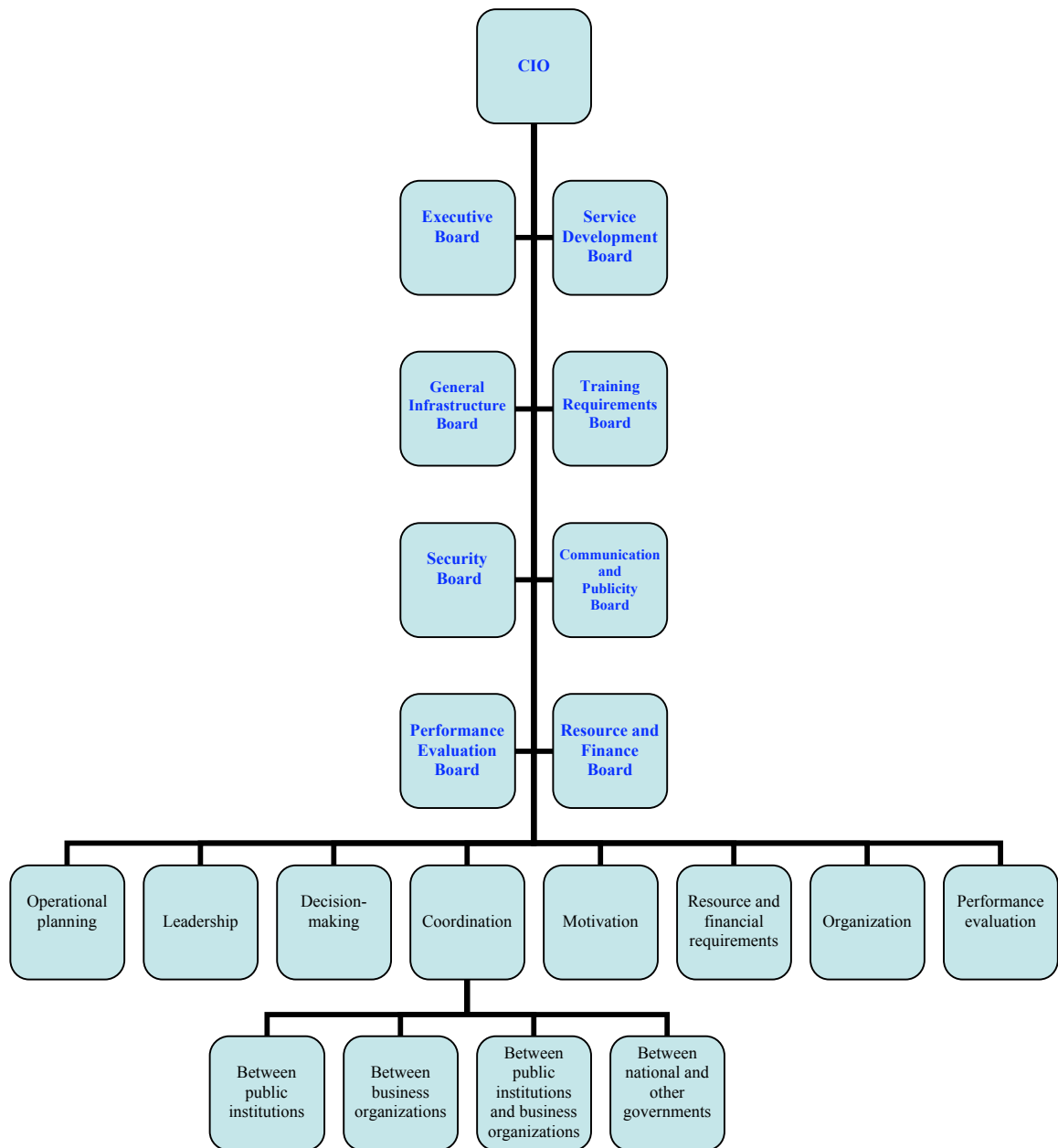


Figure 2.6 Executive Structure of E-Government System Implementation

2.2.1.2. Strategic Management

Strategic Management is defined as setting of decisions and activities that result in application of plans to succeed an organization's targets. As an ideal E-Government implementation is a target for a country where it is intended to implement, certain decisions and actions need to be set under a set of connected plans before implementation processes begin and that plans need to be put into action and their effectiveness and results

are to be controlled during implementation process in order to have an effective E-Government System up and running.

Strategic Management contains some certain crucial tasks:

- Analyzing the organization's options by matching its resources with the external environment.
- Identifying the most wanted options assessing the each option together with organization's mission.
- Picking up a set of long-term targets and grand strategies that will succeed the most wanted options.
- Developing yearly targets and grand strategies that are compatible with the chosen set of long-term grand strategies and targets.
- Implement the strategic options through budgeted resource allocations considering matching of tasks, structures, reward system, people and technologies.
- Running an analysis that reflects the organization's internal current conditions and capabilities.
- Evaluating the organization's external environment together with general and competitive contextual factors.
- Figuring out organization's mission and statements about its intention, philosophy and goals.
- Assessing the success of the strategic process as an input for future decision-making (Pearce and Robinson, 2005).

2.2.1.2.1. Components of Strategic Management Model

Strategic Management is to be able to see looming signs and interpret them in advance to steer the organization to right direction. Consequently, organization becomes successful among its rivals and maintains its existence growing in the market.

Achieving a successful Strategic Management eleven steps need to be realized (Figure 2.7):

Organization's mission: Organization's mission is the main concept that differs the organization from other organizations elaborating its scope of operations, which reflects the values and priorities of the strategic decision makers.

Internal analysis: Analyzing organization's resources such as human resources, financial strength and physical resources.

External environment: It is all about the conditions and possibilities that may effect organization's strategic options and describe its competitive situation. It comprises three interactive divisions: the remote, operating environments and industry.

Strategic analysis and choice: It is concomitant evaluation of external environment and organization sources as to figure out its strengths of competitiveness. Most of the organization executives pay extreme attention to right combination of business increases shareholder value leading them during their strategic analysis and choice.

Long term objectives: The targets that an organization pursues over a multiyear period are its long-term objectives.

Generic and grand strategies: Generic strategies define organizations' competitive direction in the market place, such as differentiation and low-cost.

Action plan and short-term objectives: Action plans are for putting generic and grand strategies into action through four steps: First, describe functional tactics and actions implemented in the next periods to establish competitive advantage. Second, clear time set for completion. Third, figuring out who is responsible for each activity. Finally, each action pursues certain goals as its result.

Functional tactics: Those tactics are elaborated statements of activities to be used to succeed short-term targets and establish competitive advantage.

Policies that empower action: Doing things quickly is a necessity in today's competitive environment. Policies help organizations to realize the speed and standardization that administrators need in decision-making process.

Restructuring, reengineering and refocusing the organization: Recasting the organization through restructuring or downsizing has crucial importance in achieving strategy implementation. In order to increase organization's profitability or competitiveness, organization's leadership, culture or reward system can be changed.

Strategic control and continuous improvement: Strategic control is important to see if the strategy underway is going according to the plan. Keeping track on it enables executives to do necessary corrections or adjustments before it is too late to intervene. Continuous improvement enables a way for managers to provide a sort of strategic control, which allows their organization to respond proactively and timely for business success (Pearce and Robinson, 2005).

- Organization's long-term profitability is often impacted by strategic issues.
- Strategic issues require substantial amount of the organization's resources.
- Strategic matters require considering the organization's external environment.
- Strategic matters usually have multifunctional or multi-business consequences.
- Strategic issues are future focused (Pearce and Robinson, 2005).

2.2.1.2.3. Strategy developing

Strategy is a plan or organized road map of processes to achieve an organization's vision or target coordinating its sources and actual potentials.

Effective formal strategies comprise three crucial elements;

- The most important targets to be succeeded.
- The major action programs that are to accomplish the defined targets within the limits set.
- The most significant policies leading or restraining action.

Strategy is an organization process and in many ways can not be thought separate from the behavior, culture and structure of the organization in which it takes place. Sub-activities of strategy formulation as a logical activity contain figuring out organization's opportunities and threats in its environment together with its strengths and weaknesses in terms of resources. Effective strategies set around a few key concepts and thrusts, which give them balance, focus and cohesion. Strategy not only deals with unpredictable but also with the unknowable (Mintzberg and Quinn, 1998).

Criteria for effective strategy:

- Concentration
- Maintaining the initiative
- Clear, decisive targets
- Security
- Coordinated and committed leadership
- Flexibility

- Surprise

2.2.1.2.4. Strategy implementation

It is important to examine the implementation phase as to consider the advantages of available strategic alternatives. When the purpose is targeted, then all organization resources are made available to accomplish it. The implementation process is comprised by a series of administrative activities (Figure 2.8). Therefore, personal leadership is crucial in achieving of strategy (Mintzberg and Quinn, 1998).

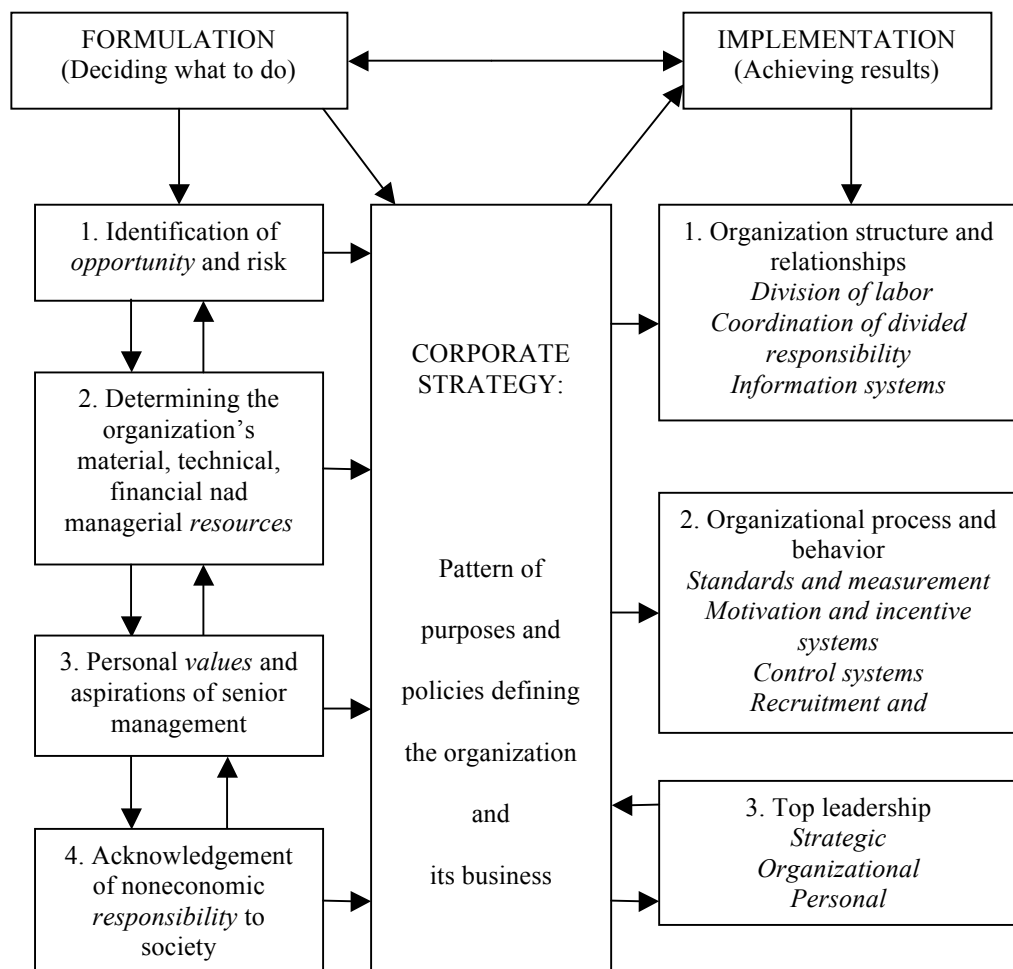


Figure 2.8 Formulation and implementation processes of strategies (Mintzberg and Quinn, 1998:50)

Fitting an information strategy into general set of strategies:

The model in figure 2.9 indicates where an information system strategy fits in strategic structure. The information system strategy in the figure indicates an element of divisional strategy could equally be viewed as spreading across all divisions. It is important to remember that it applies when the divisions are autonomous. Developing IS strategies that support general strategies are hard to set up. Therefore authorities constantly seek ways to understand better the nature of information system strategy planning and ways of observing the performance of planning process they and their organization undertake.

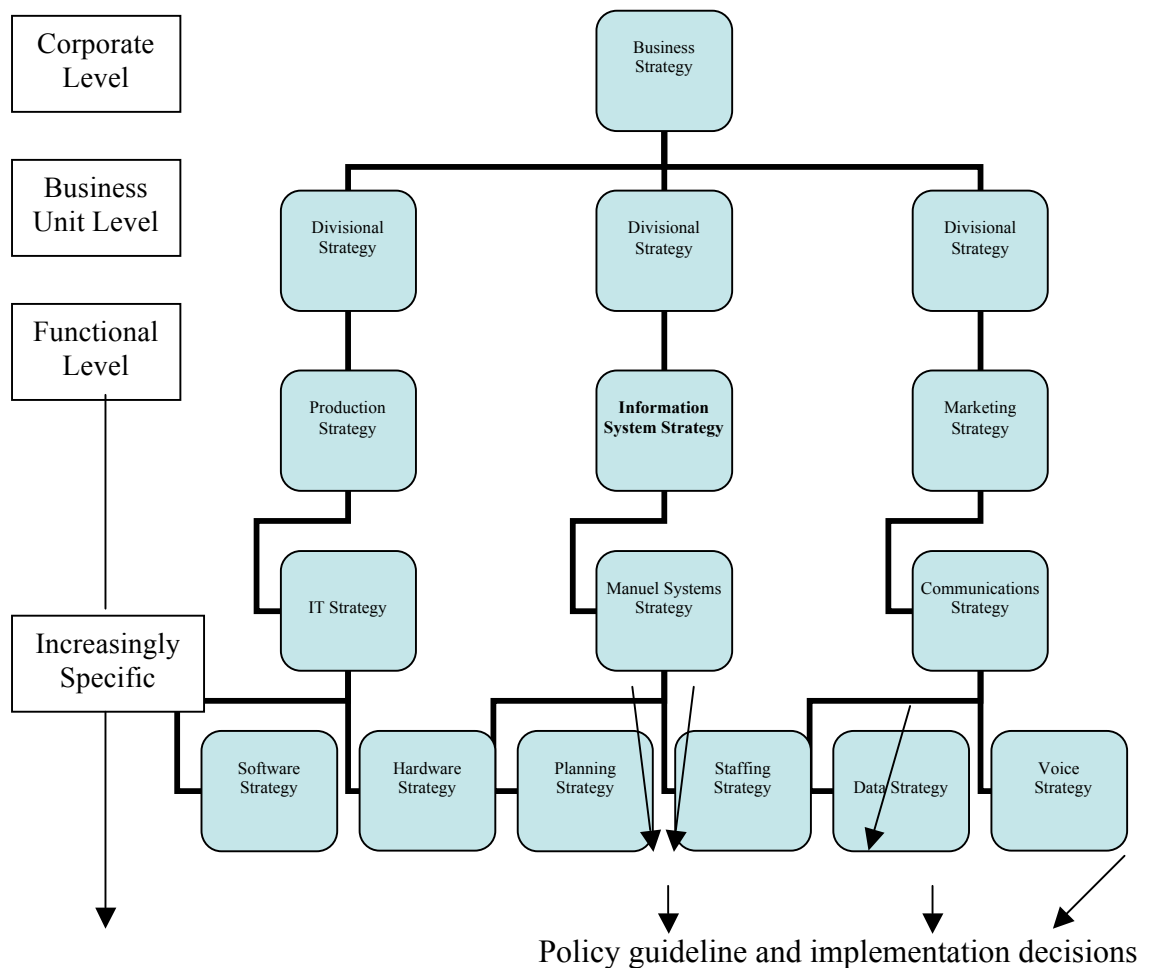


Figure 2.9 Hierarchy of Strategies

2.2.1.3. Project Management

E-Government implementation process needs to be seen and taken into consideration as bunch of projects, which comprise number of sub-projects, in order to achieve the goal of information society smoothly.

Project is a temporary effort undertaken to reach a desired result or output. It is usually benefited from reaching an organization's strategic plan. Projects are results of following strategic considerations:

- An institutional requirement
- A market demand
- A legal requirement
- A technological development

Project Management is all about contribution of abilities, tools, techniques and knowledge to project activities as to reach a specified goal. It is succeeded through Project Management processes of visioning, planning, executing, observing, controlling and closing. Managing a project includes:

- Identifying requirements
- Setting up clear and achievable objectives.
- Off setting the demands for quality, cost and time.
- Stakeholders' various and different expectations need to be adapted to plans and specifications (ANSI, 2004).

There are certain areas of expertise that project team need to have:

- The Project Management concept of knowledge
- Understanding the project environment
- Interpersonal competencies
- Application area knowledge regulations and standards.
- General management abilities.

There are also certain Project Management knowledge areas and Project Management processes for a seamless project realization (Figure 2.10).

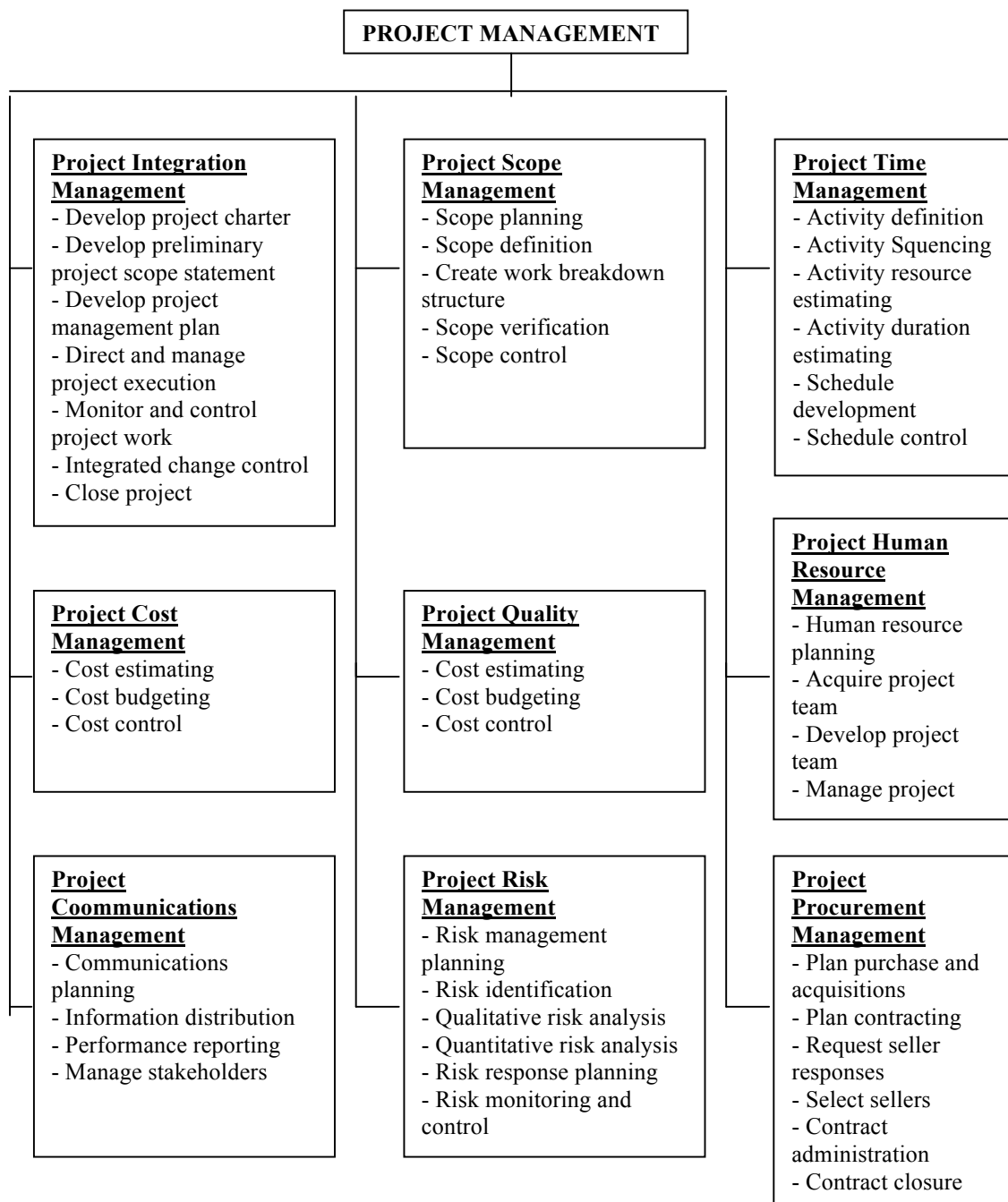


Figure 2.10 Overview of Project Management Knowledge Areas and Project Management Processes (ANSI, 2004:11)

Potential benefits from Project Management are:

- Identification of time limits for road-mapping

- Identification of a methodology for trade-off analysis
- Being aware of when objectives can not be met or will be exceeded
- Early definition of obstacles, so that overcoming actions can be taken in advance.
- Minimizing the need for continues reporting
- Improved estimating ability for future planning

Benefits of a successful Project Management can not be reached unless below subjects are overcome:

- Project complexity
- Project risk
- Advances in technology
- Organizational restructure
- Expectation changes of customers
- Forward planning and pricing (Kerzner, 2003)

E-Government related projects are to be coherent with general goals of E-Government Model and public policy. Those projects also need to be fully supported by the government and supposed to be realistic in terms of putting into practice and resources that the country has.

There are certain quality dimensions for E-Government projects (Figure 2.11):

1. *Efficiency*: Offsetting the output of service provision and the amount of resources required.
2. *Effectiveness*: Meeting the provided service to user's expectations and needs.
3. *Accessibility*: User-friendliness of the interactions and simplifying of service request and use in terms of technological and non-technological resources available.
4. *Accountability*: The assumption of administration's responsibility for actions, products, decisions, and policies. It embraces the obligation to explain, report and be answerable for resulting consequences of service provisions (Batini et al, 2008).

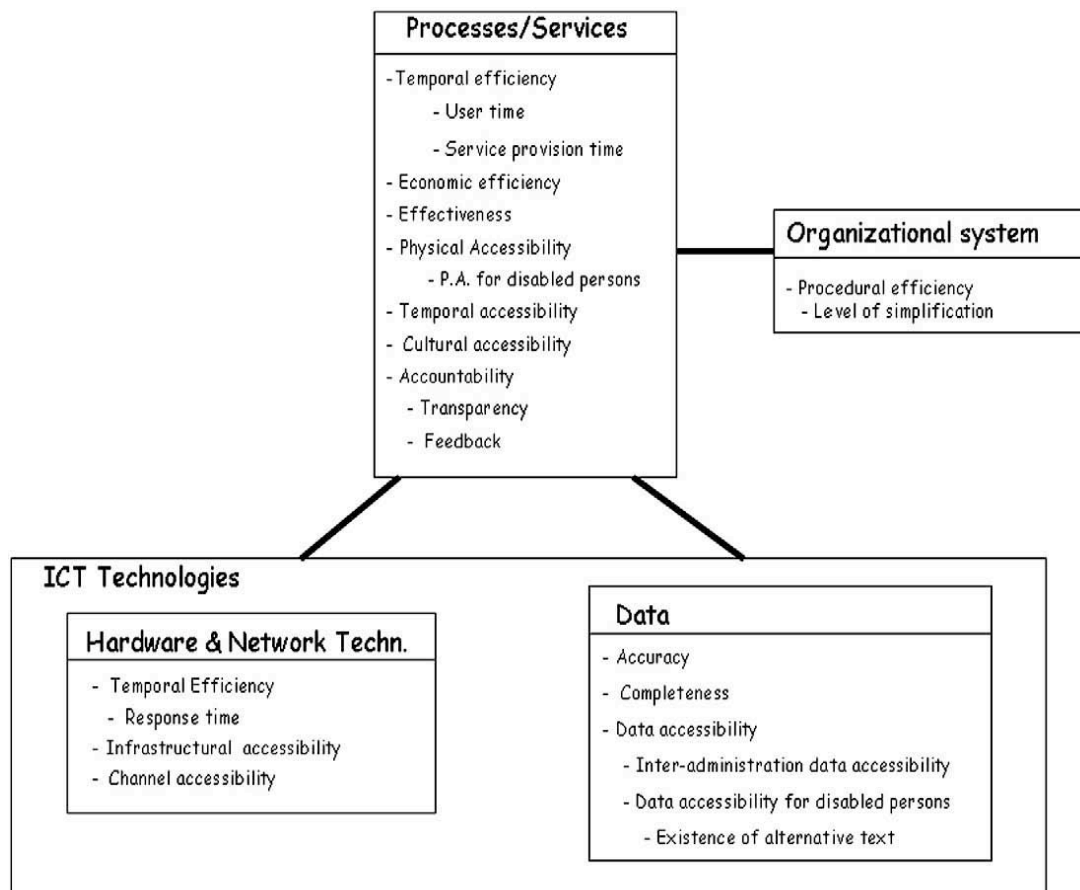


Figure 2.11 Quality dimensions for various phases of E-Government implementation projects (Batini et al, 2008)

2.2.1.4. Performance Management

Performance Management is important for E-Government System implementation as to provide executive boards with optimum use of resources. E-Government implementation has certain goals to be achieved, which need high skilled and high performer executives and employees along with effective investments and actions. Performance Management provides observation and evaluation for a government's targets of E-Government implementation. Therefore, it can be used to provide CIO and E-Government implementation boards with motivated and targets defined employees and with alerts for on time interventions to correct actions and investments done as to accomplish them efficiently.

Performance Management is a connected process of designating, evaluating and reinforcing staff work behaviors and productivity. Performance Management encompasses

practices and methods for goal setting, performance evaluation and reward systems. These practices jointly influence the performance of employees and work teams. Goal establishing specifies the performances wanted; performance evaluations assess those outcomes; reward systems ensure that desired outcomes are repeatedly provided by employees. As Performance Management effects the organization completely, minimum three contextual factors determine how these practices affect work performance: employee involvement, business strategy and work place technology. High levels of work performance emerge when goal setting, reward system and performance evaluations are entwined with these contextual factors (Cummings and Worley, 2005). More the employees know what is expected from them and equipped with necessary technology more they are motivated with what they need to achieve.

Advantages provided by Performance Management:

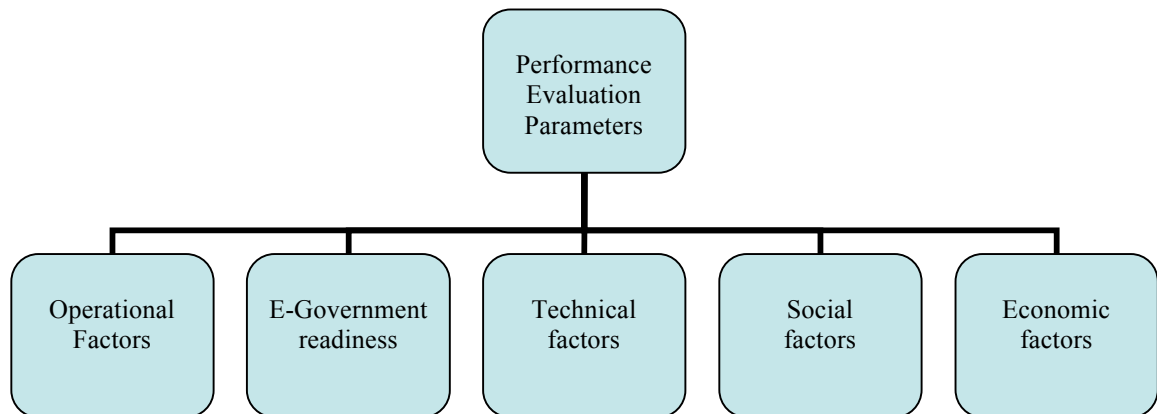
- Job satisfaction
- Empowering communication
- Motivation
- Creating loyalty
- Effective planning of training and development
- Setting infrastructure of career planning
- Transition to fair wage system

Performance evaluation of strategic components:

Measuring performance of management structure is another factor is vital to complete implementation process in time with optimum use of resources. Effectiveness of strategic components of E-Government System implementation needs to be well observed, assessed and measured constantly as to be able to take necessary corrective actions on time Besides, IT projects and their efficiency and effectiveness play key roles for a successful E-Government System implementation. Consequently, their return period also need to be evaluated periodically.

There are certain measurement factors to be considered for the performance and effectiveness of E-Government System (Table 2.3).

Table 2.3 Performance evaluation parameters of E-Government System



2.2.1.5. Communication Management

Establishing a seamless communication system is an essential for the implementation process of E-Government System. There are three main stakeholders the communication system needs to encompass: Government agencies, citizens and private sector (Figure 2.12). Communication system is especially important to convey information horizontally and vertically between E-Government System implementation committees, government agencies, citizens and private sector. An effective communication network enables directives, problems, needs, developments and recommendations to be conveyed in time and correctly without missing out anything. There are few things to be realized to have an effective communication system: First, establishing various interactive communication environments, putting an effective CRM into practice, provides end-users and private sector with sharing their E-Government System experiences with each other. It is also ideal to make those beneficiaries participate in implementation processes with their ideas and recommendations. Aforementioned end-user and private sector experiences can be used to develop the system and value of its services according to users' needs as to achieve being user-centric. Second, an internal communication and recommendation system helps implementation committees to hear government agencies' needs and problems faced and to make them participate in implementation processes actively (Figure 2.12).

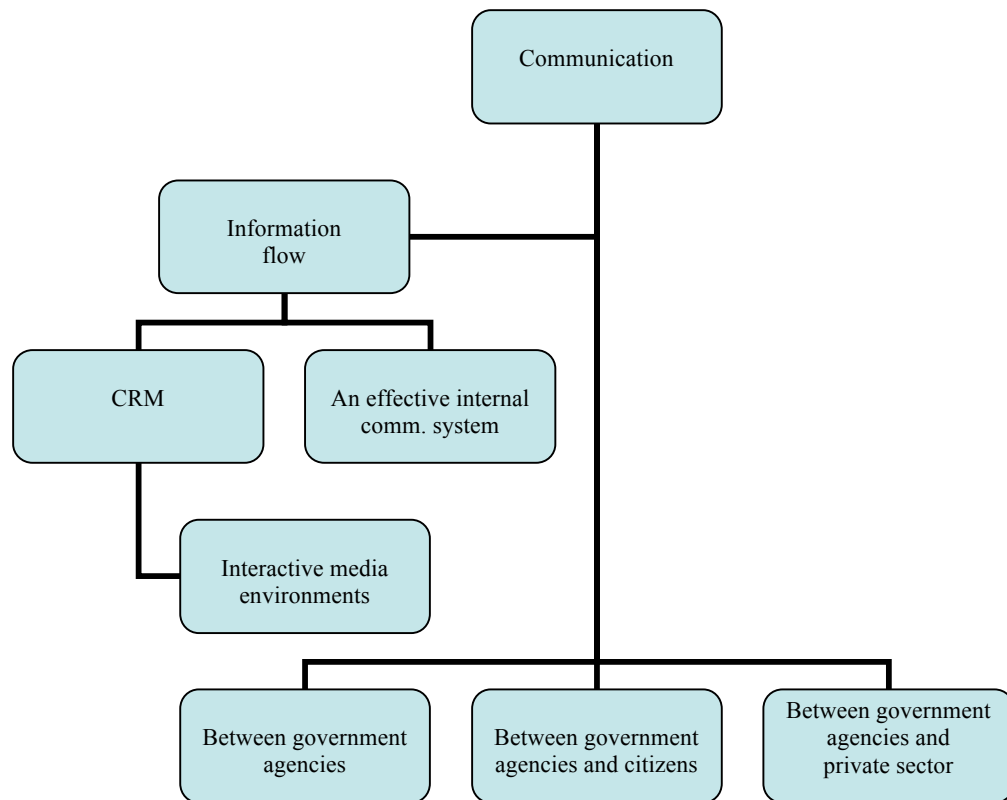


Figure 2.12 Parties of communication system

2.2.1.5.1 Information Management

Information management, which is realized by database, is one of the strategic components for E-Government Systems. Two purposes are usually tried to realize in Information Management: First, increasing the value of organization through information technologies and information systems supported by them. Second, conveying the correct information to decision makers at the right time and with the right way (Bensghir, 1996:25). As Information Management is vital for E-Government Systems it needs to be managed professionally by an office or a department, which is led by a CIO reports directly to the prime minister.

A cohesive Information Management System involves five stages as information transitions from source to use (Figure 2.13):

- Information acquisition,
- Information storage and mining,

- Information analysis,
- Information sharing and dissemination,
- Information application and validation (Marquardt and Kearsley, 1998:158).

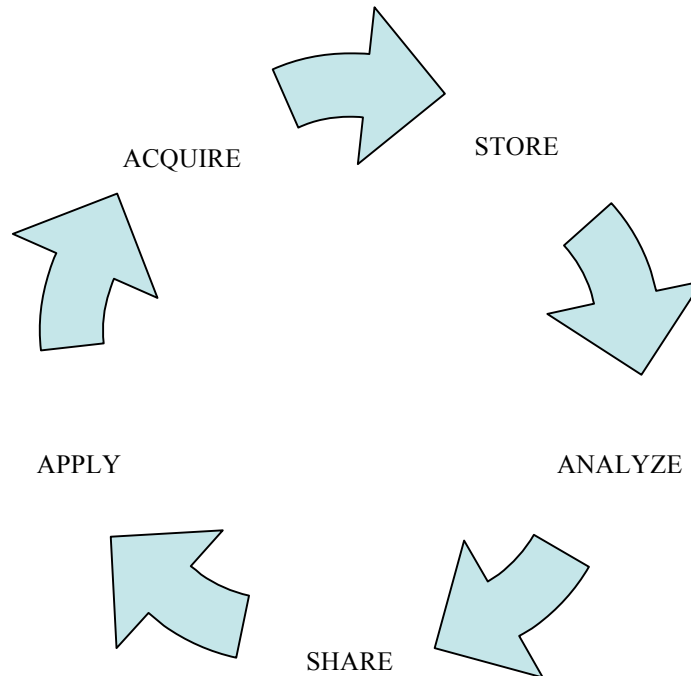


Figure 2.13 Stages of an Information Management System
(Marquardt and Kearsley, 1998:158)

Marquardt and Kearsley assert that for organizations to manage their information effectively and efficiently, each of these five components must be ongoing and interactive. The management of information should be continually subjected to perceptual filters as well as to both proactive and reactive activities (Marquardt and Kearsley, 1998:159). An ideal Information Management System should be shored up with a flawless documentation system. There are certain things to be paid attention in achieving it (UN, 2008):

- Elaborated information
- Using correct channel
- Adequate training
- Restricted access
- Sufficient change control
- Alert system to notify changes
- Well classification

- In time information flow
- Well integrated information sources
- Minimized obsolete and out of date information
- Well established quality control
- Minimized missing information

2.2.1.5.1.1 Information retrieval and information sharing

As it is so valuable and hard to get it is so vital for an organization that knowledge needs to be transferred to or from individuals or organizations very carefully and accurately or serious problems may occur. Data storage is also so important as to get the knowledge back safely and quickly. Weick warns that as a result of the changeable nature of the storage and retrieval process, the normal integration of human memory, the impact of perceptual filters and the loss of supporting rationales, knowledge retrieved from organizational memory may bear little resemblance to what was originally stored (citer, Marquardt and Kearsley, 1998:166). That is why it is vital for an organization to establish a corporate memory and design processes in a manner to ensure accurate and timely knowledge retrieval. The corporate knowledge base consolidates knowledge into a central location. This emerges the conditions for the speed sharing of knowledge and sustained, collective knowledge growth. Lead times among learning and knowledge application are shortened systematically. Human capital becomes more productive because of structured, intelligent and easily accessible processes (Marquardt and Kearsley, 1998:166).

Information and its sharing are essential for E-Government Systems. Consequently, traditional attitude of not sharing information amongst government agencies need to be changed as to increase effectiveness of the government and to realize user-centricity of the system. There are certain benefits of achieving it (Figure 2.14).



Figure 2.14 Enablers of information sharing

2.2.1.5.1.2 Information storage

Complex structures of organizations have caused them need more and more information for their management and control operations. As a result of needing big and large amount of information created information clusters. Therefore it become harder and harder to understand, to remember and to interpret those information clusters. The only way that aforementioned information used effectively and efficiently is to systemize and store it (Bensghir, 1996). That is why adequate system capacity is crucial for effective data storage. The concept first emerged in the 1980s. Once data were in place and catalogued, managers could help themselves to whatever slice of the organization's data pie they needed at that moment. A knowledge storage system enables an organization to contain

and retain knowledge, so that it becomes organization property and doesn't go home at night or leave the organization when the employee leaves. Unfortunately, knowledge (also referred to as 'intellectual capital'), though far more important than physical material, is usually scattered, hard to find and liable to disappear without a trace because it is not stored. Storage is obviously important, but what knowledge should be stored is the question (Marquardt and Kearsley, 1998:161).

Stewart offers five general categories under knowledge should be stored:

- *Corporate yellow pages* – capabilities of employees, consultants and advisors of the organization; e.g., who speaks Thai, who knows JavaScript, who has worked with client A?
- *Lesson learned* – checklists of what went right or wrong that might be applied to other projects; leverage what has been learned in the past rather than losing the recipe.
- *Competitor and Supplier Intelligence* – continuously updated organization profiles and news from commercial and public sources and wire services; call reports from sales people; attendees' notes from conferences and conventions; an in-house directory of experts, news about regulations.
- *Organization Experiences and Policies* – process maps and work flows, plans, producers, principles, performance measures, shareholder and customer profiles, products and services (including features, functionality, pricing, sales and repair).
- *Organization products and processes* – technologies, inventions, data, publications and processes; strategies and cultures, structures and systems as well as organization routines and procedures that work (citer, Marquardt and Kearsley, 1998:161-162).

The way we store the knowledge is also important element of data storage. In order to be able to reach the knowledge or integrate it with previous knowledge easily that we had stored, we need to classify and code it then store it with other related information. Having done that also other people who are supposed to reach the information may reach it easily. Marquardt and Kearsley argue that knowledge is only clumsy data unless it is coded and stored in a way that makes sense to individuals and the organization. Too many organizations remain overwhelmed and inundated with vast amounts of data that clutter up the information highway. An organization cannot learn from the information it is irretrievable, distorted, fragmented or inaccurate. It is important to keep it in mind that

knowledge storage involves technical (records, database, etc.) and human process. As the organizations grow bigger and bigger in operation and get more specialized and decentralized, the organization's storage system and memory can become fragmented and corporate benefits of the knowledge can be harmed. It is true that technological developments enable us to store more information therefore emphasis should be given to data bombardment or information overload. (Marquardt and Kearsley, 1998:162). That is the reason why storing, reaching and retrieving to adequate information is so important for the organizations.

2.2.1.5.1.3 Data processing and data mining

According to Haber what human information processing is that cognitive psychology is often called human information processing reflects the predominant approach to the subject used by cognitive psychologists. The acquisition, storage, retrieval and use of information comprise a number of separate stages and the information processing approach attempts to identify what happens during these stages (citer, Reed, 1996:5). Data processing enables us to integrate the information or knowledge, which is already in the storage in order to create a meaningful new knowledge.

The latest development in analytical tools is data mining. Data mining provides organizations with finding meaning in their data. By discovering new patterns of fitting models to the data, employees can store and extract information to better develop strategies and answer difficult business questions. OLAP (on-line analytical process) analyzes data with substantial volumes elaborately and to emerge hidden patterns and answer all kind of questions managers may as. Aforementioned data mining software answers the questions, which managers would not even think of. There are several data mining tasks such as classification, regression, cluttering, summarization, dependency modeling and change and deviation detection as well as data mining methods like:

- Decision trees and rules
- Nonlinear regression and classification methods
- Example-based methods
- Probabilistic graphical dependency models
- Relational learning methods and use of intelligent agents

There is some data-mining tools are being developed for navigating data, for discovering patterns and creating new strategies and for delineating underlying statistical and quantitative visualization methods. Some visualization products are AVS/Express, SGI MineSet and Visible Decisions Discovery. Also, in order to integrate data mining products, Data Mind and IBM's Intelligent Miner are supposed to be very helpful (Marquardt and Kearsley, 1998:164).

2.2.1.5.1.4 Information and communication

Scarcity of proper communication and co-operation between the administrations in an organization or among organizations often causes some set backs and emerges two main problems: Duplicated and inconsistent information and multiple access points for similar services or applications. One major result of having multiple disconnected views for the same information is that citizens experience severe service degradation during their interaction with the administrations. Taking into account these issues in the long term, a crucial aspect for E-Government System project is to design a cooperative architecture that enables the administrations to provide better services. This cooperative architecture, with some variants, follows the general structure shown in the right-hand side of figure 2.15, whereas in the left-hand side the traditional style used in the interactions among businesses and administrations is represented. The three principal interventions in the ICT cooperative architecture concern:

1. The *common front office layer* has the goal of reengineering the relationship between users and administrations, enabling secure identification (*digital authentication layer*), filtering the differences among the administrative procedures, and virtually showing the users a unique seamless set of agencies (*seamless interface layer*). The role of the interface is also to provide a multi-channel access and specialized interface for similar groups of users, allowing different users preferences and skills (*multichannel access layer*).
2. The *common back office layer* allows the public administration to interact through a cooperative infrastructure as to exchange existing data available on citizens. Besides the *connectivity infrastructure layer*, which provides connectivity, a *cooperation infrastructure layer* is presented, including application protocols, repositories, gateways, etc. The main

target is to allow each administration to specify and publish a set of cooperative interfaces including data and application services made available to other agencies. On top of this layer an *event notification infrastructure layer* is placed whose goal is to guarantee synchronization between update events. This layer can be used by an administration when receiving updated information from a citizen. The update is published in the cooperative infrastructure and the information can then be subscribed to by all other agencies interested in the update.

3. The *data architecture* is typically organized in terms of a number of databases managed in the local administrative domains. Typically, such databases represent the same group of citizens or overlapping groups of citizens with heterogeneous identifiers and domains. In a cooperative architecture, this heterogeneity and fragmentation is mitigated to produce a new data architecture enabling cooperation. In order to minimize the loss of autonomy of administrations, local databases may be kept unchanged and new databases common to all administrations created. These may be obtained through the linkage of the information on citizens in the local databases (Batini & Scannapieco, 2006).

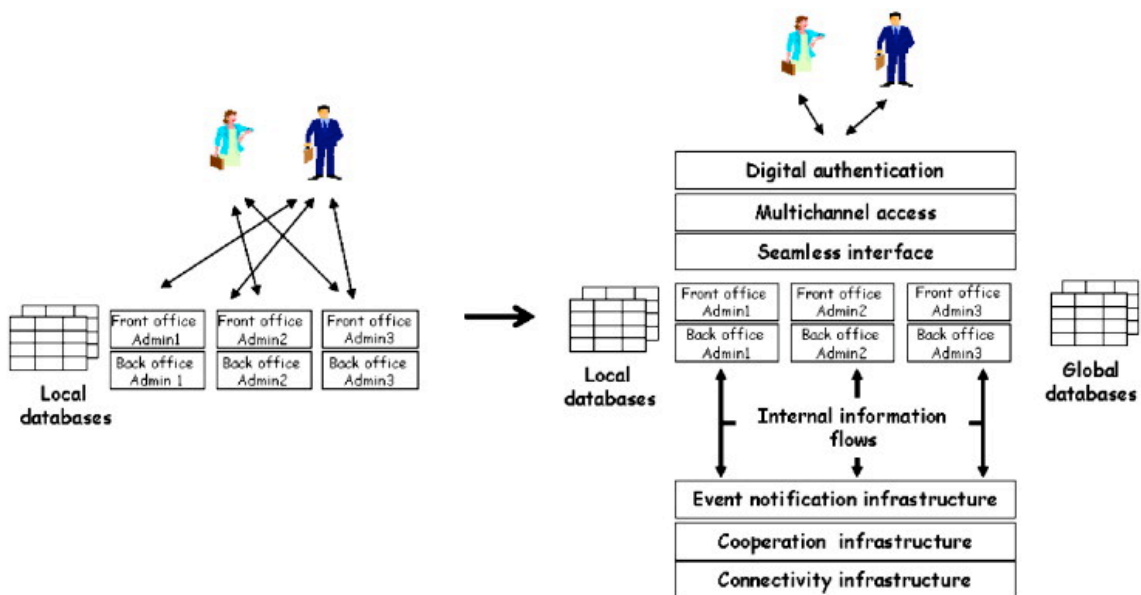


Figure 2.15 Cooperative architecture between administrations and users (Batini & Scannapieco, 2006).

2.2.1.5.2. Customer Relationship Management

An efficient and an effective E-Government System is evaluated depending on its users' usage rates of its services and information provided. It can only be achieved through being user-centric. In order to figure out and putting into action successful user-centric priorities, starting right from the beginning of and throughout the implementation process and after, it should be focused on users' needs and expectations. If the goal is to make E-Government services to be used by the most of the citizens in an incremental manner, every possible effort should be made and opportunity should be taken to gain users' thoughts to realize this for effectiveness of the system. Carter, Bélanger and Löfstedt states that governments must make a concerted effort to find out what customers actually want if the initiative is to be successful (Carter, Bélanger and Löfstedt, as cited in Rose and Grant, 2009). In this respect, appropriate applications of CRM are the best tools to bring about the perspectives of target audiences. Asking for citizens' and private sector's feedback and renewing the system accordingly makes them feel to participate in system's implementation process. Those feedbacks also enables a government to see which applications are useful and used the most by citizens and which ones are not useful and why? Then, E-Government CIO and the Executive Board can emulate the features of the one used the most to adjust or renew less used services or applications. Having done that, value of services are increased and the goal of user-centric services can be achieved. In addition to that, CRM applications and statistics gain from those applications provide feedbacks to evaluate staff performance, which can be used for promotions and wage regulations. From the perspective of the citizens, effective participative management, in which they feel they are a part of the governance, can only be realized achieving successful CRM applications. Thus, CRM is an essential tool for a strategic-government implementation, in which a citizen-centric system runs through its satisfied users.

CRM activities are divided into two categories: Front office applications are used to reach and serve to the customers. On the other hand, back office applications are used to analyze the data gained from the customers and turning them into meaningful information. Integrated usage of aforementioned services is crucial for CRM's success. There are certain advantages that the CRM system provides to customers and organizations (Table 2.4) (Andersen, 2001):

Table 2.4 Advantages of CRM in terms of Customers and Corporations
(Andersen, 2001:37)

<u>In terms of Customer</u>	<u>In terms of Corporation</u>
Rapid, easy and uninterrupted access	Increasing in customer satisfaction
Rapid provision of demands	Lower cost
Getting lower priced or free services	Accessing global market due to web
Easier and interactive communication	Accessing real time customer information
Shortening of service duration	Easy gaining of customer feedbacks
Getting individualized service	Effecting of marketing activities
	Increasing in sales
	Increasing in profit
	Increasing in customer dependency

2.2.1.5.2.1. Interactive media environments to reach out citizens

Setting up interactive media environments in cyberspace support establishing a flawless communication with the users. Having done that, users would have the chance to share their experiences of E-Government System with each other and also with the government. The government will broaden its opportunities to reach its citizens. In that way, the government finds out current needs and expectations of the users as well as repeating problems that they face utilizing E-Government System. Some social media environments like “Facebook”, “Twitter”, “YouTube” or a blog can also be used as interactive media environments.

In order to establish a fruitful relationship with citizens as to understand their expectations and strength the relationship with them there are certain things to be done constantly (Figure 2.16).

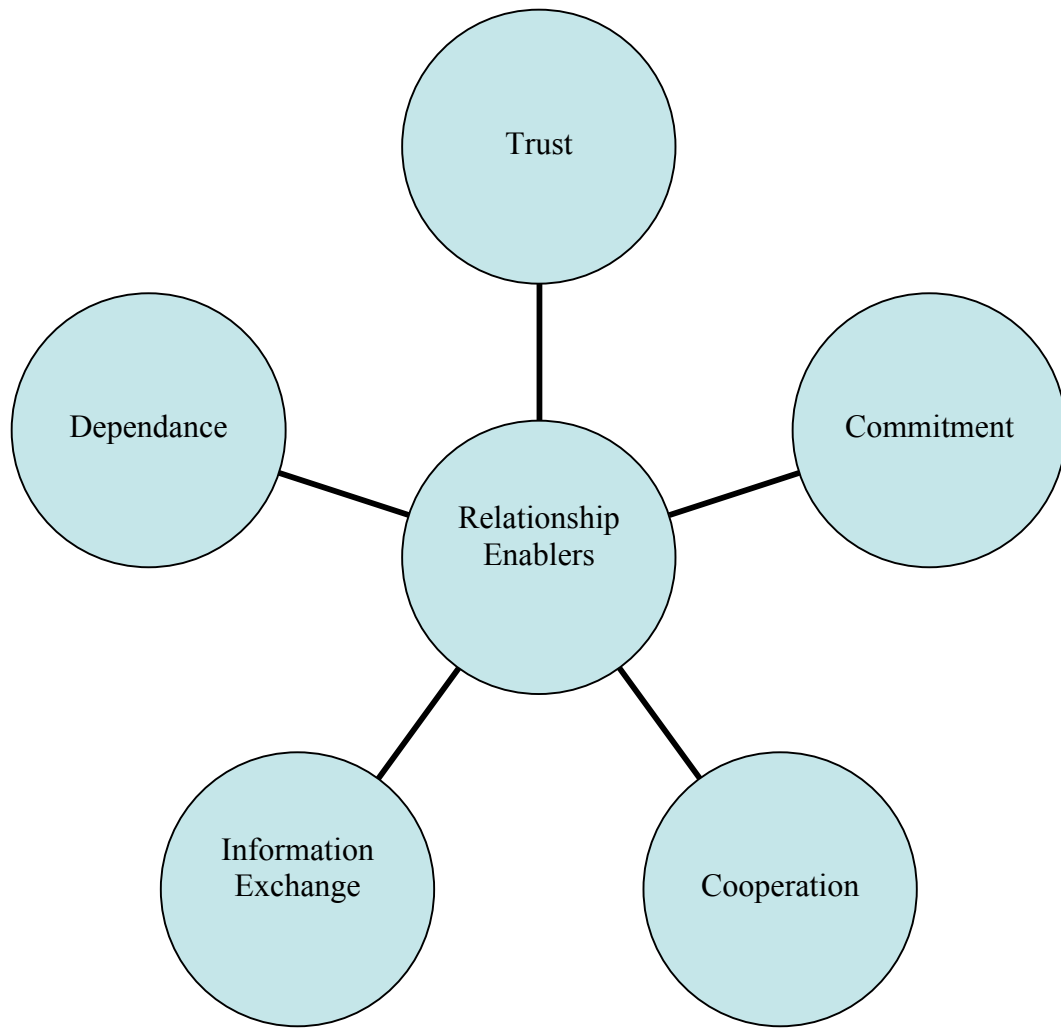


Figure 2.16 Key Relationship Enablers (Weinstein and Johnson, 1999:138)

Communication is the best way to establish and maintain trust, which comprises reliability and integrity. In achieving that, it is important to be honest, open and straightforward to the public. Commitment is an implicit and explicit pledge of perpetuating and underpinning relationship. A high level of commitment encourages both parties in relationship to pursue their targets and expectations. Cooperation encompasses coordinated activities between parties involved in relationship. Dependence is a willingness to invest time and dedicate resources for the purpose of setting up and empowering a relationship. Information exchange has an important role keeping other enabler together and preventing them from disappearing. An effective information exchange can also be used for process and service innovation. The key here is to use gained information to emerge a value for citizens (Weinstein and Johnson, 1999).

2.2.1.5.2.2. Interactive communication and recommendation system for employees

It is important not to exclude any stakeholders in transformation period. In that respect employees of government agencies needs and expectations also need to be paid attention as much as other beneficiaries. Those employees are the ones, who communicate with the users the most. Consequently, their feedbacks and information flows regarding citizens' needs, problems and dissatisfaction are crucial for a seamless E-Government implementation. An internal interactive communication and recommendation system operates in cyberspace, in which upward and downward communication is easily achieved, will help to realize it going through transformation period preventing misunderstandings and minimizing ambiguities between executive board, implementation boards and government agencies' staff.

2.2.2. E-Government as a communication system

E-Government System is a new concept of communication system between government and its citizens that has some components need to be put into practice concurrently. Those components can be gathered under two main groups as operation related components and system related components. Those components are;

Operation related components:

- Publicity
- Participation
- Inclusion
- Inducing internet usage
- ICT competent society

System related components:

- Security
- Applying VCD principles on websites
- Mobile devices applicable applications and services
- User-centricity

- Standardization
- Establishing a single portal
- Interoperability
- System accessibility

2.2.2.1. Operation related components

Those components are publicity, participation, inclusion, inducing internet usage and information communication technology competent society.

2.2.2.1.1. Publicity

Effective publicity activities are also important for citizens as to be aware of and keeping it vivid in their minds of E-Government System and its services. Therefore, each and every possible way and opportunity should be used to introduce E-Government System to its beneficiaries as well as to make them accustom with it.

As the main idea of E-Government System is to serve citizens better through renewed and value increased services shaped by their needs and expectations. Those services need to be introduced well to the beneficiaries such as public institutions, citizens and the private sector through planned activities using ICT and social media tools like “Twitter”, “Facebook”, “YouTube”, newspapers, public and private TV channels (Figure 2.17). Some programs can be broadcasted on TV and radio channels promoting and showing how to utilize E-Government services. Newspapers, magazines, brochures, leaflets and billboards can be used for advertising. Besides, E-Government System usage lessons can be adapted to education system as to introduce and to teach the system and its benefits to students. So, it will be easy for them to realize the benefits of the system and adapt to it as early as possible. Also each opportunity of interaction between system’s potential beneficiaries and government agencies’ employees should be used effectively to promote the system and its services.

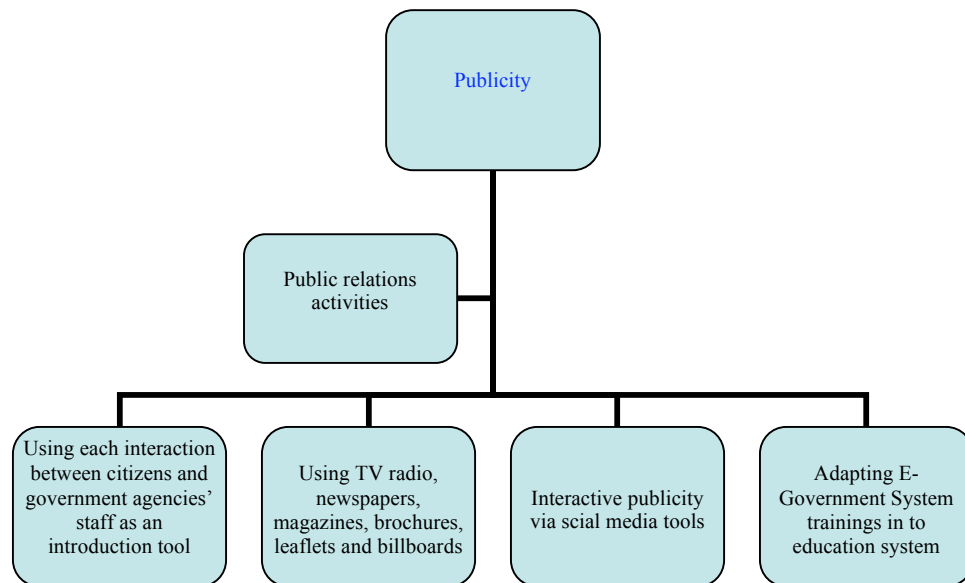


Figure 2.17 Publicity tools

2.2.2.1.2. Participation

Concurrent participation of beneficiaries is needed for effective E-Government System implementation processes. Beneficiaries of E-Government System are namely public institutions, citizens and private sector, each of which participation is crucial for the efficiency and the success of the system. E-participation is especially important for E-Government System as well as physical participation in terms of government agencies.

More institutions participate in using the system and share the valuable information they have with the public as to create need for the system along with consulting to citizens over websites, mobile devices or social media tools like blogs, “Twitter”, “YouTube” and “Facebook” on current governance issues, more citizens and private organizations are attracted to use the system maximizing e-participation. E-participation regulations and participation notifications for future issues can also be published through those social media tools to attract more users and to minimize ambiguity like some countries have been doing lately. Those kinds of activities increase users’ trust towards the government. Transition and transformation period will be short and smooth accordingly (Figure 2.18).

Either ICT enabled or not, a misleading evaluation is frequently made with regard to gaining public participation simply creating channels for citizens to interact with governments. Lee says that participation stands for shifting the concept of passive

customer to active citizen in government and citizen relationship. He also emphasizes that maintaining citizens' perpetual participation is hard to achieve (Lee, 2006). Users should be induced to participate policy making and decision-making processes of the government through creative ways in order to realize Participative Management: For example, the budget consultation website of the Canadian province of British Columbia invites citizens to submit videos with their views on alternative ways of addressing the economic crisis and their indications of budgetary priorities. Another example is about tempting deployment of ICT tools, citizens were invited to provide feedback on policies to address the State budget deficit with a message from Twitter account of the Governor of California in June 2009. In August of the same year, a website was designed just to gather all the feedbacks came from citizens via Twitter, along with a user-based system also allowing users to rate each other's ideas in order to reveal the best submissions (UN, 2010). Through those ways, Participative Management is successfully realized and participants are made believe that something is changing in governance and they really participate in government's actions, which concern their future. So, taking the advantages of social media tools should not be overlooked in achieving participation and users' perception of increased value of government services accordingly. The concept of E-Government System is all about making citizens feel that way.

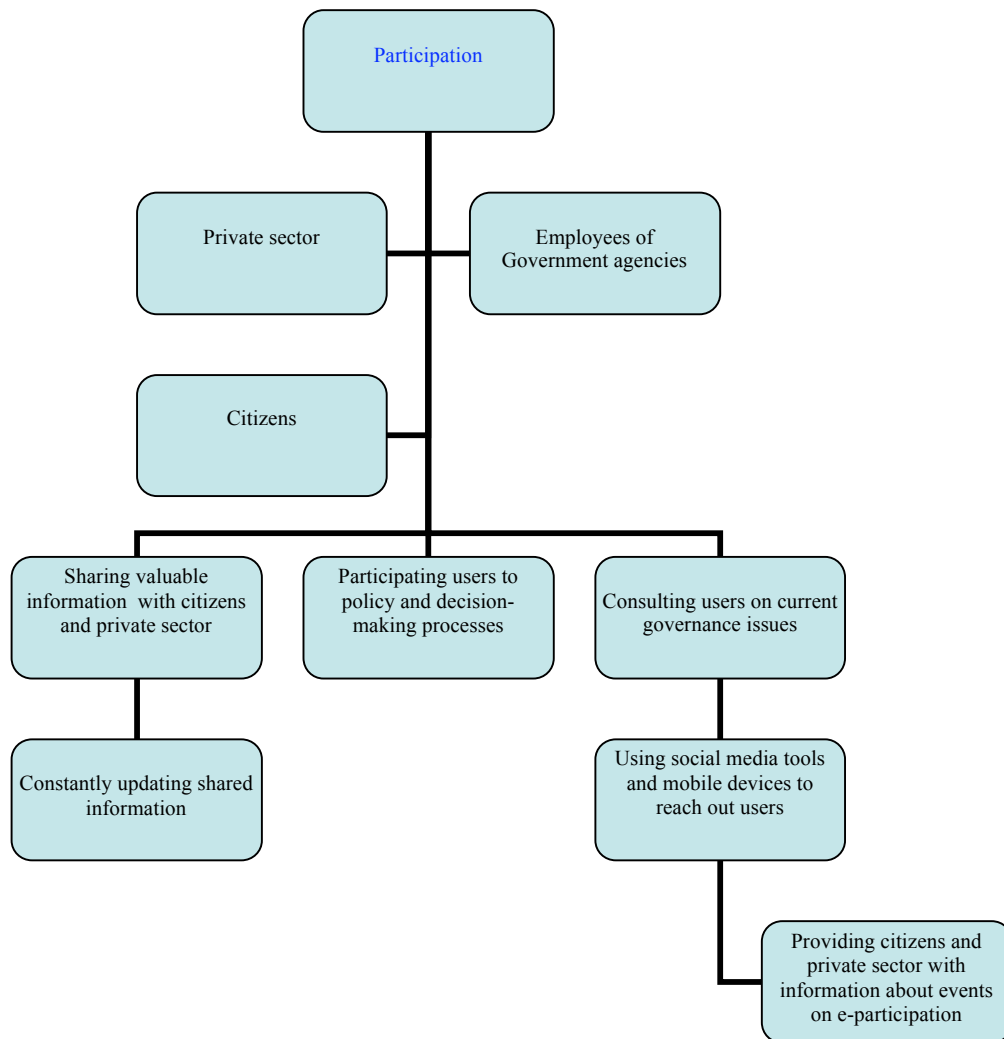


Figure 2.18 Targets and requirements of participation

2.2.2.1.3. Inclusion

Inclusion of citizens can only be achieved through eliminating various difficulties caused by disability, age, education, economy, gender or geography and taking the advantages of every possible ways of serving to those citizens regardless of which socio-economic groups or disadvantaged groups they are in and reaching out for them as to make them benefit from E-Government services equally (Figure 2.19).

Illiterate, old and retired people should not be forgotten to serve, as they may not be included in total number of users regardless whatever is done. For instance, Singapore has realized an exquisite service by linking the database of various government agencies with the direct deposit systems of the nation's banks for rapid cash transfers to those most in

need like members of vulnerable groups including old people (UN, 2010). It is one of E-Government System's flexibilities, which enables a government to come up with those kinds of innovative and creative approaches in serving citizens and in achieving inclusion accordingly.

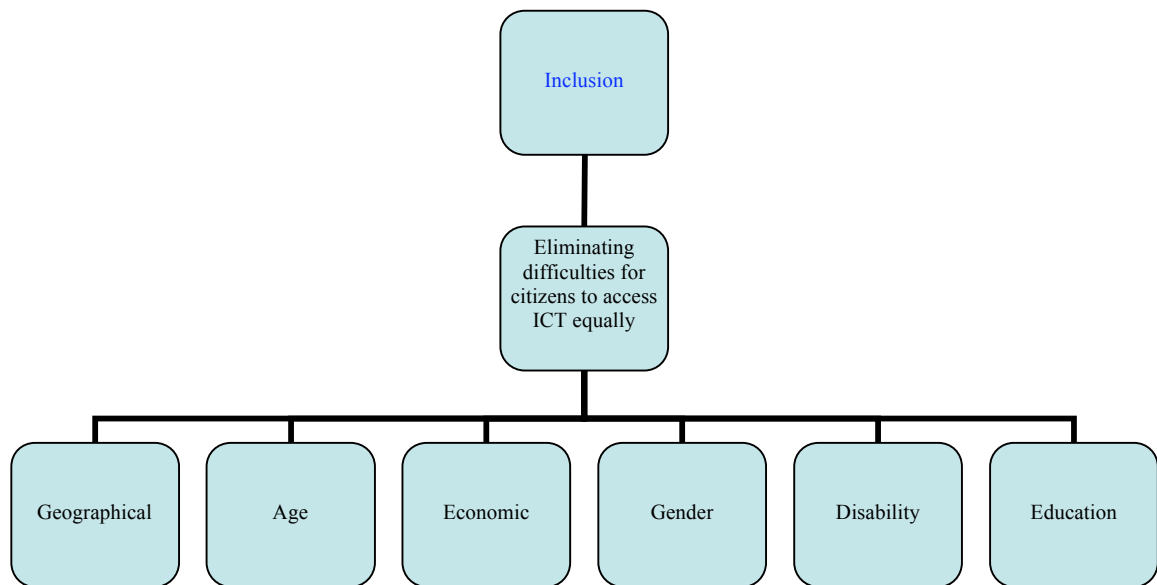


Figure 2.19 Difficulties to overcome as to achieve inclusion

2.2.2.1.4. Inducing internet usage

One of the main reasons that E-Government System have been spreading among the governments is to make citizens feel closer to the Governments via renewed and improved E-Government services. In order to succeed the goal of high uptake rate and high number of service users, internet usage should be attracted among citizens. In achieving this, all beneficiaries should be provided with equal chances to utilize internet. Therefore, internet fees should be affordable for the citizens considering their average household incomes. If a society is not provided with sufficient and reasonably priced internet access, the society could not be expected to benefit from E-Government services as much as it is planned in advance. In addition to that, libraries, schools, public education centers, culture centers should be provided with more computers and internet accesses along with increasing the number of kiosks throughout the county as to provide citizens with more internet access points.

Having done that, it is also important to share valuable information over internet with the citizens as it attracts more users. Once they realize the benefits of it, they get used to it.

Although it requires relatively high investments, in succeeding to induce internet usage, broadband internet should also be spread within the country as to provide fast internet connections along with facilitating the transfer of substantial amount of information in a short period of time. As to off set the high costs of broadband internet access, private sector can be attracted to invest on communication infrastructure of the country creating an ideal ICT competition environment. Consequently, it would be much easier to provide users with low cost fast speed internet access (Figure 2.20).

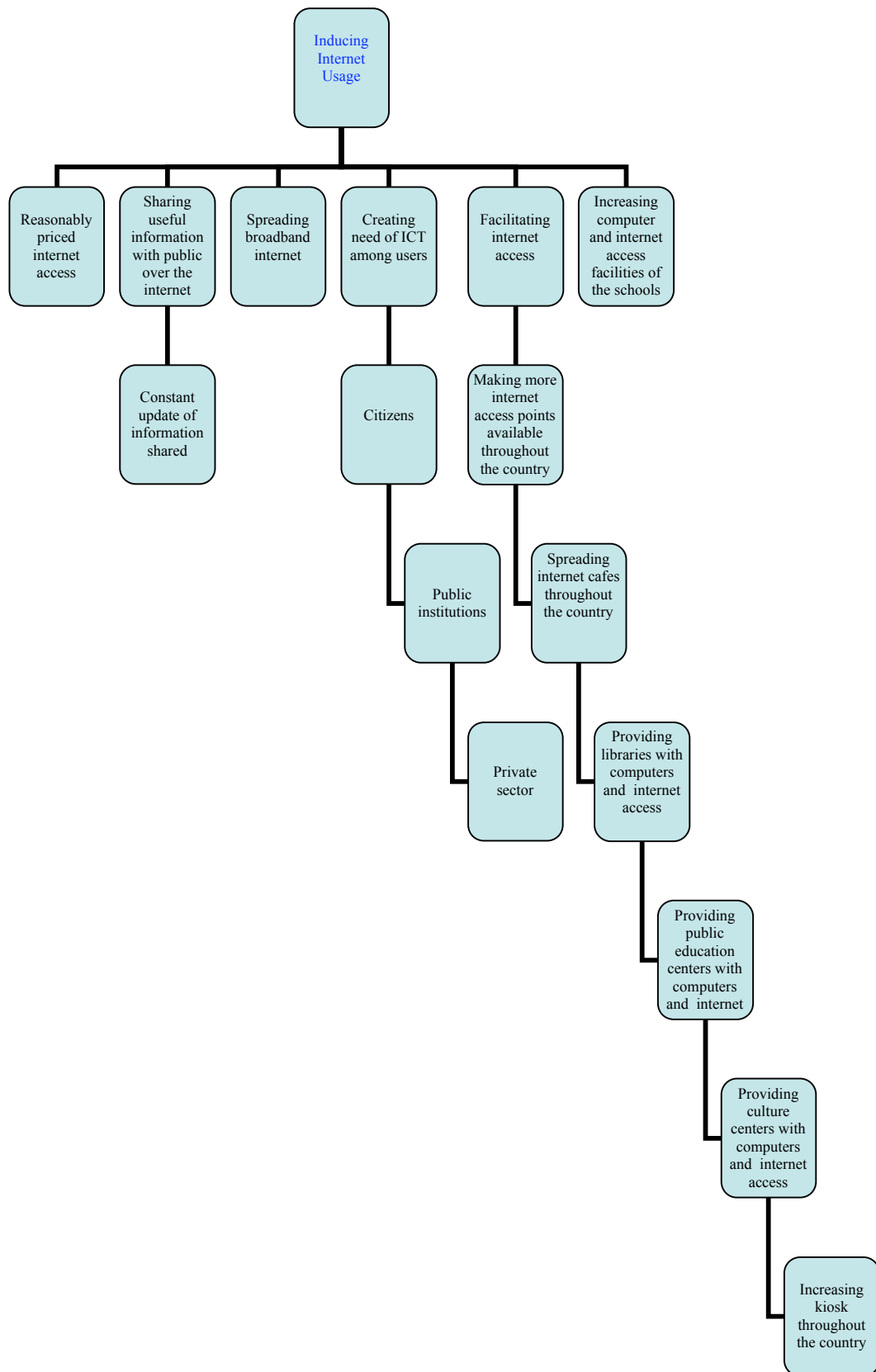


Figure 2.20 Things to do for inducing internet usage

2.2.2.1.5. Information Communication Technology competent society

As to make most of citizens to benefit from E-Government System and its services, society needs to be turn into an ICT competent society minimizing digital divide. According to UN, more population grows in developing countries more people will face with the problems of digital divide unless governments work in collaboration to provide substantial access to information (UN, 2010). Governments have certain resources, through which they can achieve the technology competent society approach and concurrently minimize the digital divide. Governments should vitalize ICT investments and R&D within private sector creating suitable and competitive environment. It will help to develop communication and technological infrastructure of the country. Collaboration between private sector, public sector and NGOs also should be invigorated to minimize digital divide through certain activities like CSR projects, which are put into practice by private companies on their own or together with the government and NGOs. For example, an article published in Haber Türk Newspaper on March 10th. 2011 about a project called “Techno-Woman”, which is about to be started in Turkey with the collaboration of Turkish Ministry of Education, Intel Corporation and Turkey Futurists Association as an NGO. Main idea of the project is to train the women on how to use the internet and the computer more effectively along with raising awareness among those who do not know what computer and internet are and to develop their entrepreneurship. The trainings within the project will be run in 21 cities located encompassing 7 regions of Turkey. Those trainings will spread to all cities of Turkey in the near future.

Moreover, governments can adapt ICT related lessons in education system for students. Short-term ICT courses can be established and put into practice according to various needs of citizens through internet cafes, libraries and schools. TV channels for distance education and volunteer citizens for train the trainer can be used to achieve that. Schools can be allocated for trainings along with internet access points throughout the country for ICT trainings and certificate programs. Besides, on the job trainings need to be organized in cooperation with private sector for the people who work for government and for private sector. Those trainings should also cover how to use trainings for E-Government System (Figure 2.21)

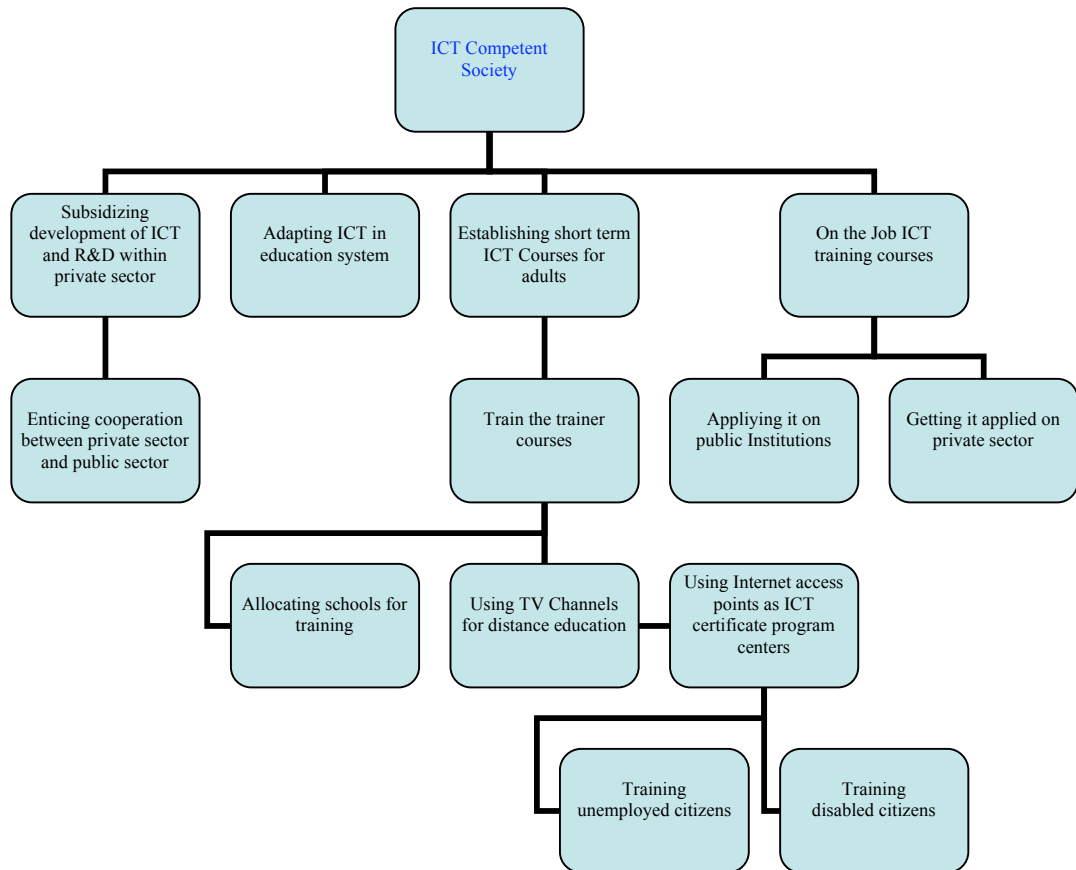


Figure 2.21 Phases of Creating Technology Competent Society

2.2.2.2. System related components

System related components are security, applying VCD principles on websites, mobile devices adaptable applications and services, user-centricity, standardization, establishing a single portal, interoperability and system accessibility.

2.2.2.2.1. Security

Security is another component that directly effects citizens' usage frequency of the system. Appropriate measures provide users and the system itself with the security. A secure system induces more and more users to benefit from the E-Government services without hesitation.

Having moved most of the transactions, businesses, services to cyberspace, security of data and systems that keep those data became curial for the new environment. According to

data of the year 2010 of Turkey Statistic Organization everyone out of two people, who have used internet, have come across security problems. 36,4% of them have had virus related problems, which caused information and time losses. 58% of the internet users have used protection software for their personal computers to protect their PCs and their information stored in them. As security creates trust for users it needs to be provided for the new environment.

Cyber attacks are examined in two main groups; passive attacks and active attacks.

Passive Attacks:

Those kind of attacks intent to make use of information or learn from the systems but do not harm them. Passive attacks are concerned with the information being conveyed. There are two types of intrusion depending on intruder's opportunities to interpret and extract the information being conveyed:

Passive wiretapping attack: When two parties communicate unencrypted, intruder is able to extract all information that is encoded in the data.

Traffic analysis attack: Intruder is not able to drag the information that the conveyed data encodes, but infers of information from the observation of outside traffic features such as two organizations' intensive mail traffic may tell the intruder that those two organizations are having sort of conversation to become partners.

Active Attacks: Those attacks attempt to alter system resources or effect their operations. In these sorts of attacks information conveyed from the sender to the receiver may not only be observed but also completely controlled by the intruder deleting or modifying. Those attacks are relatively easy to be realized. The reason for the most of these kinds of attacks is because information send or receive is not protected in terms of integrity and authenticity (Oppliger, 2001).

There are three main elements that security measures need to take care of: system data and the users. Data security comprises trustworthiness of content, storage, retrieval and transfer of the data in the system. Users' security contains confidentiality of users' personal

information, which only authorized officials and government agencies should be able to reach along with secure transactions and information gathering for users. System's security is all about system's protection against malicious attacks and being able to be reached at all times securely (Figure 2.22).

As intensity of security measures effect the cost of E-Government System, security levels can differ depending on importance of applications. While financial related transactions need high level of security, reaching statistic related information may need lower level of security. Legal regulations are needed when defining which transaction needs what level of security (TBD, 2002).

The best way for security is to understand security. Next step is to figure out current choices and measurements in the field of security. Three main fields need to be examined before Security measures are taken:

Physical Security: Physical security is to prevent power supply and hardware interruption of data stores or data base servers, where data is kept.

Network Security: It is to halt unwanted accesses via network and establishing systems like "firewall" systems as to control log ins and log outs to the system constantly.

Data Security: It is protection of data when it is transmitted or when it is in data base. Encryption systems and SSL (Secure Socket Layer) applications can be used protecting data (TBD, 2002).

Digital certificate is also used for security. It is a piece of encrypted software that confirms your identity and establishes your authority to perform a particular task. Digital certificate is used registering with E-Government System. Some government services do not require the level of security provided by digital certificates as the information involved in them is less sensitive. If you only want to use this type of service, you can register with a User ID and a password.

Cyber crimes:

Computer related crimes are defined as cyber crimes. Ersoy examines the cyber crimes in three categories (Ersoy, as cited in Andersen, 2001):

- Crimes committed through IT systems
- Crimes committed against IT systems
- Crimes committed against IT tools

IT Crimes are divided into six main groups according to the IT Related Crimes Report of IT Related Crimes Work Group of T.C. Police General Management (Andersen, 2001):

- Unauthorized access to computer systems and services
- Unauthorized access
- Unauthorized eavesdrop
- Account breach
- Computer sabotage
- Logical information sabotage
- Physical information sabotage
- Fraud through a computer
- Bankcard fraud
- Input/Output program fraud
- Unauthorized and unfair usage of communication services
- Forgery through a computer
- Unauthorized usage of computer programs
- Usage against a license agreement
- Multiplying against license rights
- Final user copying
- Hard disc uploading
- Forgery
- Concurrent usage
- Piracy of bulletin board
- Software renting
- Other
- Abuse of personal information
- Creating forge identity and identity duplication

- Illegal publications
- Industrial espionage
- Pornography

Application of numeric signature for encryption of data send is especially important as to deter third persons from having access to documents send through internet and to maintain security of the system. Strengthening legal infrastructure is also crucial for security as to attract more and more users to the services of E-Government. So, necessary laws such as protection of individual information need to be legislated together with implementation process of E-Government System.

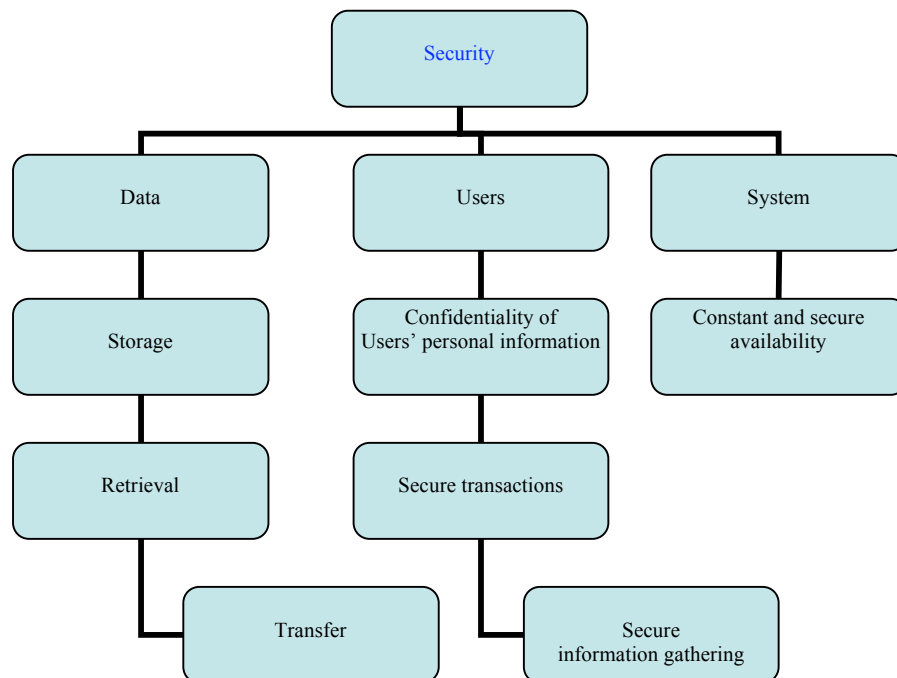


Figure 2.22 Elements of Security

2.2.2.2.2. Applying Visual Communication Design principles on websites

As communication differs in virtual environment from other sorts of communication including face to face communication, construction of the message should also be different in that environment. So, providing clear vision for users of the system in virtual communication is especially important. There are certain elements, which are vital for the clear vision. Huxley argues that the first stage of clear vision is to 'sense'. To sense simply means letting enough light enter your eyes so that you can see objects immediately around

you. His next stage is to select a particular element from a field of vision. To select is to isolate and look at a specific part of a scene within the enormous frame of possibility that seeing offers. The isolation is the result of the combination of the light gathering and focusing properties of the eye with the higher level functions of the brain. When you select you engage more fully the objects in the scene than when you merely look. Selecting starts the process of classification of objects as harmful, helpful, known, unfamiliar, meaningful or confusing. The last stage is to 'perceive'; that is, you must try to make sense of what you select. If your mind has any chance of storing visual information for long-term retrieval and to increase your knowledge base, you must actively consider the meaning of what you see. Aldous Huxley's method for clear seeing has a substantial visual meaning (Figure 2.23). The more you know, the more you sense. The more you sense, the more you select. The more you select, the more you perceive. The more you perceive, the more you remember. The more you remember, the more you learn. The more you learn, the more you know. The circle repeats itself on and on (Aldous Huxley, as cited in Lester, 2003:5-6).

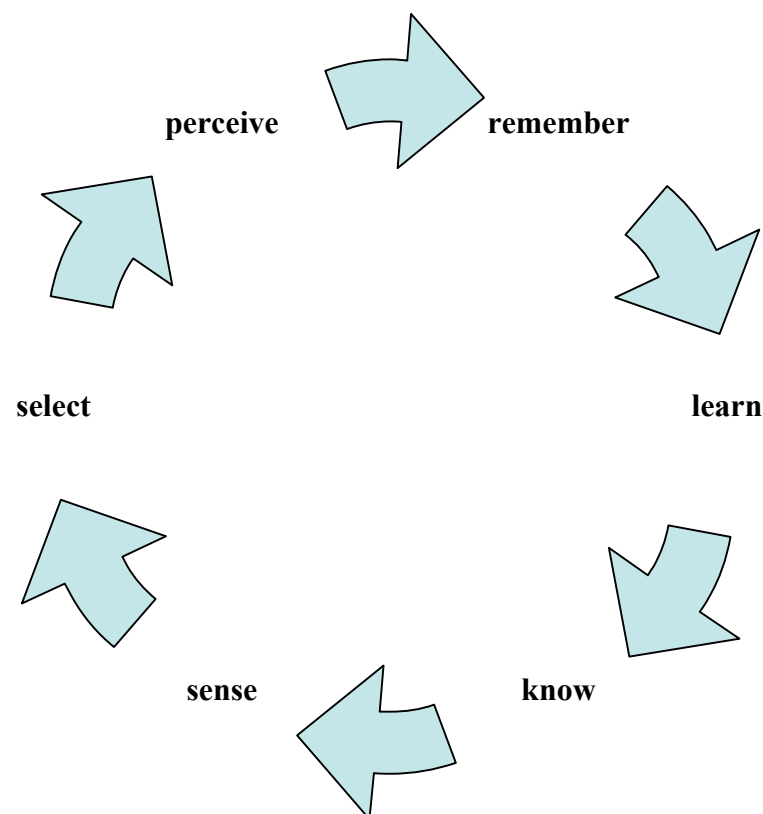


Figure 2.23 Aldous Huxley's method of clear seeing
(P. M. Lester, Visual Communication, 2003:6)

In cyberspace communication, various ICT devices are the tools to be used, in which human-computer interaction occurs. So, effective design of visuals in those devices is crucial in providing effective HCI for users of E-Government System. In achieving this, VCD elements like signs, symbols, typography, colors, grids, texture, shaping, proportion and images should be applied professionally (Figure 2.24). According to Aydın, design means the arrangement of visual elements such as brochures, books, leaflets and similar materials. The concept of design means ‘drawings or sketches of part of a structure or an apparatus on paper’. Design is being used as a form of a notion in the mind of a person as his intention or purpose to do something that must be done (Aydın, 2007:3).

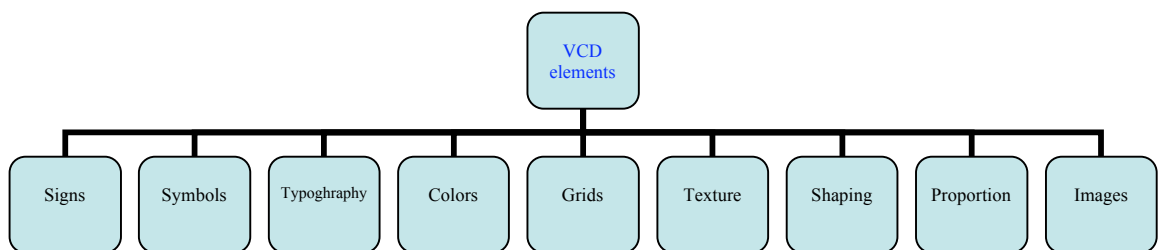


Figure 2.24 Elements of VCD principles

2.2.2.2.3. Mobile devices adaptable applications and services

Being relatively affordable in price and easy usage supported by broadband speed of transferring data have been causing mobile devices rapidly spreading around the world. Pervasive usage of mobile devices has made mobile device adaptable services the latest venue for E-Government System. Thus, more and more countries using E-Government System has started to adapt their services to mobile devices to achieve the concept of being user-centric in serving citizens. In that way, those countries aim to attract more users and being in touch with them at all times. Considering that change, it can be said that transformation of E-Government System has been looming, which emerges a new concept for governance called mobile government that comprises the idea of connected government.

Concentrating on mobile devices in usage requires certain issues to be taken into account such as security and privacy of users should be paid more attention as mobile devices are more vulnerable against malicious attacks, legal infrastructure is to be revised covering

users' rights and mobile device data adaptability with other version of e-government data must be ensured (Figure 2.25).

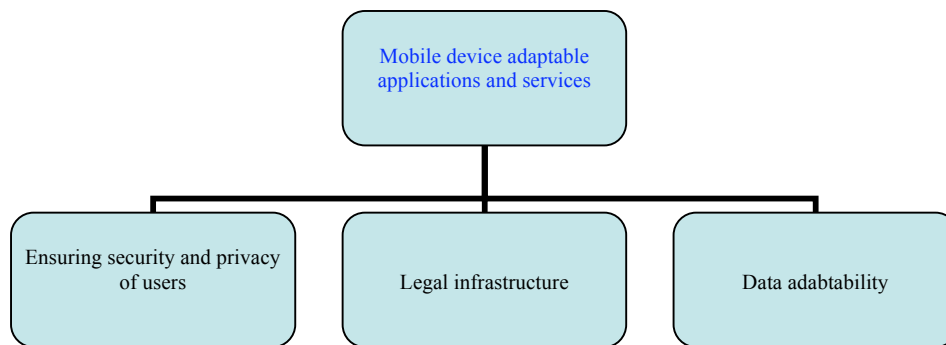


Figure 2.25 Issues to be taken into account for mobile device usage

2.2.2.2.4. User-centricity

Being user-centric is one of E-Government System's essentials of changes required in terms of the governments' focus. Success of E-government System entails giving the priority to citizens and seeing them as costumers. More and more countries have been realizing the importance of take-up of services provided. Thus, it has been becoming the focus of the countries (UN, 2008). The main idea here is to make more citizens to utilize the services. The best way to accomplish that is to make them participate in reconstruction and modernization of services and building successful interfaces as to satisfy their expectations. It is also important that useful and valuable information should be shared with users to attract them to utilize the system more, but the information shared is to be constantly updated.

Traditional one-way communication between the governments and the citizens should be shifted to interactive communication, through which it is much easier to reach citizens and their feedbacks and to make them use the services provided considering how social media tools have become the latest venues. Especially interactive communication environments such as "Facebook", "Twitter" and "YouTube" can be used or a new one can be created. More innovative ways to reach citizens always are to be looked for like mobile devices.

Citizens are supposed to be provided with a user-friendly system and applications simplified procedures, forms, context and information provided along with minimized bureaucracy in achieving user-centricity.

Creating single point problem solving and its performance also need to be focused on. Government agencies' employees are to be provided with necessary equipment and trainings, which enable them to provide citizens with quality services (Figure 2.26).

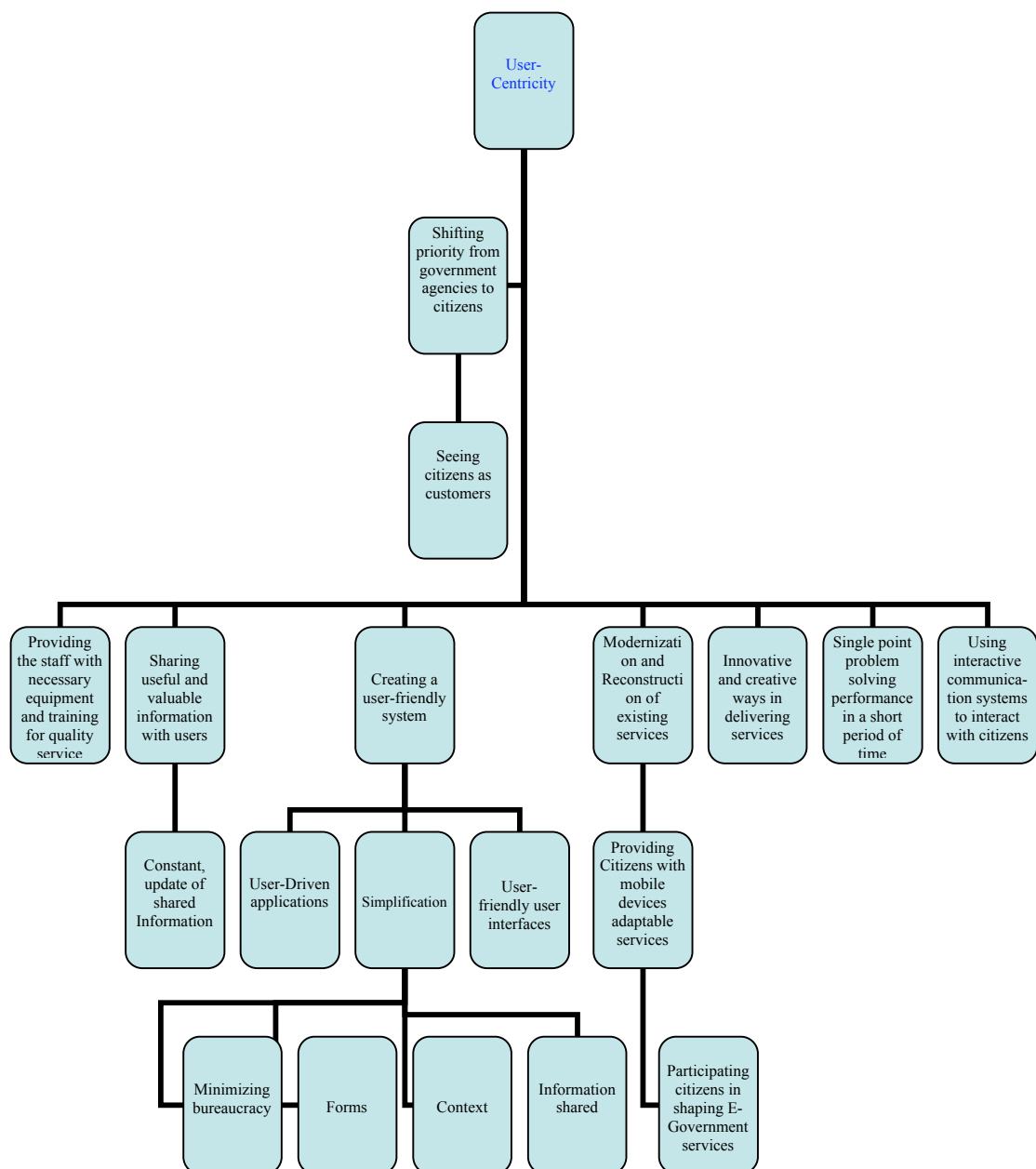


Figure 2.26 Requirements of user-centricity

2.2.2.2.5. Standardization

Standardization of web pages, services, work processes, software, file formats and forms used in government agencies are especially important for E-Government System as to facilitate exchanging, saving and consolidating of information, files and forms between government agencies, private sector and even other governments.

In achieving standardization, first of all work and transaction processes of government agencies need to be reconstructed considering users' expectations and needs, on which all other standardization steps need to be constructed. Then, all websites used, performance measurement of investments, projects and their feasibilities, human resources work at the back stage, their trainings and ICT competencies, security of system and users need to be standardized.

File format, which will be used for data creating, data sharing, data storage and data backup is extremely important for E-Government System's interoperability infrastructure. XML seems to be the most proper format to be used with its easy readability by the computers and widespread usage around the world.

Standardization is also a cost-cutting measure that prevents institutions involved in E-Government implementation from wasting their resources investing on unnecessary systems and applications in order to have better services as long as those improvement endeavors are coordinated and guided. It is also essential to realize interoperability of the system along with satisfaction of the users (Figure 2.27).

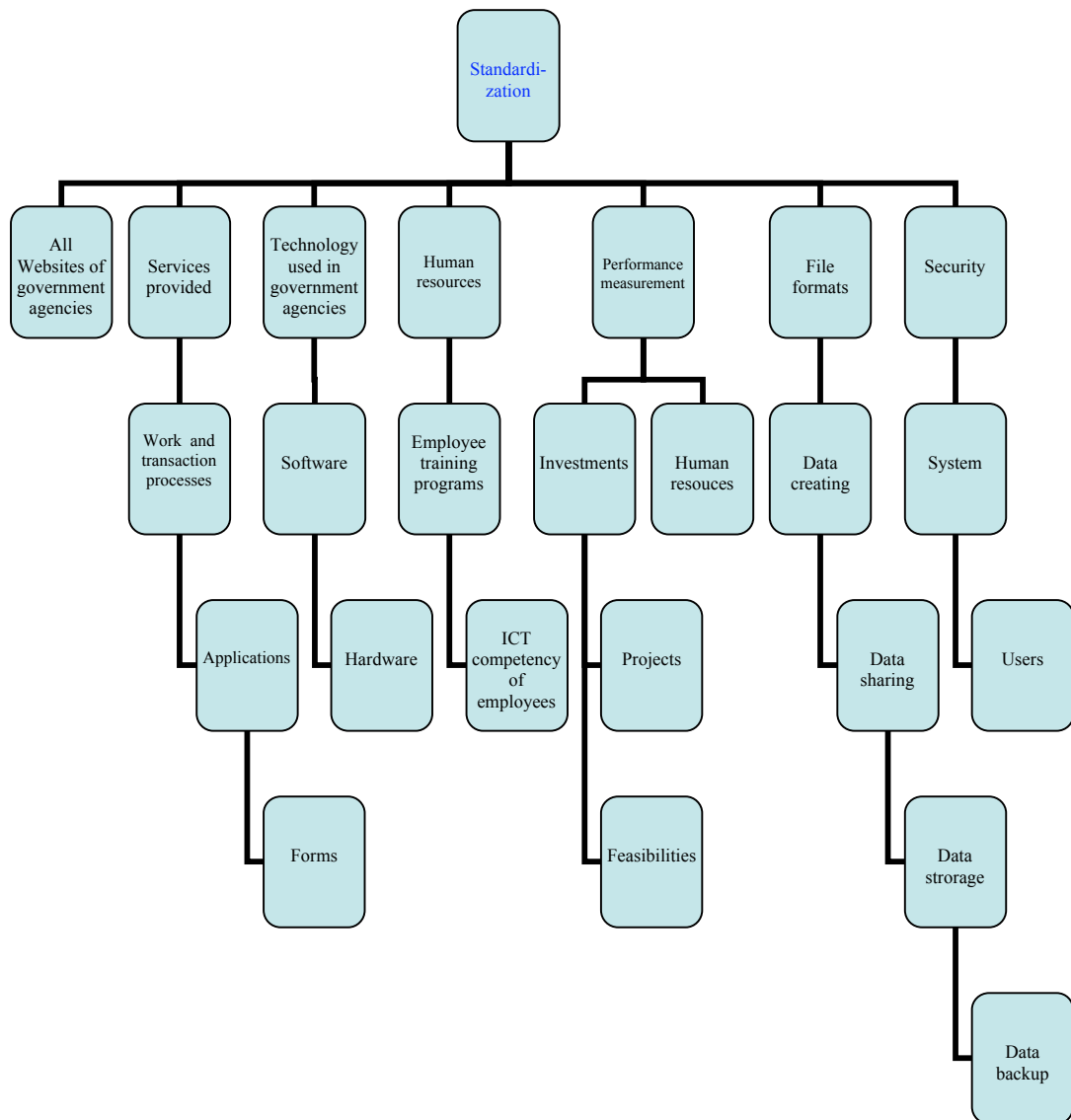


Figure 2.27 Elements of standardization

2.2.2.2.6. Establishing a single portal

Establishing an ideal single portal constituted according to VDC principles, where all services and information can be reached, entices users to benefit the system more causing to increase uptake rates along with reaching all E-Government services and information easily minimizing confusion and waste of time. Lee states that traits of E-Government websites are the important factors that make citizens utilize the system (Lee, 2006). Therefore, it is a user-centric application and helps to increase users' satisfaction. According to UN's E-Government Survey Report of 2010, many countries have renewed their national and ministry websites as tightly integrated portals providing citizens with a single point of entry to all E-Government services (UN, 2010). This specific application of

E-Government facilitates the usage of the system saving time for citizens along with alleviating the difficulties to reach the various services, which are served by different government institutions. Consequently, it is a user-centric application (Figure 2.28).

Realizing an effective portal requires an adequate software infrastructure, constant access and interoperability of the system.

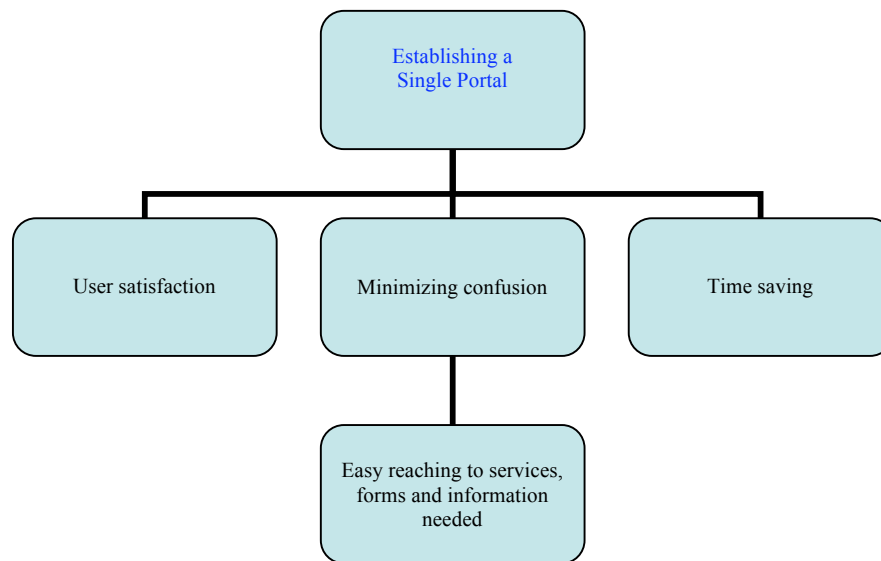


Figure 2.28 Enablers of establishing a single portal

2.2.2.2.7. Interoperability

Establishing a single portal and putting it into practice has more meaning when interoperability of E-Government System is provided. A single portal should not only provide users with the opportunity to reach all services provided by different government agencies from a single point, but also it should work with an interoperable system, which provides all business organizations' and citizens' information to be used by all various applications of the system once the information is put through the system.

Sharing of information that government agencies have, with citizens with private sector among each other, is the essence of interoperability, which is one of the most important elements of change and a sub-components of E-Government System. According to UN, the real potential of E-Government System lies in free sharing of government information based on common standards (UN, 2010).

Achieving interoperability of the system enables users to enter the specific information to the system only once, which is critical for citizens' satisfaction in achieving being user-centric. It also needs to be ensured that it is perpetual.

Conversely, traditional attitude of government agencies is based on not sharing any information more than necessary and limited cooperation with each other and with private sector. According to an OECD report, 10-15% of officers of central and local authorities work in cooperation with other public institutions (OECD, 2007). Hence, change of this concrete attitude of government agencies is vital for accomplishing interoperability and for an ideal E-Government System accordingly.

Building trust between government agencies helps to overcome that obstacle. When it is provided, private sector and citizens benefit from it as much as government agencies do.

Coordination of ICT departments of government agencies will support and facilitate realizing interoperability.

Standardization of file formats, services and forms for information exchange and standard software infrastructure are also needed for interoperability along with mobile files and documentations' adaptation to current applications and software used. Moreover, system's capacity should be sufficient to embrace interoperability.

Interoperability should also be propped up with integration of internal and external systems used by other stakeholders like private sector together with constant system accessibility as to prevent any interruptions (Figure 2.29).

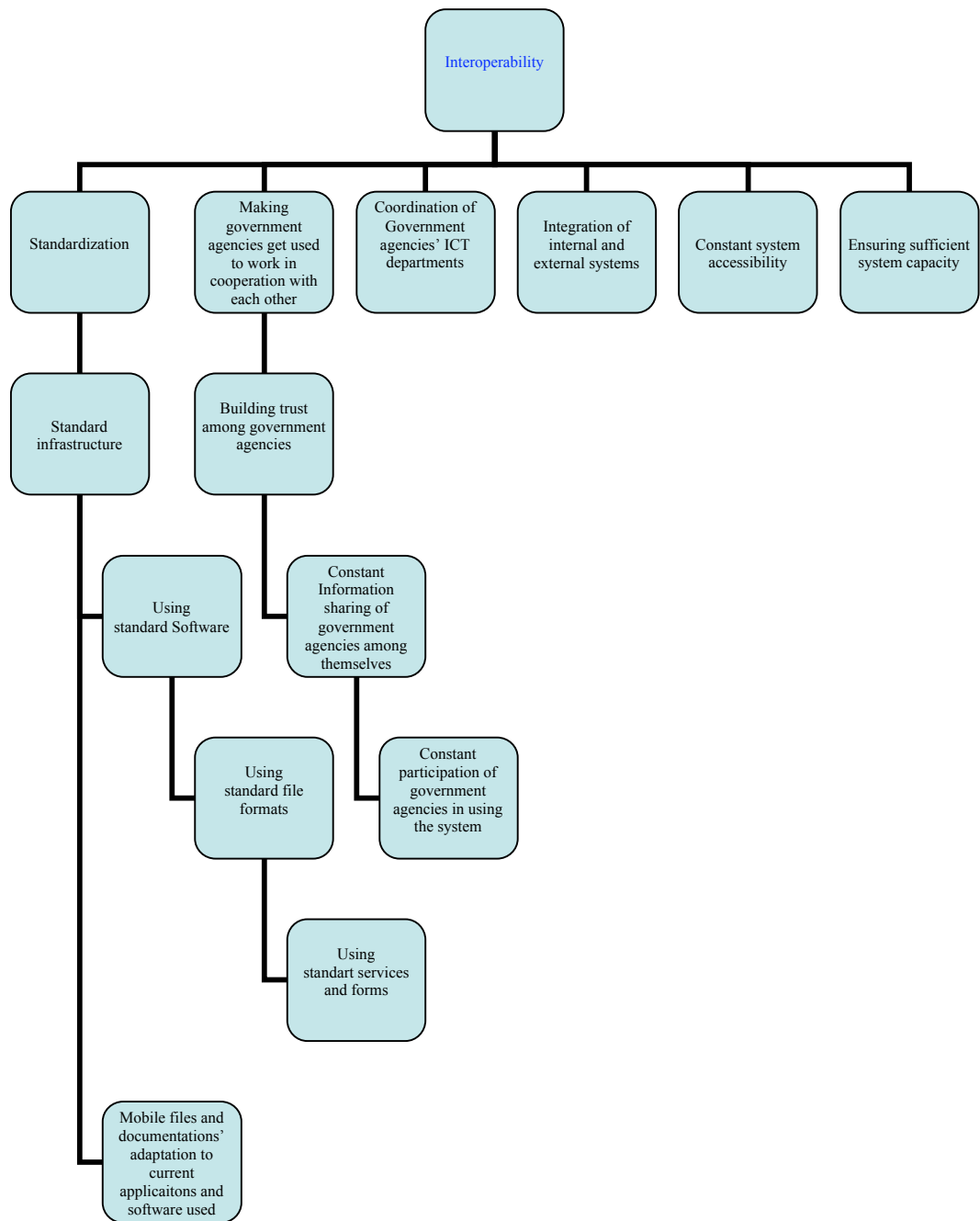


Figure 2.29 Requirements for interoperability

2.2.2.2.8. System accessibility

It is important for E-Government System and its services ready to be reached at all times by all the beneficiaries such as public officers, citizens and the organizations of private sector as to create trust and gravitate more users to the system.

A system, which works sporadically does not attract any demand, creates frustration and decreases participation instead. It does not help to build trust either.

Accessibility concerns with web portal of the system, all affiliated websites, services, forms and general and individual information (Figure 2.30). So, an ideal technical infrastructure needs to be built according to the country's communication structure and needs as to provide constant system accessibility

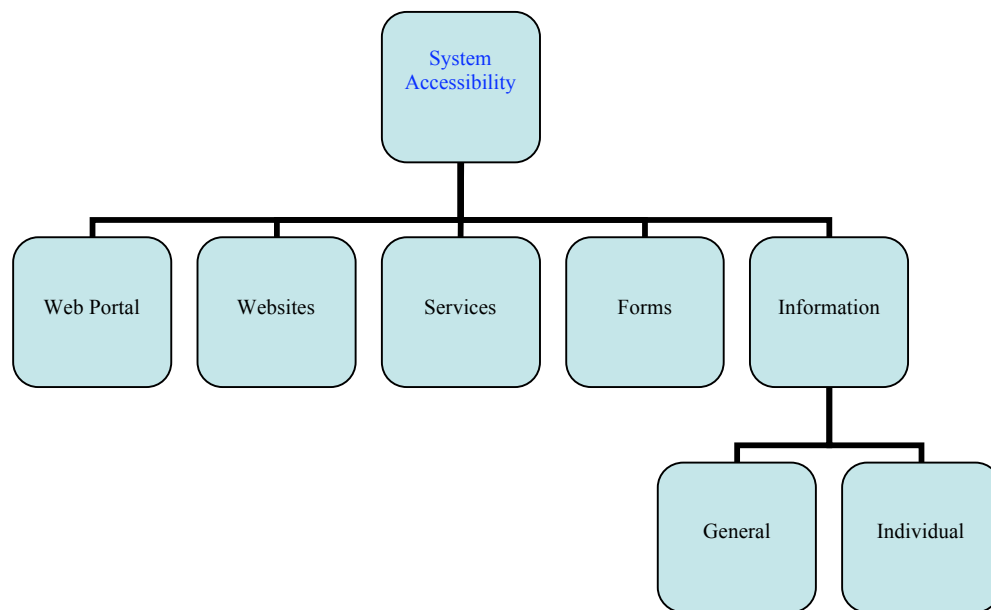


Figure 2.30 Elements of Accessibility

2.2.3. Change Management

E-Government implementation in many respects requires certain transformations especially for public institutions, in which all services and ways of doing transactions and organizational structure are reconstructed. Reconstructing of a government means not only adapting ICT in business processes, but transforming from traditional government structure to E-Government structure, which requires being more accountable, more transparent, more democratic and more open to citizens giving the priority to them along with trusting them. Mulgan states that, accountability stands for the ability of any administration to act clearly, transparent with traceable procedures and to give account for its acts and their consequences and with accountability in constituency relations, basically the ability to pay attention to different actors and to inform the constituency (Mulgan, as cited in Batini et

al., 2008). Governments are also expected to make all citizens to benefit from their services realizing inclusion in societies. In achieving this goal, internet access should be facilitated increasing internet access points such as internet cafes, public education centers, libraries, kiosks, culture centers, internet classes in the schools should be increased, which enables to create ICT competent society in achieving information society. So, governments should set their vision and mission accordingly.

In the organizational level, it requires putting horizontal organizational structure into practice in governance. There are certain goals to be achieved in implementing an efficient and an effective E-Government System, such as bringing about a better business environment creating fair and competitive markets, minimizing public private divide, diminishing bureaucracy and increasing service quality for citizens and private sector through modernized and reconstructed business processes. In increasing service quality and citizen satisfaction, services should be standardized together with information sharing among public institutions as to accomplish interoperability of E-Government System. So, information in the system can be used by each government agency minimizing transaction processes to achieve effective services. Information sharing could be a real challenge to be accomplished for some governments, where tradition of not sharing of information has rooted.

As it is especially important to reach the information as early as possible along with controlling information flow in information age, which enables a successful E-Government Implementation, an information department or an information ministry should be established together with a position of CIO or information minister to lead information and E-Government System implementation.

E-Government also requires emphasizing participative management making citizens more participate in governments' actions, consulting them on certain issues in decision-making, forming services through their needs taking the advantage of every possible way to communicate with them interactively putting into practice an effective CRM System.

Communication in virtual environments, where human-computer interaction takes place, differs from face to face communication. Thus, it should not be overlooked that providing services in cyberspace requires VCD principles to be paid attention in forming websites.

As government buildings have been becoming obsolete in terms of providing services to citizens, cyberspace is now the new environment to deliver the services. Hence, governments have many opportunities to reach and submit those services on 7/24 bases to citizens in achieving being user-centric, such as social media tools and mobile devices.

Performance of government agencies and their services can be controlled much easier than the traditional governance model as a result of ICT. Thus, E-Government System enables overhauling services' performance, increasing service efficiency and end-users' satisfaction. Consequence of ICT adaptation, the government becomes more accessible, responsive and flexible. Disadvantaged and disabled people also feel more included in the society through E-Government System. Those goals require serious changes in a traditional government structure. A model for a state reconstruction phase is as shown in figure 2.31.

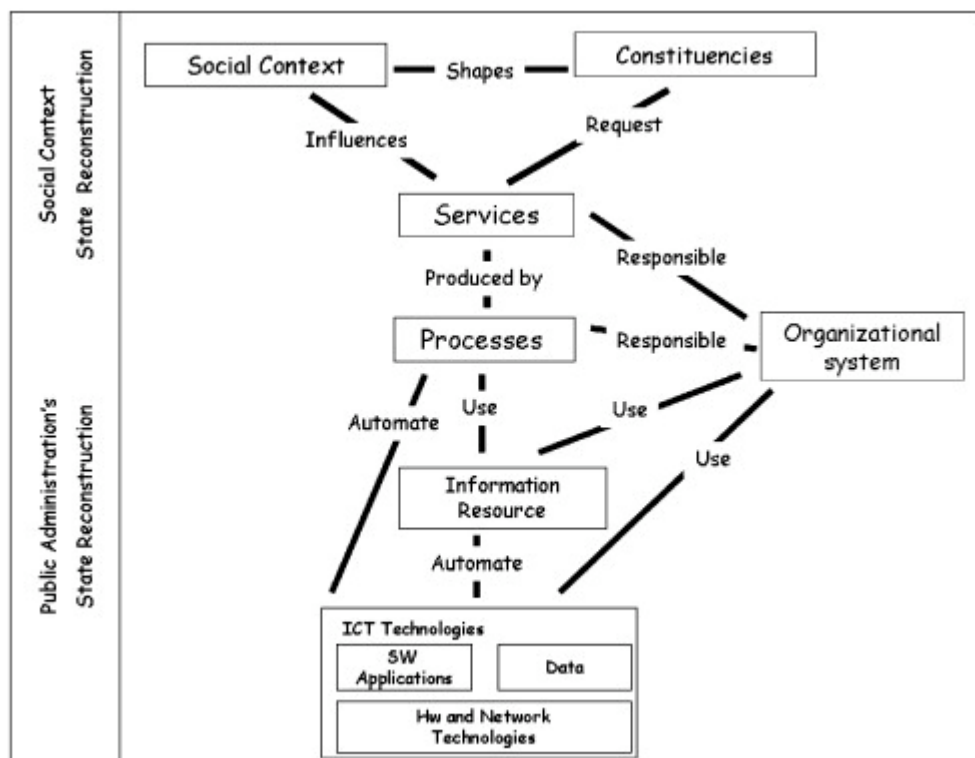


Figure 2.31 A model for a state reconstruction phase (Batini et al., 2008)

New technology related change in organizations encompasses going out of conventional borders of thinking and doing business and gaining new skills to succeed in new ways of doing business as to meet with beneficiaries' expectations. All parties involved in the

change need to be made believe in it along with constant possession of high ranking government officials. It has critical importance for a successful transformation. So, the change period does not last long enabling optimum use of resources. More it takes time more aforementioned parties are to lose their faith in it. Besides, it comprises mostly technological processes like establishing hardware equipment and software systems, which obsolesces quickly and requires costly investments. Another key element to achieve the goal of change is government employees' competency in ICT and their constant training to develop their skills. It is also important to put change into practice set by step allowing staff to get used to it and minimizing probable ambiguities on every step ensuring a good communication between the government and affiliated agencies. Therefore, the change needs to be professionally managed and embraced through strategic plans and well defined vision, mission and targets. The responsible body of E-Government implementation needs to carry out a complete evaluation to understand the private and public organizations' and beneficiaries' needs and culture to set a proper approach to those who are involved in transformation in order to be successful in gaining their commitment and participation. The success of the change is based on it. Framework of the change management can be seen in figure 2.32

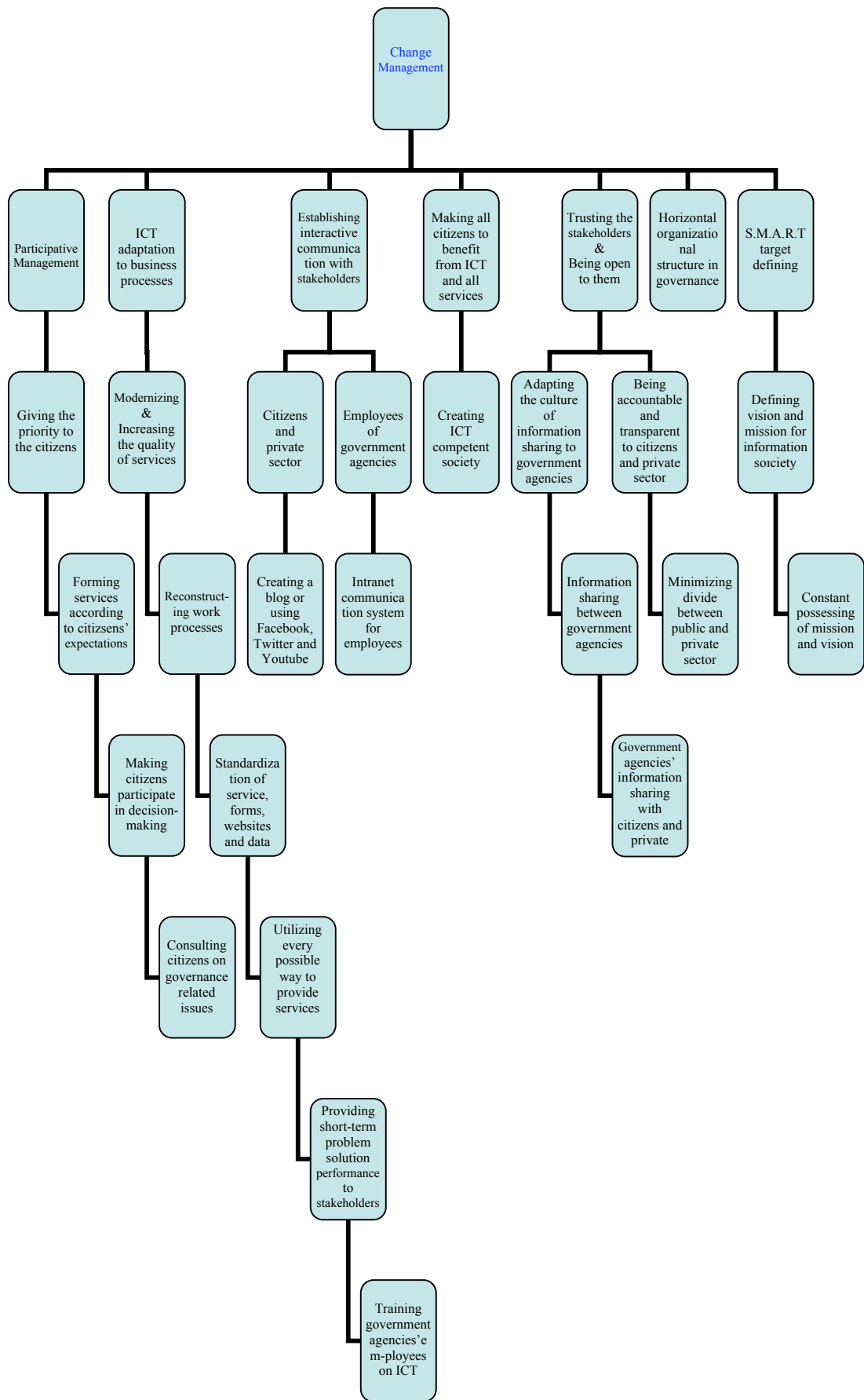


Figure 2.32 Elements of Change Management

Generally speaking a change is not good or bad. The important thing is how we evaluate it. There are three crucial points that need to be focused on during a planned change:

- Improvement of operations by business reengineering.
- Restructuring responsibilities and roles.
- Redefining measurements and performance standards.

Dynamics of a planned organizational change is as in figure 2.33

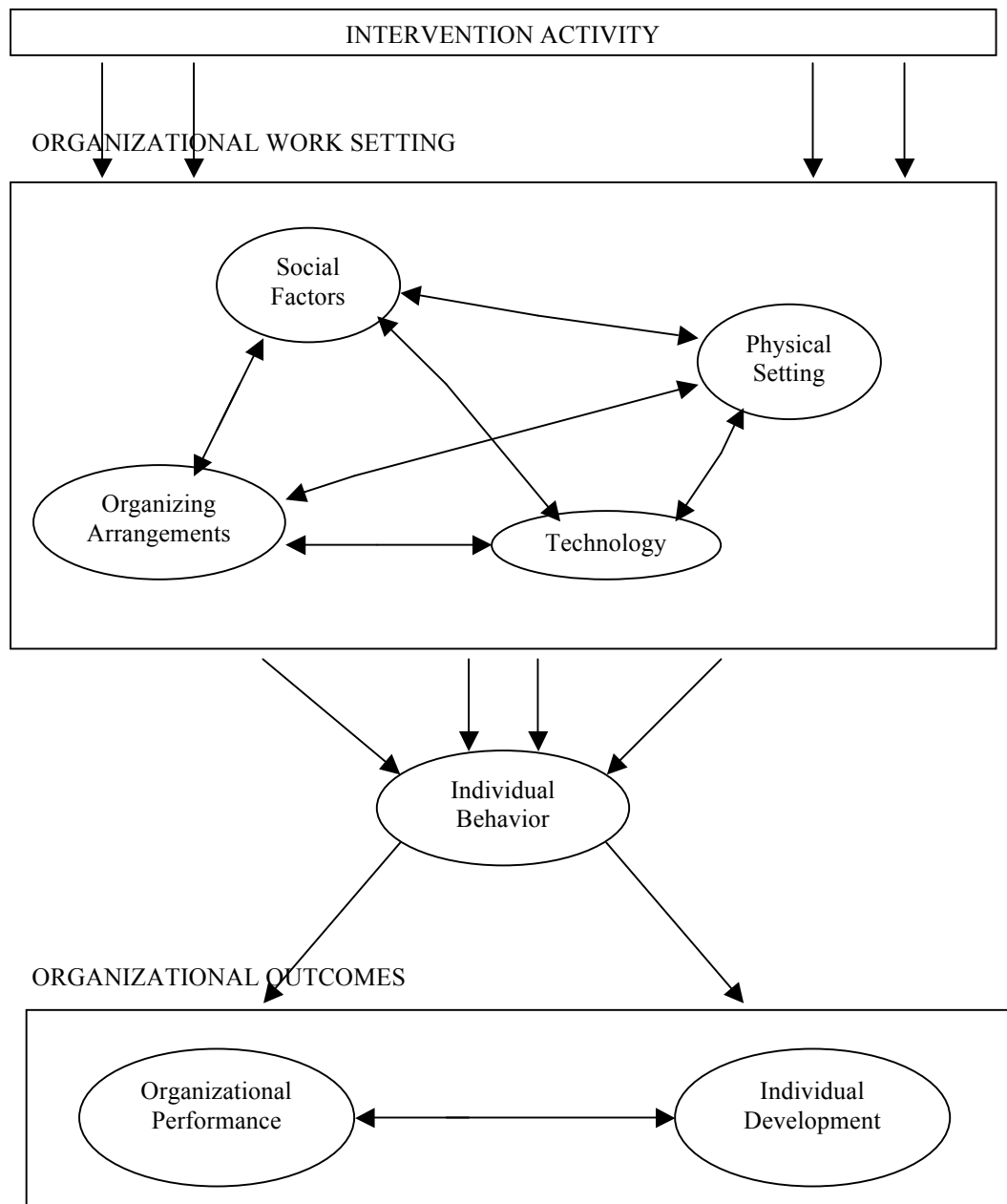


Figure 2.33 A Theoretical Model of the Dynamics of Planned Organizational Change (Miller, 1998:316)

There are some change models that can be applied to the change processes of the governments, which can be used as road maps to succeed a desired change (Figure 2.34). One of them is Lewin's Change Model that comprises three stages; Unfreezing, movement and refreezing. Unfreezing can be done by introducing information that indicates differences between behaviors pursued by organization members. In that way, members can be encouraged to get involved in change activities. Moving is the step changes organization's or department's behavior. It is all about intervening in the system to develop

new values or attitudes through changes in organizational structures and policies. Refreezing stabilizes the organization at a new state of balance, which can be achieved using of supporting mechanisms cementing the new organizational state like organization culture, policies and structures (Cummings and Worley, 2005).

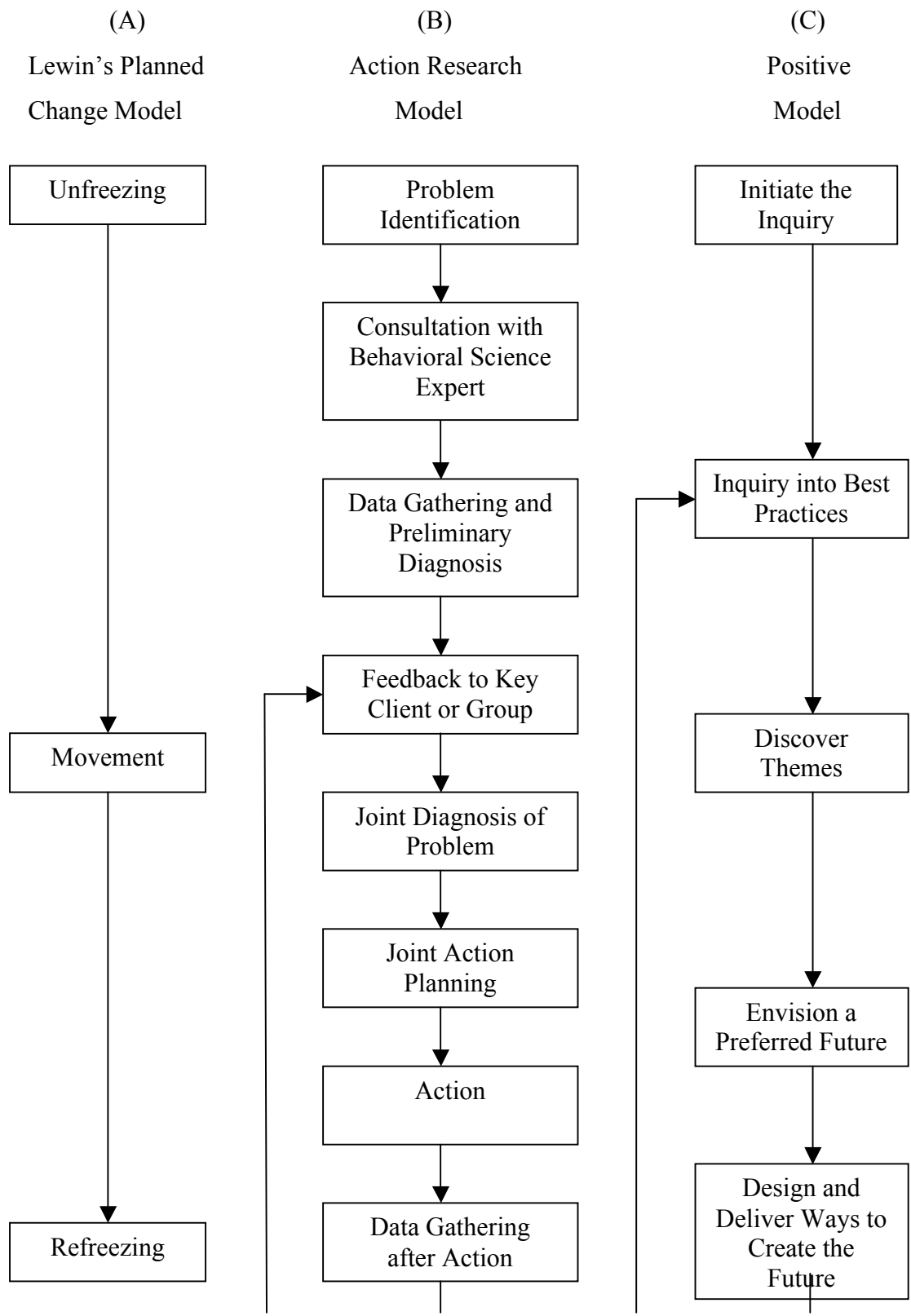


Figure 2.34 Planned Change Models (Cummings and Worley, 2005:23)

It is vital to have competency to cope with what change brings about, so that operational and strategic gaps do not develop. Whatever the route to change chosen, a shift in relationships occurs among those functions:

- Business strategy
- I/T strategy
- I/T organizations
- Business organizations (Figure 2.35)

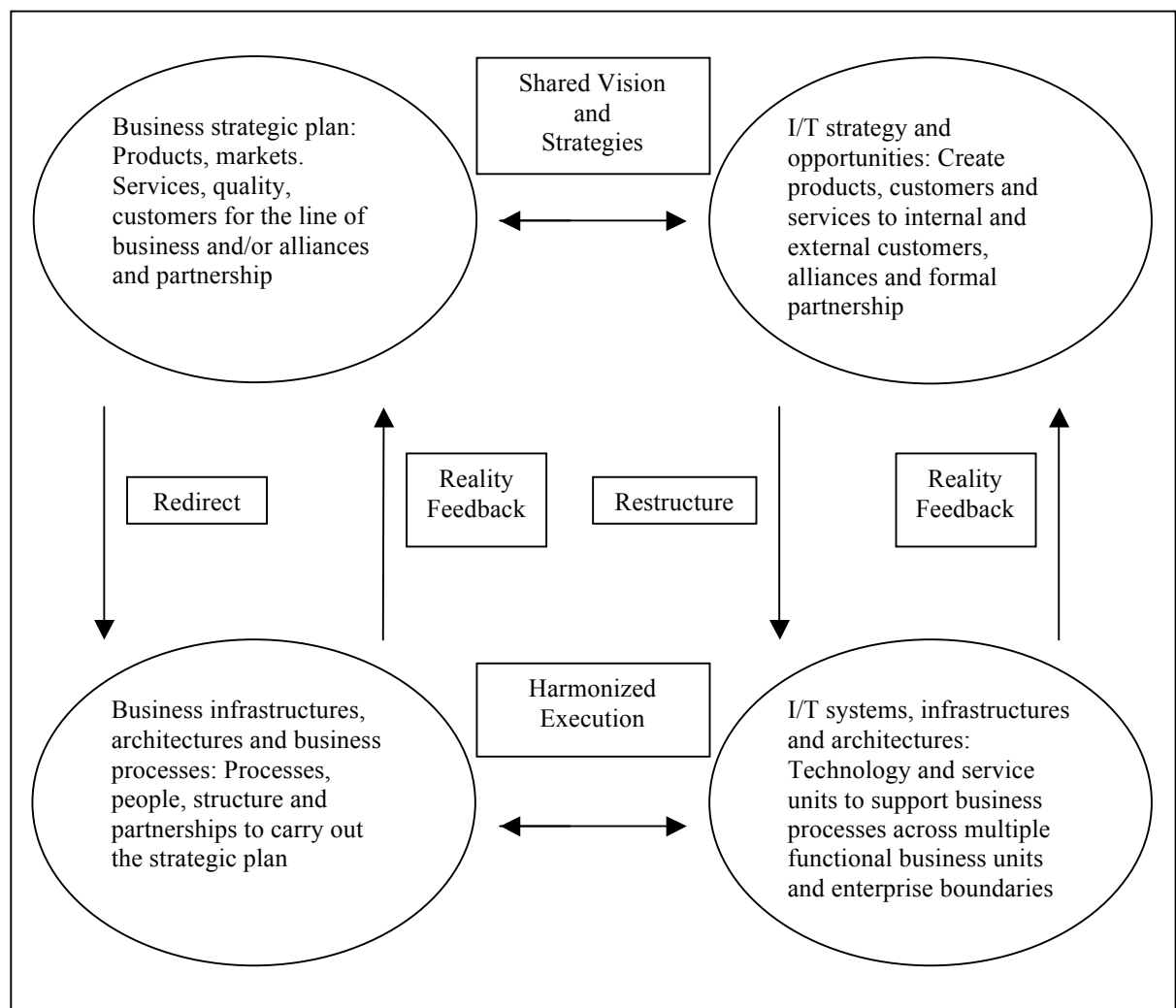


Figure 2.35 Shift in relationships among the functions (Parker, 1996:379)

Strengthening role of I/T also undergoes to change process as well as organization. Strategy development and business process improvements become joint efforts of business and technology. Improving customer service points through the application of I/T can

create business value. It is also important that business and I/T strategies build around the coordination of business change with I/T change. Overall success of change depends on it (Parker, 1996).

It can not be guaranteed that change will be a success. There are few enterprises have an effective strategic planning process that is connected to business performance measurement other than financial and management compensation plans. The initial step to overcome that obstacle is to include well-designed and consistent business/operation value measurement strategy and a plan for implementation of the strategy to make strategic planning more effective (Figure 2.36). It requires the active involvements of top business and I/T management (Parker, 1996).

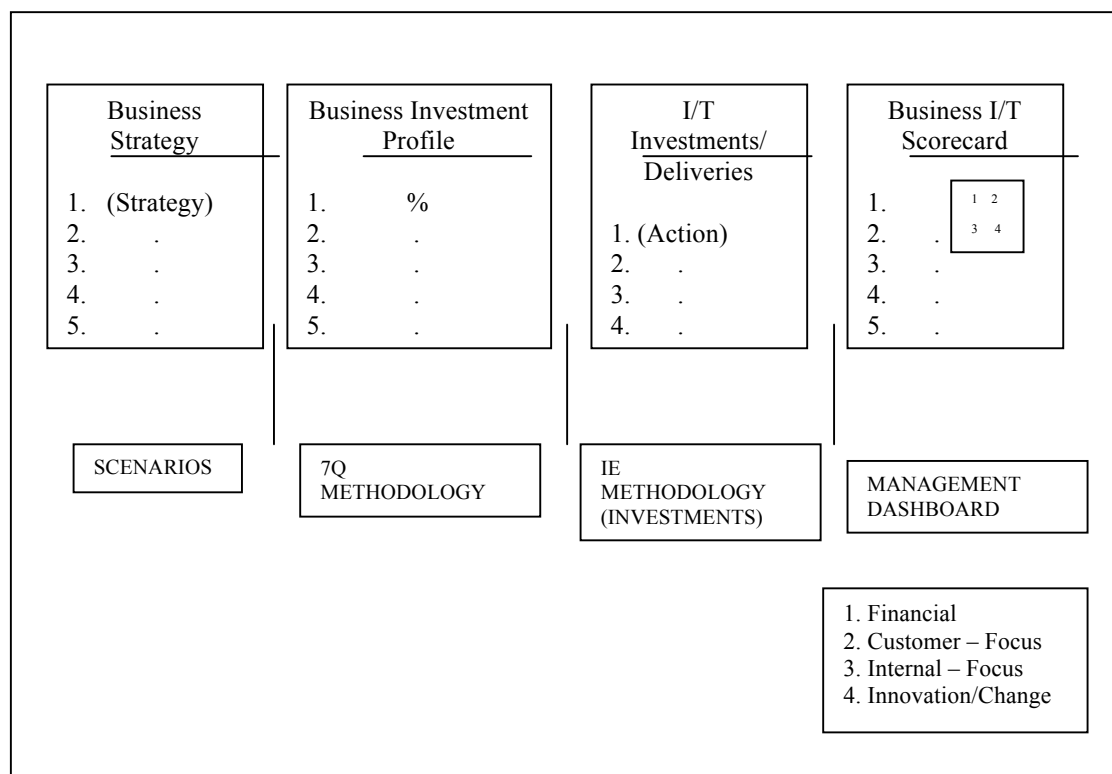


Figure 2.36 Visible Strategy + Visible Actions = Visible & Measurable Results (Parker, 1996:380)

2.2.3.1. Change and culture

Culture is accepted to be one of the informal structures that affect change (Figure 2.37). Therefore, cultural differences of countries and even organizations need to be paid

attention during the change as transition period of change differs from country to country and organization to organization depending on it.

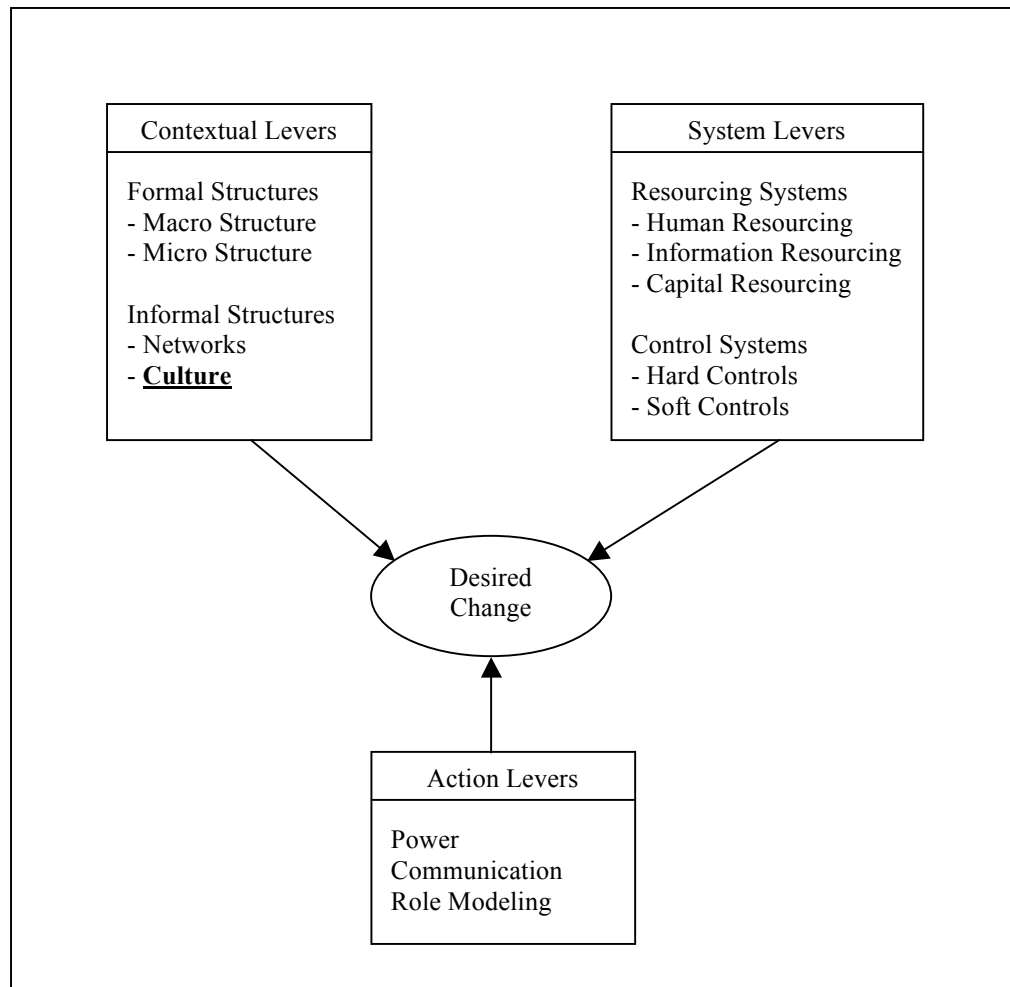


Figure 2.37 The Levers Available for Affecting Change (Cummings and Worley, 2005)

According to researchers, applying organizational development in different countries requires a context-based approach to organized change, which is related with fitting the change process to the values held by members in the particular country or region. These beliefs notify people about behaviors that are acceptable and important in their culture. Cultural values play an important role in how members react to innovation related to power, ambiguity and change. Researchers state that there are five crucial values delineate national cultures: context orientation, power distance, uncertainty avoidance, achievement orientation and individualism (Cummings and Worley, 2005):

Context orientation:

This value stands for how information is transferred and time is valued in a culture. Countries like US and Scandinavia are low-context cultures, where information communicated in words and phrases. More specific words are spoken more sense is made. In terms of reflecting a message communication medium is more important than the words and time is a flexible concept in high-context cultures. Ritual and ceremony are important for high-context cultures. In high context cultures structures are less formal; few written procedures to guide behavior. How someone behaves is a crucial indicator of support and coherence to the way things are done.

Power distance:

With a brief explanation this value is about the way people view authority, status differences and influence patterns. People live in high-power distance areas like Eastern Europe and Latin America tend to favor unequal distributions of power and influence. Therefore autocratic decision-making practices are accepted in those countries.

Uncertainty avoidance:

People live in high uncertainty-avoidance regions, like Asia, prefer stable routines, resistance change. Therefore, they act to maintain the status quo. They do not like conflict and not prefer rules to be broken. For people live in low uncertainty-avoidance regions such as in many European countries ambiguity is less threatening. Organizations in these cultures tend to favor fewer rules, higher levels of participation in decision-making, more risk taking, more organic structures.

Achievement orientation:

Employees in these cultures favor gaining of the resources and power. Organizations in these cultures pursue aggressive targets and have great deal of stress and conflict. Organizational success is measured in terms of size, speed and growth. Career advancement, salary raise and freedom are so important for employees in these cultures.

Individualism:

In these cultures such as Canada and US personal initiative and competitiveness are profoundly appreciated. Organizations usually have high turnover rates and individual rather than group decision-making process. When personal gain is the case employee empowerment is backed. On the other hand, in low individualism countries such as Mexico, Japan and China loyalty to one's group is paramount. Organizations favor cooperation and loyalty.

2.2.3.2. Elements of change

There are some requirements to be put into practice as to achieve certain goals and actions for a successful change (Figure 2.38).

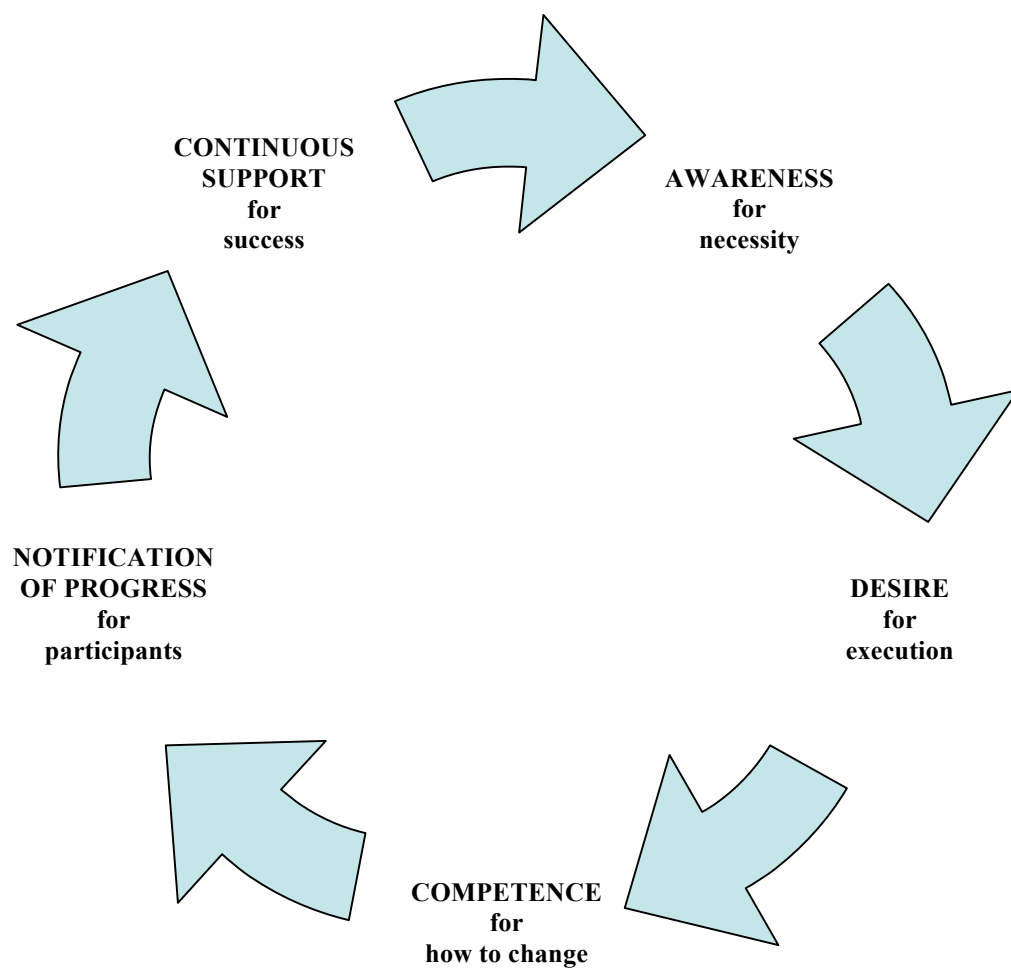


Figure 2.38 Components of a successful change

2.2.3.2.1. Management abilities required for executives of Change Management:

Some important abilities for a competent executive for Change Management comprises 4 main competencies:

- Interpersonal Communication
 - Empathy
 - Positive aspect
 - Intelligent

- Diagnostic
 - Technical knowledge
 - Analytical thinking
 - Result orientation

- Initiation
 - Presentation
 - Influence
 - Group management
 - Solution creation

- Organizational
 - Adapting
 - Coordination
 - Management

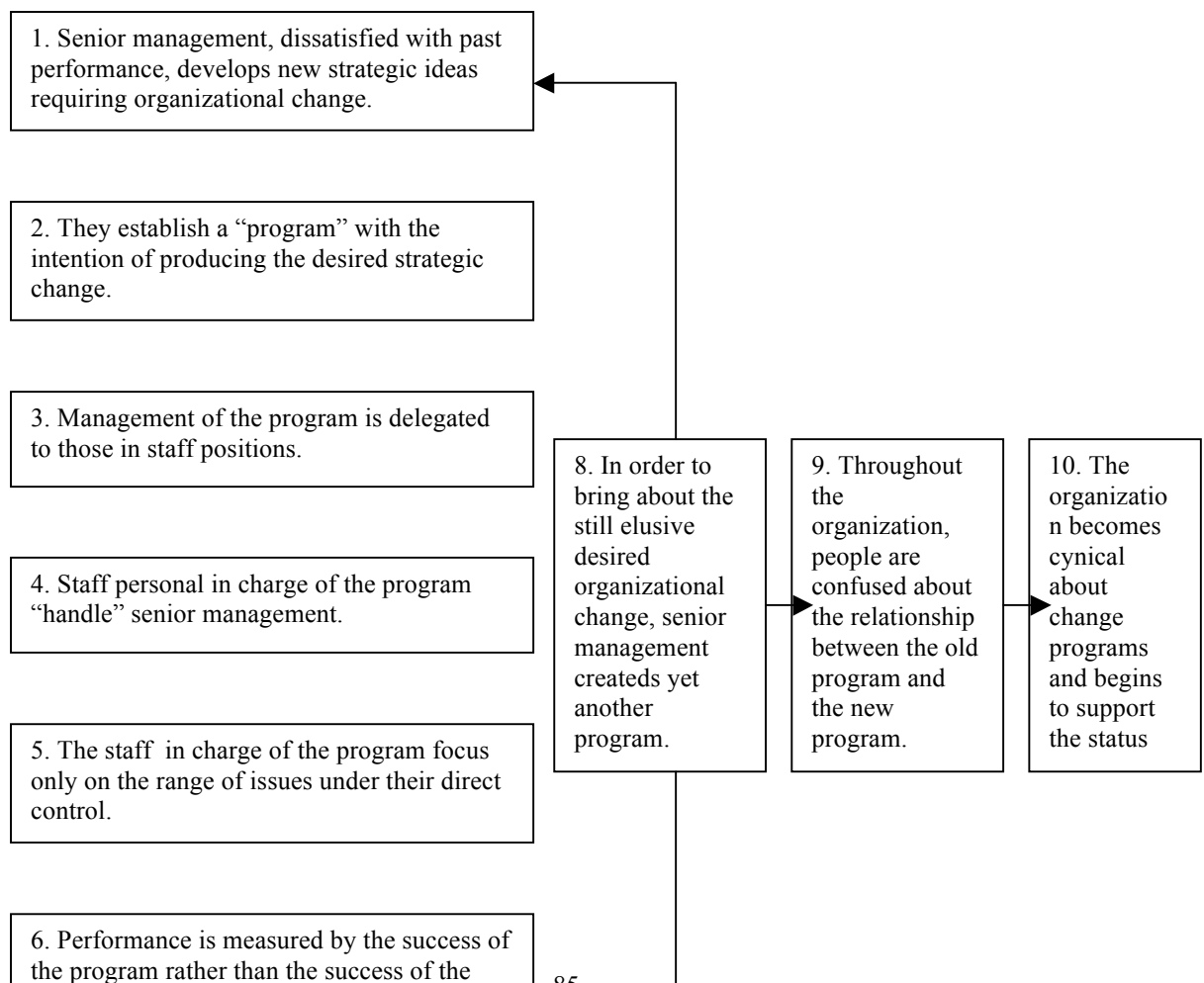
2.2.3.2.2. Some reasons for unsuccessful change

There are some common mistakes, which need to be avoided considering a change:

- Timing: Start at a wrong time.
- Making change an option.
- Focusing only on process and paying enough attention to results.

- Not involving in implementation of change.
- Unnecessary outsource: Delegating important processes to outsiders.
- Not setting any inspiration system for change to be owned.
- Leadership does not walk the talk (Leaders of change do not do what they expect participants to do).
- No effort to follow up the processes.
- Chasing good news instead of reality.
- Restricted only with upper level communication instead of wide range of communication.
- Prior relations and motions, while subordinate work and results.

Sometimes executives responsible from the change make “activity-centered” kind of mistakes. In this kind of mistakes executives focuses on the activity, which is to affect the desired change, rather than on the results of the change. Executives often promote such activities through programs, which become core pieces of their change program. This kind of approach to change is so called “activity-centered change program” (Figure 2.39).



7. Even though most of the organization is unchanged, the program is declared a success.

Figure 2.39 Activity-Centered Change Programs: A Common Pattern of Failure
(Miller, 1998:321)

2.2.3.2.2.1. Difficulties of change

Change in an organization is not something, which everybody can easily embrace. Consequently, officials, who are responsible from change, need to consider facing certain difficulties carrying out the change:

- Generally there is always resistance to change
- Human beings are always afraid of unknowns.
- Many people say that they are with what they have and think that they do not need change.
- Change has some imperatives consist of some changes in values and habits, which are found hard to be accepted.
- Execution team seems to embrace the change, but do not accept to support it in reality, which effects the change process.

Most common prejudices and questions appear in peoples' mind against change:

- We really did not need it.
- We do not know what is right.
- It is a waste of time and money.
- Everything was much better before change.
- They do not tell us their real intention.
- What is going to happen soon?

- How am I going to be effected?
- How is my environment going to be effected?

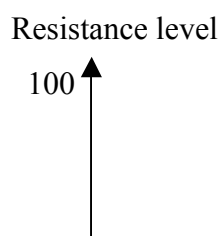
2.2.3.2.2. Resistance to change

Those are all endowers to slowdown or even halt the change because their always a cost involved. People, who are imposed by that, need to renew themselves to adapt it.

Resistance is a natural consequence of change. It is thought to be a kind of protection instinct, which is an indication of energy, for human beings. The important thing is to be able to guide it in a correct direction, not to control it. Energy is an indispensable element of change.

Resistance to change and impact area:

More socio-economic level of a person is high, more the person resists to change (Figure 2.40).



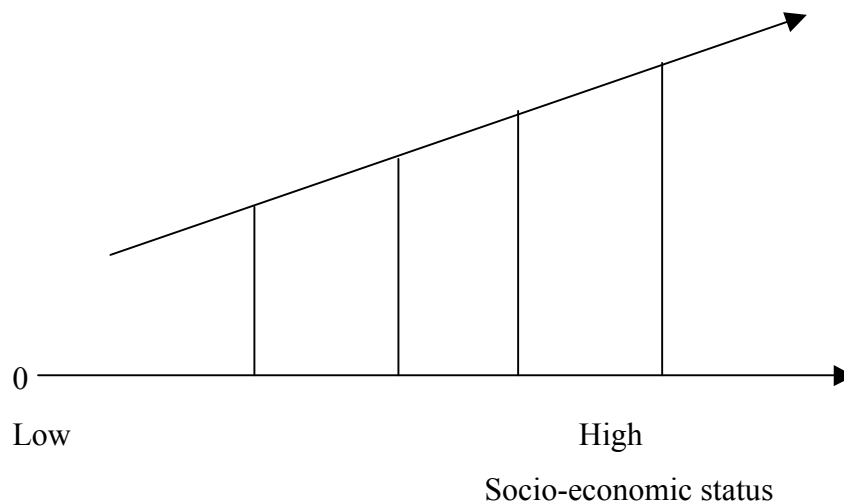


Figure 2.40 Graphic of resistance to change

2.2.3.3. Stages of diffusion of an innovation

As innovation involves leaving traditional ways of doing things it changes from person to person adopting new ideas or innovations. Some people adopt it easily while some other people resist to it. Clarke (1983) states that those, who accept and start using a new technology or an idea, are called innovators. People, who follow up an innovative idea through media tools or interpersonal contacts are called early adopters or opinion leaders. Those, who perceive a tendency relatively early and decide to go for it called early majority. Those, who wait until the very end are so called laggards (Figure 2.41). So, it can be expected to happen during E-Government adaptation period of citizens. Necessary organizations need to be done in planning to prevent any set backs causing by adaptation differences of users.

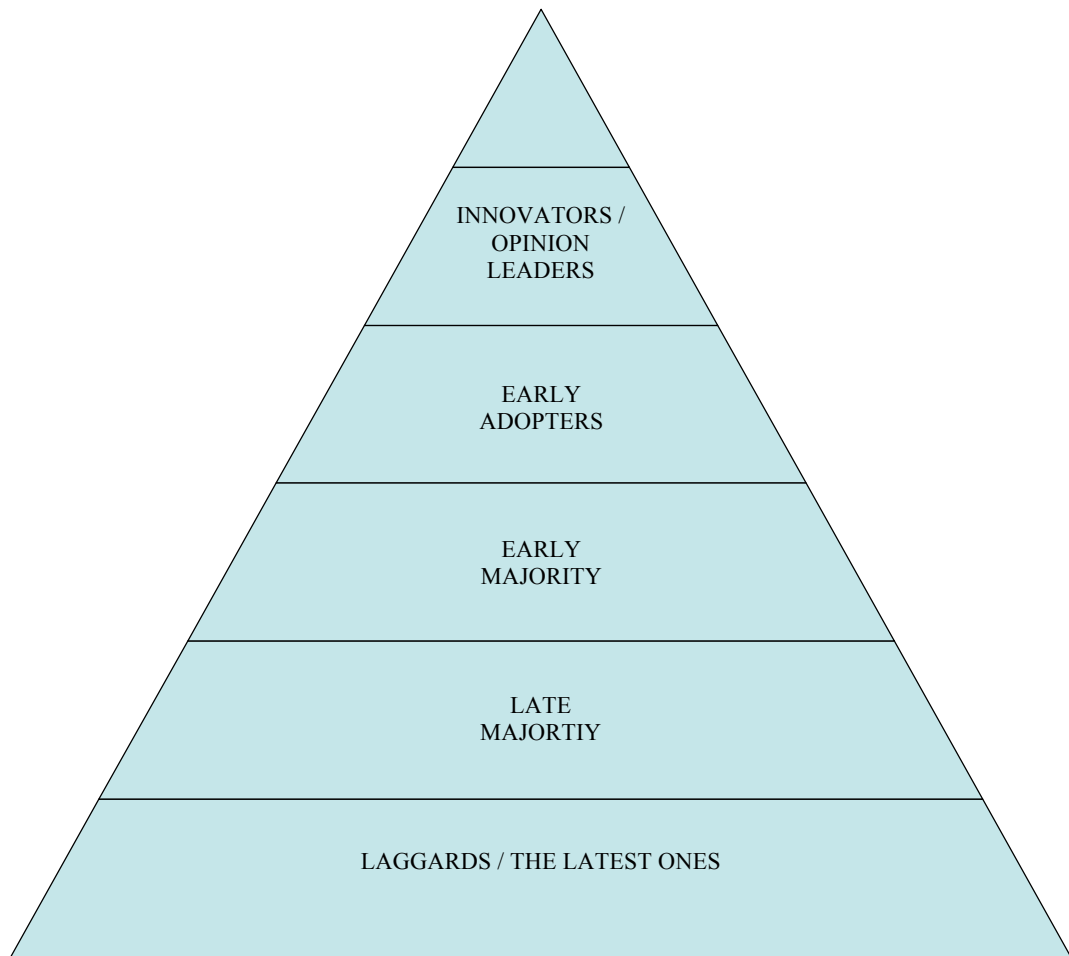


Figure 2.41 Stages of diffusion of an innovation (Clarke, 1983)

2.2.3.3.1. Some human attitudes towards change

People, who are incurred change, act differently towards it depending on the position they hold in the organization, educational backgrounds, experiences and expectations. Some types of reactions towards change are:

- Instant criticism
- Denial
- Change of body language
- Sabotage
- Easy agreement

- Reflection / Deflection
- Silence
- Open criticism
- Leave / Farewell

On the other hand, reflections of responsible officials towards above mentioned criticism are crucial and they shape the change's success substantially.

That is what may happen if transformer approaches to criticisms intolerantly:

- Resistance may raise
- Success gained might be less than loss.
- It may prevent synergy.
- It may create fear.
- It may cause grouping and drawing apart.

2.2.3.4. Things to do for a successful Change Management

There are certain things for CIO and Executive Board of E-Government System implementation to do for a seamless Change Management:

- Establishing a clear vision and being consistent.
- Early publicity for details of change.
- Encouraging target audience for change.
- Letting everyone know that change takes time and phases need to be realized step by step through well defined targets in advance.
- Defining shared rhetoric and complying with it.
- Necessary measurements need to be planned and promulgated in advance.
- Constant support to change.
- Providing affiliates' support to change.
- Getting in to resistance to see the impact.
- Resolving problems instead of putting away or postponing.
- Providing information flow of progress to work teams and to all participants.
- Confronting reality.

- Paying attention to constructive criticism.

2.2.3.4.1. “S.M.A.R.T.” target defining

As E-Government System has a complex structure, certain targets need to be defined in achieving its implementation depending on the country’s expectations. Those targets are required to be well defined through “S.M.A.R.T.” target defining methodology, which is another component of Change Management.

S.M.A.R.T. targets drive from 5 phases;

- *Specific:* Targets need to be specific and well defined as to be understood clearly by each staff of organization.
- *Measurable:* Targets are expected to be measurable as to observe their performance. So, necessary corrections can be done accordingly.
- *Achievable:* Targets are supposed to be achievable. So, organization’s employees, who are expected to realize it, will have motivation to pursue it.
- *Realistic:* Realistic targets create believe among employees to accomplish them.
- *Time restricted:* Time needs to be set for each target to be realized. So, efficiency of actions to reach targets can be evaluated.

3. E-GOVERNMENT MODELS

According to United Nations E-Government survey run in 2010 as to figure out ranking, first 10 countries in terms of E-Government System developments are as below (Table 3.1).

Table 3.1 United Nations' E-Government ranking survey (UN, 2010:71)

Rank	Country	E-government development Index value		World e-government development ranking	
		2010	2008	2010	2008
1	United Kingdom	0.8147	0.7872	4	10
2	Netherlands	0.8097	0.8631	5	5
3	Norway	0.8020	0.8921	6	3
4	Denmark	0.7872	0.9134	7	2
5	Spain	0.7516	0.7228	9	20
6	France	0.7510	0.8038	10	9
7	Sweden	0.7474	0.9157	12	1
8	Germany	0.7309	0.7136	15	22
9	Belgium	0.7225	0.6779	16	24
10	Switzerland	0.7136	0.7626	18	12
	World average	0.4406	0.4514		

3.1. E-Government Models in the World

There are some E-Government models around the world, which are thought to be successful.

3.1.1. US

US is one of the leading countries in terms of E-Government System and its applications. The usa.gov portal has blogs, video sharing, photo sharing, pod casting, connections for social networking sites, syndicated web feeds, social bookmarks, and micro-blogging, which make it a bit more distinctive than the other countries' websites and portals in terms of facilities and services provided. In that respect US government uses all facilities of web2.0 to serve its citizens better and attractive services, which increase the usage of government websites. US Government keeps investing 65 billion USD on ICT each year.

The main reason for this is because US Government wants to be a leading country in the World for information related matters.

According to High, Advantages, which are expected from E-Government System in US can be examined under five groups;

- Financial benefits

It comprises especially increase in tax collections and decrease in costs.

- Economic developments

E-Government Model causes new regulations on law loopholes, standardization and security, which induces virtual trade enabling more secured and reinforced electronic environment.

- Preventing labor force wastes

Integrating of all services may prevent labor force wastes.

- Creating a more democratic society

Through a more transparent administration citizens may get the chance to get their voice heard better along with being able to participate in governance more.

- Providing more effective services to citizens through more proper conditions

The priority in E-Government System moves to citizens rather than government agencies. So, services provided are shaped through citizens' expectations as to satisfy them (High, 2003:1-2, as cited in Odabaş, 2009).

3.1.2. UK

The report, which is prepared in 1999, called “Modernization of Government” was centered IT for public institutions and their services. It was targeted to provide 100% of the public services over the internet.

UK's online action plan is based on mainly three themes:

- 1) Transforming Business
- 2) Transforming Government
- 3) Transforming People

According to a report issued by Central Office of Information UK government spent 94 million Pounds on website development and operation costs and addition to that also 32 million spent on web staff in 2009-2010. In average 28.000 user benefited from the UK Trade and Investment website per month, but cost was 4 million Pounds to built it. Each website user cost the Government 11.78 Pounds according to the report. Present number of the Government websites was 820. The most cost efficient government website was stated as Department for Environment Food and Rural Affairs, which cost 2 pennies per visit (BBC, 2010).

According to another report published in 2010 by COI, 73% of the households have internet access. 31% of internet users connected via a mobile phone, up from 23% in 2009. Report also says that gross income is a significant indicator of internet use. 87% of the users concern about security related problems such as financial loss caused by fraudulent use of credit or debit cards. 5% of internet users have already experienced such an incident.

Online sophistication level, which shows full electronic case handling of transactions, is almost 90%, while it is around 80% in EU (Capgemini, 2006).

3.1.3. Singapore

Singapore is the country, which has given the highest priority to E-Government establishment placing it to its development strategies. In order to realize that vision Singapore established National Computerization Committee in 1980 as to spread ICT in the country. That committee encouraged society to use computer and trained its citizens periodically. Having realized those activities IT sector developed substantially and Singapore became an IT producer in the world. Then National Information Networks Program was put into practice in 1986, which enabled Singapore Government to carry out almost all transactions with private institutions on electronic environment. As a result of those electronic application and communication environments such as “TradeNet” and “LawNet” together with working in cooperation with the Government, institutions became

more effective and profitable and also many legal problems have been solved easily. Following those developments advent of internet made Singapore put “Information Society Program for 21th. Century” project into practice in 1999 as to make government benefit from wireless communication technologies. As a result of this strategy all its citizens has been started to get government services via internet. (Kuran, 2005). Consequence of its felicitous strategies today Singapore is thought to be one of the most respectable and leading information societies (Figure 3.1).

Singapore is able to provide its citizens with almost 98% of its services over the internet. According to a research done in 2006 in Singapore 90% of Singapore citizens were satisfied with electronic services and they all recommend others to use those services. Application of “Online Business License Services” was awarded with UN’s “UN Public Service Award” on the category of ICT on public administration application (Şahin 2008).

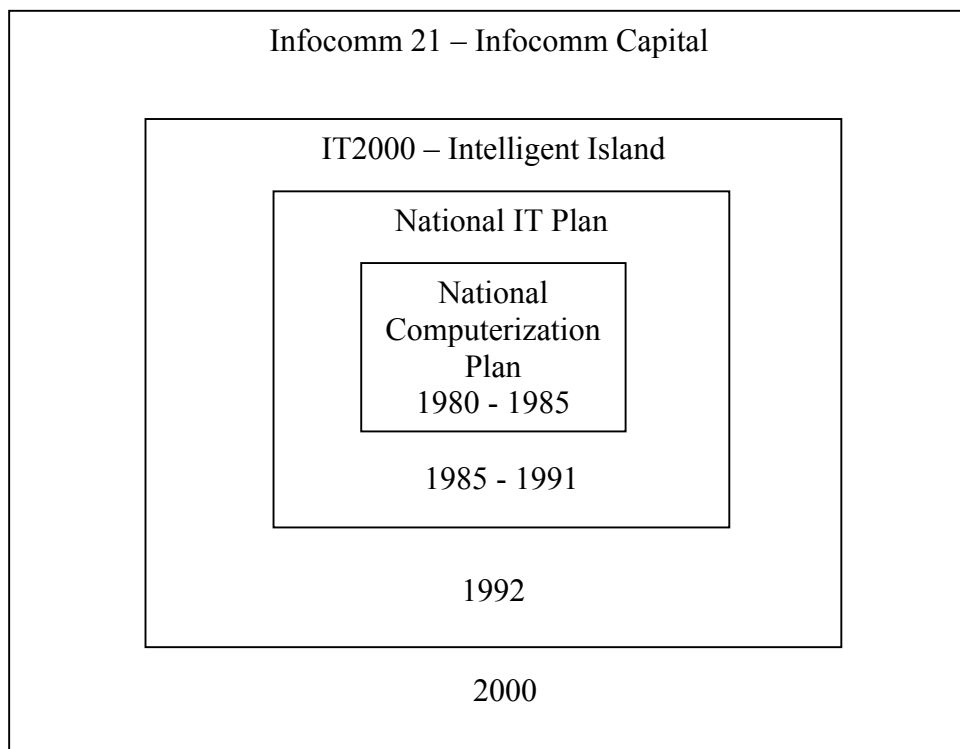


Figure 3.1 Singapore Government’s programmed growth model (Kuran, 2005:34)

3.1.4. Korea

Korea Information Society Institution was established in 1996. This institution established Korea Authorization Certificate Center and System Downing and Antivirus Information Centers in 1999 and Individual Information Protection Center in 2000.

Building E-Government System Korea's strategies are reforming work methods, government services and information resource management. Having realized that Korea's intention was to establish an advanced administration, which enables them to provide Korean citizens with participatory democracy, balanced social growth and per capita of 20.000 USD for gross national product.

Korea's overall E-Government vision is to be the best open government in the world.

3.1.5. Sweden

Becoming a most appropriate "information society" for everyone is Sweden's strategy. In that respect, Sweden aims to provide all its citizens with electronic services, which facilitate and improve the quality of their daily lives together with improving infrastructure of modern IT technologies. According to a research done in Sweden, 73% of the households uses internet. 40% of the households have broadband internet. 51% of users of the age group of 55-74 use internet at least once a week. All municipalities have their own e-municipality strategies. Those municipalities' activities are transparent (Şahin, 2008).

Skiden states that, Using of information technology has been saturated significantly among both citizens and public institutions in Sweden. Consequently, it is seen as a potential future revenue resource for the country. This may lead Sweden to become a technology exporter country. One of the best E-Government applications in Sweden is "E-Custom solutions", which has been developed by Sweden Customs Organization. It is thought to be the world's leader among customs systems (Skiden, 2003, as cited in Odabaş, 2009). So, Sweden has come a long way in achieving the goal of information society.

The level of online availability of services is 75% in Sweden, while it is a little more than 50% in EU. Online sophistication level, which shows full electronic case handling of transactions, is almost 90%, while it is around 80% in EU (Capgemini, 2006). Sweden has

a high mobile phone usage rate, which makes it easy for them to put mobile services into practice. Software-based electronic IDs are in use for certain E-Government services. Sweden government also plans to put into practice an electronic identification card containing biometric identifiers.

Östberg gives examples of some services used through mobile devices in Sweden;

- WAP services

WAP services are used by many citizens for employment related issues. 10.000 citizens in average per month apply for employee placement services.

- SMS services

Another employee placement service is SMS services, which is done through mobile devices. Citizens put their information through the system and system directs employment notifications to citizens. This system is also used for notifying students.

- Payment services

Payment services are for invoice, car parking and bus fare payments.

- Mobile old citizen services

Old citizens' information is put through the system and authorized officers can see them together with those people's responsible relatives.

- Mobile state inspectors

Inspectors also need information, which is related their field, like people work in old citizen services. Sweden was ranked as first in UN' s report prepared in 2008 in achieving digital based services and solutions which facilitate citizens' lives.

3.2. E-Government Model of Turkey

Like other countries, Turkey also has been facing certain problems over the years since the process of transition to E-Government started. Some important problems need to be

overcome like regulation restrictions, internet access, budget related problems, infrastructure and ICT aptitude (OECD, 2007).

There are some problems, which prevent the application of E-Government System in Turkey. Those problems are; transparency, security, insufficient legal infrastructure and digital gap (Arslan et al, 2007).

According to United Nations' E-Government survey carried out in 2010, Turkey's E-Government System was ranked as 69th in E-Government development index table of the report (Table 3.2).

Table 3.2 United Nations' E-Government development index (UN, 2010:71)

Rank	Country	Index value	Of which		
			Online service component	Telecommunication infrastructure component	Human capital component
55	Antigua and Barbuda	0.5154	0.0410	0.1730	0.3014
56	Mexico	0.5150	0.1500	0.0713	0.2936
57	Andorra	0.5148	0.0788	0.1457	0.2903
58	Saudi Arabia	0.5142	0.1058	0.1330	0.2754
59	Russian Federation	0.5136	0.1123	0.0913	0.3101
60	Montenegro	0.5101	0.1069	0.1093	0.2940
61	Brazil	0.5006	0.1252	0.0838	0.2916
62	Qatar	0.4928	0.0950	0.1046	0.2932
63	Peru	0.4923	0.1392	0.0590	0.2941
64	Belarus	0.4900	0.1025	0.0687	0.3188
65	Bahamas	0.4871	0.0788	0.1156	0.2927
66	Tunisia	0.4826	0.1641	0.0641	0.2544
67	Trinidad and Tobago	0.4806	0.1155	0.0760	0.2891
68	Brunei Darussalam	0.4796	0.0961	0.0892	0.2943
69	Turkey	0.4780	0.1177	0.0852	0.2752
70	Venezuela	0.4774	0.1036	0.0766	0.2971
71	Costa Rica	0.4749	0.1036	0.0800	0.2913
72	China	0.4700	0.1252	0.0631	0.2817
73	El Salvador	0.4700	0.1446	0.0635	0.2619
74	Bosnia and Herzegovina	0.4698	0.0939	0.0827	0.2932
75	Saint Kitts and Nevis	0.4691	0.0345	0.1417	0.2929
76	Thailand	0.4653	0.1133	0.0576	0.2943
77	Mauritius	0.4645	0.1004	0.0874	0.2768
78	Philippines	0.4637	0.1338	0.0368	0.2931
79	Panama	0.4619	0.0961	0.0727	0.2932
80	Republic of Moldova	0.4611	0.1004	0.0638	0.2970
81	Serbia	0.4585	0.0756	0.0889	0.2940
82	Oman	0.4576	0.1252	0.0690	0.2633
83	Azerbaijan	0.4571	0.1101	0.0439	0.3031
84	Dominican Republic	0.4557	0.1241	0.0547	0.2769
85	Albania	0.4519	0.1058	0.0538	0.2924
86	Egypt	0.4518	0.1803	0.0414	0.2301
87	Uzbekistan	0.4498	0.1284	0.0282	0.2931
88	Saint Lucia	0.4471	0.0378	0.1158	0.2934
89	Jamaica	0.4467	0.0777	0.0930	0.2759
90	Viet Nam	0.4454	0.1036	0.0746	0.2672
91	Kyrgyzstan	0.4417	0.1079	0.0303	0.3035
92	Maldives	0.4392	0.0550	0.0952	0.2889
93	Lebanon	0.4388	0.0907	0.0648	0.2833

3.2.1. Socio-economic structure of Turkey

Urban and rural rate of the population for 2006 (TÜİK and DPT);

- Urban population is 45.754.000 people, that stand for 62,7%.
- Rural population is 27.220.000 people, that stand for 37,3%.

Total population and distribution of population by age groups for 2006 (TÜİK and DPT);

- Turkey's population is 72.974.000. 28,1% of them are between the ages of 0 and 14, 66% of them are between the ages of 15 and 64, 6% of them are between the ages of 65+.

Level of educational attainment of the group of 25 to 64 year old population for 2003 (OECD);

- 74% have below upper secondary school education
- 17% have upper secondary school education
- 9% have tertiary school education

3.2.2. Information society infrastructure of Turkey

Computer and internet usage are rapidly increasing in Turkey. According to the research carried out for the first three months of 2010 by Turkey Statistic Organization, 41,6% of population of Turkey have internet access. It indicates 11,6% raise comparing the last year's data, which was 30%. It shows that internet usage is increasing rapidly in Turkey. Result of the same research indicates that every three people out five use the internet everyday. Computer use in the age group of 16-74 is 43,2%. Computer usage rate is 53,4% for men and 33,2% for women. Internet use in the age group of 16-74 is 41,6. Internet usage rate for men is 51,8% and 31,7% for women. For the year 2009 those figures were 50,5% and 48,6% for men and 30% and 28% for women. Computer usage of Turkish people take place at home by 70%, at work by 31,3%, at internet cafes by 17,5%. Those figures for 2009 were 65,1%,32%, 21,1% respectively. Internet usage of Turkish people take place at home by 62,8%, at work by 31,6%, at internet cafes by 20%. Those figures for 2009 were 57,6%, 32,4%, 24,1% respectively. People from the age group of 16 to 24 have the highest computer and internet usage proportion. All figures of the categories are high for men than women.

In terms of education, the highest internet usage proportion belongs to higher educated users. 89,6% of university or higher educated people, 69,9% of high school graduates, 54% of primary and secondary school graduates, 14% primary school graduates and 2,8% non educated people use the internet.

Considering labor force, 69,2% of employer against 62,6% employee use computer and 67,8% of employer against 60,5% employee use internet. Those figures for 2009 were 67,8% and 58,6 for computer, 66,1% and 56,8% for internet. The figures for unemployed are 50% and 48,2%. Those figures for 2009 were 43,2% and 41,6%.

The reasons of using internet are sending and receiving e-mails by 72,8%, sending emails to message rooms, information groups and discussion forms by 64,2%, reading newspaper and magazine, downloading information by 58,8%, gaining information about goods and services by 55,7% and game, music and film downloading by 51,2%. Those figures for the year 2009 were 72,4%, 70%, 57,8% and 56,3%, The proportion of buying goods or services for individual use over internet is 15%. Last year the figure was 11,8% (TUIK, 2010).

3.2.3. E-Government strategic targets of Turkey

Turkey has 7 strategic targets for E-Government applications (DPT, 2007);

- Modernization of public administration
- Citizen centered service change
- Social change
- ICT in business world
- Competitive national ICT sector
- Widespread and affordable communication structure
- Development of Research & Development and innovativeness

Reform and modernization of public administration is an important propellant for E-Government in Turkey. E-Government is seen to be a crucial tool to realize below targets related to public modernization;

- Increasing productivity and efficiency
- Encouraging transparency and accountability
- Increasing tax revenues

- Decreasing corruption
- Providing information and e-services
- Being more user-centric
- Eliminating data and service usage derives from independent and duplicate sources increasing data sharing and common services.

Below tables show what Turkey targeted in 2006 at its report of Information Society Strategy:

Social change:

In 2006, the rate of internet users was 14%, which was targeted to increase to 51% by 2010. According to TSI's research, rate realized for internet users is 41,6% for the first quarter of 2010, which indicates 9,4 points short fall than what is targeted in 2006. Internet usage for students was 53% in 2006 and target was 96% for 2010. Realized rate is 89,5% in 2010, which is 6,5% less than target. Internet usage rate for employees was 17% in 2006 and targeted as 77 for 2010 and realized as 76,7% in 2010. Target was almost achieved for employees. Same indicator for unemployed was 21% in 2006 and targeted as 56% for 2010 and realized as 48,2% in 2010, which is 7,8 points less than target.

The rate for individuals doing online shopping was 2,2% in 2006 and 30% was the target rate for 2010. According to TSI's research, the rate realized is 15% covering the shopping done between research day and back to more than a year period, which indicates that exactly half of the target could not be realized. It can be said that internet users do not adapt to online shopping rapidly. Security related problems can be one of the major issues why users do not prefer doing online shopping.

Figure for users experience security problems was 24% in 2006 and planned that it would be same in 2010. According to the same research results 46,8% of the users had security related problems over the past two months. %36,4 percent of the same users had virus and other computer issues related security problems, which cause information and time losses. The figure shows that security problems seem to be the most important obstacles, which may be play a deterrent role for Turkish users to benefit electronic services in general (Table 3.3).

Table 3.3. Targets of internet usage (SPO, 2006)

Year 2006

Year 2010

Key Indicators *	Current Situation ² (%)	Target (%)
Internet users	14	51
- Students	53	96
- Employees	17	77
- The unemployed	21	56
Broadband Internet Subscriber Penetration Rate	2	12,5
Employed and unemployed individuals using the Internet for educational purposes	1,2	39
Students using the Internet for educational purposes	34	78
Individuals doing online banking	2,1	33
Individuals doing online shopping	2,2	30
Individuals using e-government services	5,9	35
Households with computers connected to the Internet	7	48
Individuals accessing the Internet from PIAPs	0,2	5,1
Users experiencing security problems	24	24

* for individuals aged 16-74

ICT adaptation by businesses:

According to TSI's research, ration of obtaining information in 2009 for enterprises was 89,6%, which is almost what was targeted. Rate of downloading in 2009 was 91%, which 11 points more than the target. Those figures state that enterprise targets have been achieved and even exceeded.

Rate of enterprises that have computers was 61% in 2006 and targeted as 95% for 2010. According to TSI's research results it is 92,3% in 2010, which indicates 3,7 points short fall than what was budgeted.

Broadband internet access rate was 20% for enterprises in 2006 and %70 was targeted for 2010. According to the same research results, realized figure is 90,9% in 2010, which exceeds the target by 20,9 points, which shows that broadband spreads rapidly in business sectors (Table 3.4).

Table 3.4 Targets of electronic public services usage (SPO, 2006)

	Year 2006	Year 2010
Key Indicators *	Current (%)	Target (%)
Ratio of enterprises using public services offered via electronic channels :		
· Obtaining information	-	90
· Downloading forms	-	80
· Filling out forms online	-	60
· Completing transaction	-	30
Ratio of Enterprises that have computer(s)	61	95
Ratio of Enterprises with broadband Internet access	20	70
Ratio of e-Commerce sales to total turnover	0-3	15
Ratio of Enterprises using Enterprise Resource Planning	0-3	15
Ratio of Enterprises using Supply Chain Management	0-1	12
Ratio of Enterprises using Customer Relations Management	0-0,5	5

* For Small and Medium Sized Enterprises (10 or more employees)

Citizen-centric service change:

Level reached in EU 20 Basic services was 53% in terms of citizen-centric services in 2006 and target as 100% in 2010 (Table 3.5).

Table 3.5 Targets of citizen-focused services (SPO, 2006)

Year 2006 Year 2010

Key Indicators	Current (%)	Target (%)
Service Level		
Percentage of services provided via electronic channels	N/A	70
Level reached in EU 20 Basic services	53	100
Service Usage		
Percentage of transactions conducted via electronic channels	N/A	33
Service Satisfaction		
e-Services user satisfaction index	N/A	80

Modernization in public administration:

Nothing seems to be done regarding modernization in public administration until 2006, but significant targets have been set for 2010 (Table 3.6).

Table 3.6 Targets of modernization in public administration (SPO, 2006).

Year 2006 Year 2010

Key Indicators	Current (%)	Target (%)
Efficiency in Public Administration		
Savings in annual public sector current expenditures	-	9
Public procurement in electronic environment	-	90
Public services with online back-office processes	N/A	100
Projects completed within budget limits and schedule	N/A	90

Globally competitive IT sector:

Some considerable improvements have been targeted for 2010 to support competitive IT sector in Turkey (Table 3.7).

Table 3.7 Targets of globally competitive IT sector (SPO, 2006)

Year 2006 Year 2010

Key Indicators	Current	Target
<i>Internal Market Size</i>		
Packaged software (million USD)	390	1.267
Services (million USD)	574	1.525
IT Hardware (million USD)	2.086	6.368
<i>Export Size</i>		
Packaged software (million USD)	30	161
Services (million USD)	40	215
IT Hardware (million USD)	10	31
<i>Ratios</i>		
Share of IT sector in GDP (%)	0.8	2.2
Ratio of software and services exports to software and services market (%)	7.3	13.5

Communication infrastructure:

Communication infrastructure related targets of Turkey can be seen in table 3.8

Table 3.8 Targets of Communication Infrastructure (SPO, 2006)

Year 2006 Year 2010

Key Indicators	Current	Target
Rank of sector competitiveness among EU countries	10+*	1-5
Ratio of population covered by broadband access infrastructure to overall population (%)	≈ 75	95
Ratio of end-user cost of broadband access to per capita income (%)	5,4	2

*The study conducted in 2004 by ECTA includes 10 EU countries.

Basic communication needs of information society:

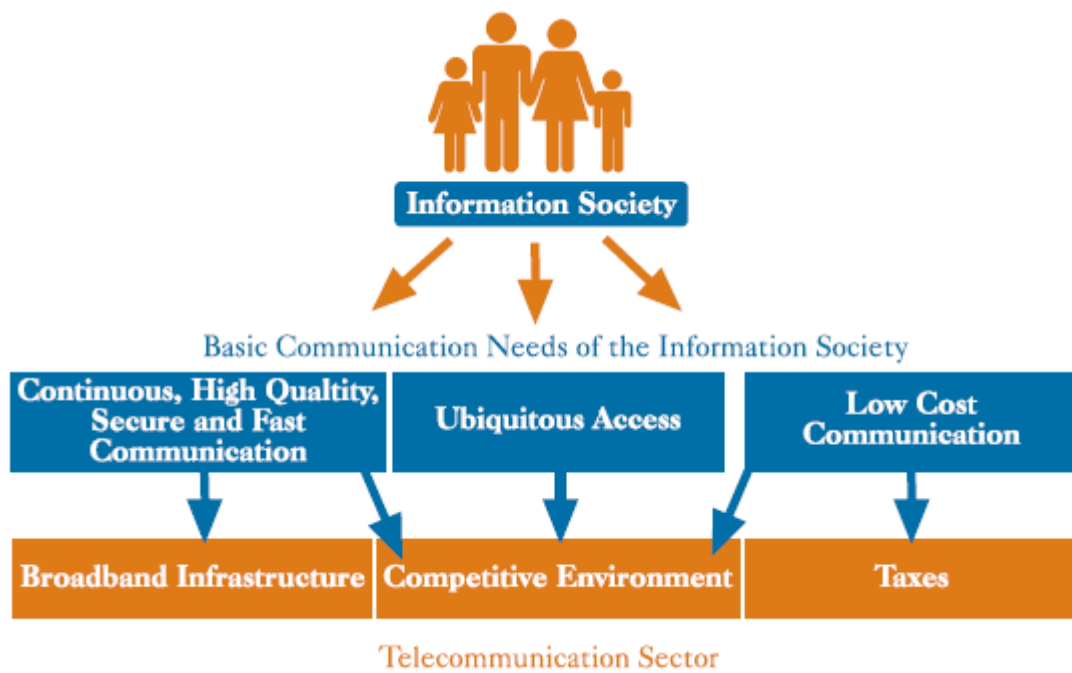


Figure 3.2 Basic communication needs of information society (SPO, 2006)

Implementation of the strategy:

Organization chart of information society strategy is as in figure 3.3

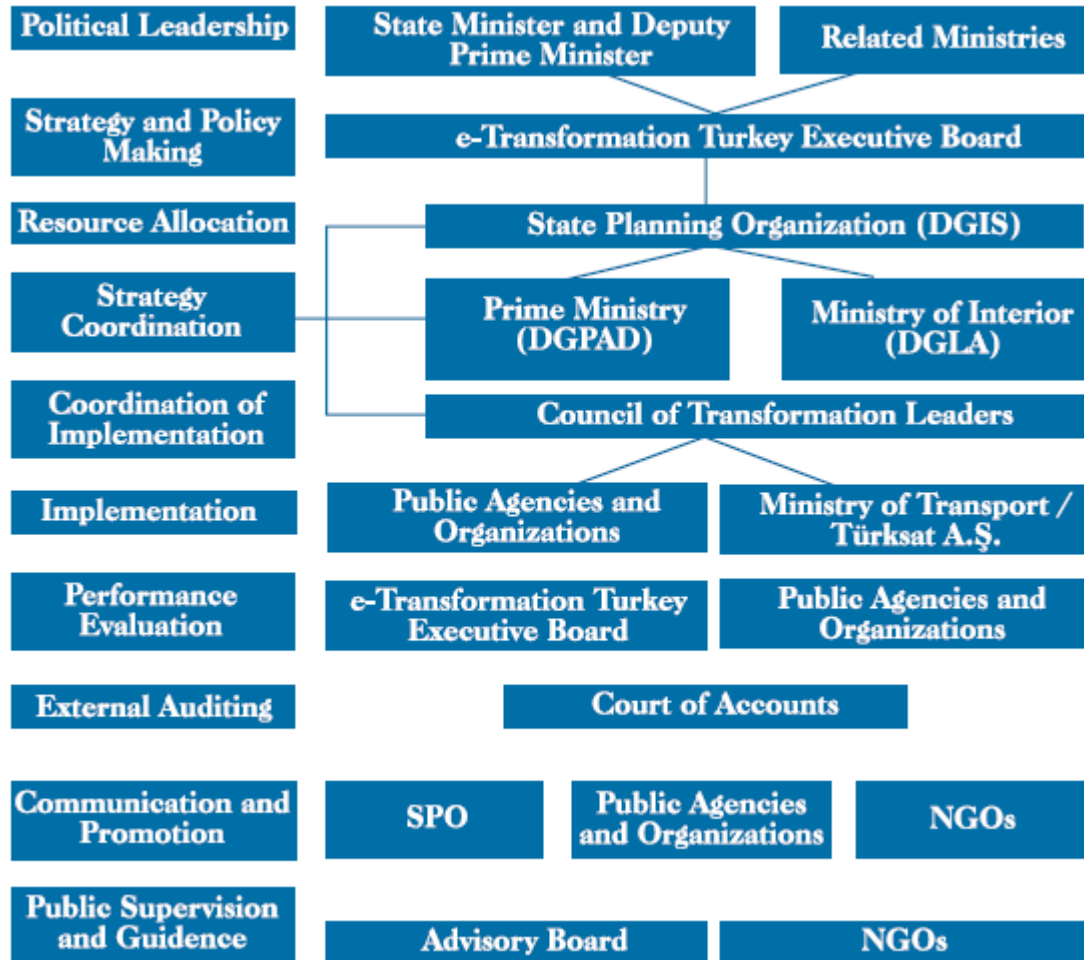


Figure 3.3 Organizational chart of information society strategy (SPO, 2006).

Time planning chart of implementation of information society strategy:

According to the chart, implementation of information society projects were planned to be realized between 2006 and 2008 and acquiring social and economic benefits of them were expected between 2009 and 2010 (Figure 3.4).

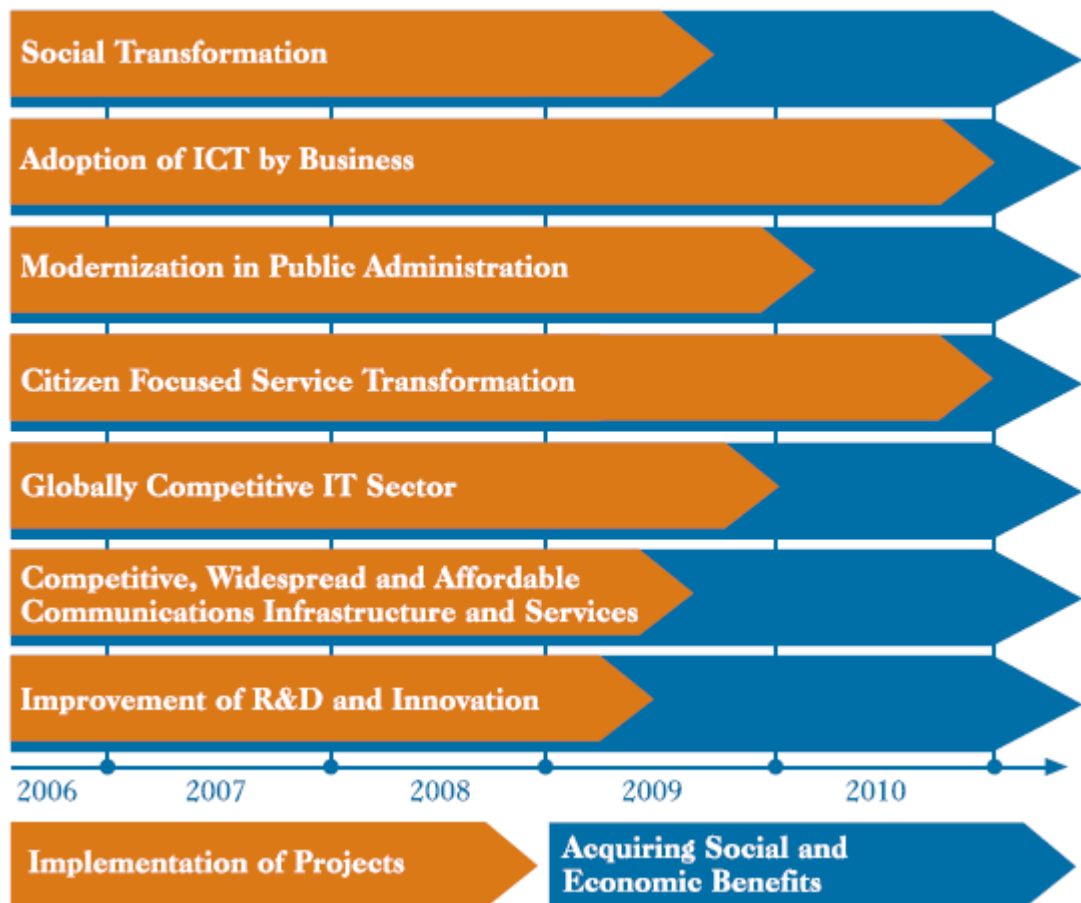


Figure 3.4 Time planning chart of implementation of information society strategy (SPO, 2006).

Turkey's vision of change into an information society as follows: "To be a country that has become a focal point in the production of science and technology, that uses information and technology as an effective tool, that produces more value with information-based decision-making processes and that is successful in global competition, with a high level of welfare" (SPO, 2006).

3.2.4. Some important phases of E-Government implementation

- The Central Civil Registration System was integrated in the system in 2002.
- Address information of all citizens has been adapted on the system.
- Institutions have become able to obtain electronically the identity information of persons necessary for the provision of services.

- The data maintained by the system has been opened to the use in electronic format to all public and private agencies.
- The identity verification procedure, which is an important process for the public institutions, has been reduced to seconds. All identity authentication procedures are carried out via the system.
- Population movements (internal migration and emigration) and the statistics based on these data have started to be produced using the system.
- It has become possible to carry out population determination using the system without the need for field applications.
- The collection of information on disability of disabled persons has been initiated on a voluntary basis and these data eased particularly the job application procedures for disabled persons when applying to the institutions and agencies.
- The civil status information necessary for the provision of services by the institutions, which used to be requested previously in paper format from persons, is no longer required (EC, 2007).
- E-Government gateway has been in use in order to realize interoperability.

3.2.5. Services Turkish E-Government System provides

There are two ways to get E-Government services. First way is to log in to related association's website where you want to get the specific service. Second is to log in to Turkish E-Government gateway, where currently 195 services are served in cooperation with 27 associations. There are four ways to access E-Government gateway;

- E-Government password,
- mobile signature,
- electronic signature and
- Turkish Republic Identification Card Number.

Services reached via E-Government can be classified under four groups;

- Notification services,
- E-Government services,

- Shortcuts to corporations,
- Up to date announcements.

Turkish E-Government gateway comprises three main pages; citizen, business and government.

Accessibility

- All pages and interactive context are developed considering disabled users.
- All contexts can be used via a keyboard.
- Web pages are designed considering W3C and Public Internet Websites Standards.
- Web pages can be viewed with XHTML 1.1 and CSS 2 supported programs

Customer Relationship Management

E-Government's call center number is 160, which serves for E-Government and password related issues. For other service problems of other public associations call center number of 150 can be called or a message to Prime Ministry Communication Center filling a form.

A Form on communication page can be used for recommendations related E-Government gateway.

3.3. E-Government Model Implementations

In this part of the study, Turkish E-Government System will be analyzed and compared with some other countries' models that are accepted to be good. Then an implementation approach will be submitted for Turkey.

3.3.1. Comparision of Turkish E-Government System with the systems of other countries

Comparing a country's E-Government System with another country requires to pay attention to each country's structural dynamics and national resources such as human

capital, various management abilities and ICT vision of executives, funds which can be allocated for system implementation, cultural structure in terms of technology and innovation acceptance and legal and communication infrastructure. Thus, implementation processes differ from country to country according to the countries' infrastructures and national resources.

As to be able to compare Turkish E-Government System with other countries' systems, a research has been carried out applying a survey to final users of the system and to companies from private sector along with interviewing some back stage users and high-ranking officers of Turkish E-Government System implementation. Besides, some randomly chosen countries' systems and some articles published in various Turkish newspapers during the research regarding Turkish E-Government System have been analyzed.

Appearance of Turkish E-Government System seems to be much like only transferring traditional services to electronic environment rather than increasing value of services, forming government services according to final users' needs and expectations and getting them involved more in governance, which ensure the transformation needed. Below Turkish E-Government System are assessed with other countries' systems on certain aspects:

Security

One of the most important differences between Turkish E-Government System and other countries' is providing protection to citizens' personal information. Security is the main thing for the system to build trust. Therefore, users will always feel insecure and hesitate to use the system unless protection has been realized. Some security related articles have been published in various Turkish newspapers:

"Secret information of 70 Million people are in danger." - published in Hürriyet Newspaper on August 6th 2010 :

"Some mobs have seized identification information of 70 Million people. How they were able to do it has been revealed. According to Turkish Internet Houses Association there is a security hole in Central Population Administration System.

Through a single identification number the rest of the family members' identification numbers can be reached. Using an identification number a person's monthly salary and necessary information for credit cards can be gained.”

“Possibility of cyber attack is inquired for the system failure occurred in customs.” - Published in Hürriyet Newspaper on February 7th 2011:

“Minister of Government responsible from customs has stated that the cyber attack that took place in customs for two days and caused the foreign trade of 2 Billion USD halted is now being inquired in terms of a cyber attack.”

Those kinds of incidents surely discourage the users to use and trust the system in terms of safety of their personal information. Turkey's ranking among OECD countries is quite low in providing secure servers to users (Figure 3.5).

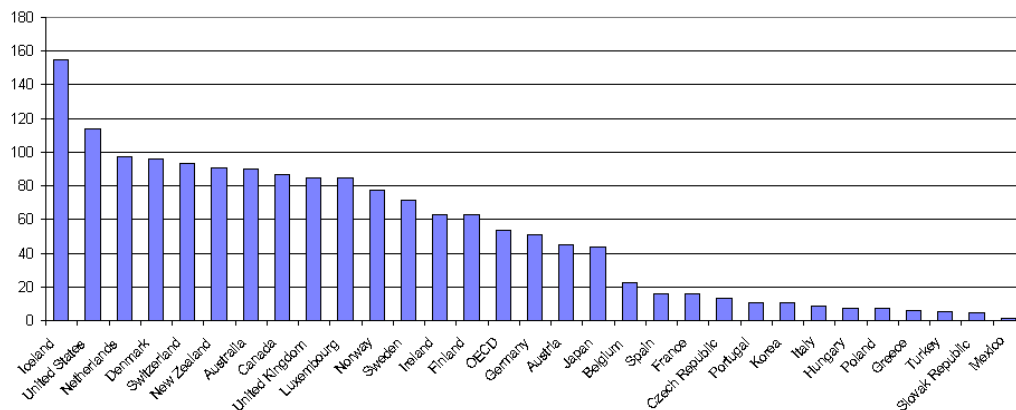


Figure 3.5 Secure servers per 100.000 inhabitants in OECD countries, July 2008 (http://www.oecd.org/document/44/0,3746,en_2649_34225_43435308_1_1_1_1,00.html).

System Entry

It is relatively difficult and troublesome to get a password to enter the system for the citizens. There are four different ways to enter the system, E-Government password, mobile signature, electronic signature and identification card, each of which has an authentication level of certain transactions. Use of identification card has not started yet. None of them can be obtained through the system. Each of them costs citizens to have it. For example, basic level entry password can only be gained from offices of Turkish Telecom Company paying 1 Turkish Lira (Figure 3.6 and figure 3.7). It might be thought to be counterintuitive to get a password for a venue, which is established in a virtual

environment. When citizens lose or forget that password, they have to pay ten times the price of the original password to get a new one.



Figure 3.6 Turkish E-Government System's password document



Figure 3.7 Turk Telecom Company's receipt of Turkish E-Government System's password

Conversely, it is possible and quite easy to get a free password going online as to be able to get tax refund from US Government answering certain number of questions in US Government's related website. An article analyzing the subject was published in Haber Türk Newspaper on November 25, 2010:

“Either you have an E-Government password or not you are plaintive.”

“Getting an E-Government password is difficult not only for the citizens alive but for the ones who are death. Therefore, those people are not able to see either their list of Social Security Institution services or their relatives' who are death. Although the application has been in service since November 1, 2010, since then no one is able to see it even through E-Government System either. As foreigners, who work in Turkey, can not get E-Government password they can not see it either.”

Another subject related article was published in Hürriyet Newspaper on November 29, 2010:

“E-Government System Membership has reached to 558.000 members. Cost of forgetting the password multiplied by 10.”

“Frequently Forgotten passwords of E-Government System, which was established two years ago with the cost of 38 Million Turkish Liras, engenders a new income center. In case of forgetting or loosing the password, which is gained from telecommunication branches, it is required to pay a penalty of 10 times the original price. Approximately 40.000 entry are done to the system per day. The most used service of E-Government System is inquiry of driving license penalty score. The second most used service of E-Government System is vehicle inquiry.”

Use of VCD elements

Another conspicuous difference is that there are too much information and visual elements on the Gateway, which are likely to distract users. That is the reason why applying Visual Communication Design Principles are important in creating web pages. Instead of

displaying almost all the services affiliated agencies provides, which causes visual disturbance, a research engine can be used to guide users to reach the services and information they want. Having done that Turkish E-Government Gateway provides a plain appearance. The most interesting services and information, which may draw users' attention, on the Gateway can be shown instead.

Interoperability

Turkish Government's agencies seem to share the information they have with each other up to a certain extent. One of the main reasons for this seems to be not being willing to waive the power, which agencies think they have, possessing the information. Besides, as the agencies do not share the information with each other, they can not be expected to share it with the citizens either. So, this attitude of the agencies needs to be changed. It is so important for the agencies share the information they have and to build trust towards each other and the citizens as to have a successful E-Government System.

Interoperability needs to be provided to E-Government System. Most of the time same information can not be used for different services. So, citizens have to submit a written document, from where their transaction is done, to another government agency to prove that.

Communication

Increasing communication between the government and citizens is the essence of the concept of E- Government System, through which trust towards the government can be build. Transparency and user-oriented services should be realized through communication owing to attract more users to the system and its services. Regarding transparency, for instance, California has spent \$21.000 for a transparency website and planed \$40.000 USD for its yearly operational costs. After a few months of opening of the website, California saved \$20 million through visitors reporting unnecessary spending to the government (UN, 2010). Turkish Government Gateway does not have many choices to communicate with citizens. So, Turkish Government should consider raising communication and also participation in governance opportunities for the citizens like that. Especially social media

tools should be taken into account as to realize better communication facilities between the Government and the citizens as some countries have already done.

Online service level

Although many services have been transferred to their electronic forms, some services have not still been transferred to virtual environment. Therefore those services cannot be given and benefited through internet. Turkish E-Government System was ranked as 62.th for on line service levels of the countries by United Nations in the same survey (Table 3.9).

Table 3.9 United Nations' on line service levels ranking report (UN, 2010:81)

Rank	Country	Emerging Information services (stage 1)		Enhanced Information services (stage 2)		Transactional services (stage 3)		Connected services (stage 4)		Total	
		Points	Score (%)	Points	Score (%)	Points	Score (%)	Points	Score (%)	Points	Score (%)
30	Tunisia	52	76	40	34	50	30	10	20	152	38
32	Uruguay	51	75	43	37	36	21	21	42	151	37
36	Kuwait	41	60	39	34	58	34	7	14	145	36
39	Mexico	45	66	52	45	26	15	16	32	139	34
40	El Salvador	48	71	30	26	46	27	10	20	134	33
44	Argentina	53	78	42	36	22	13	13	26	130	32
45	Peru	53	78	37	32	26	15	13	26	129	32
49	Philippines	48	71	25	22	35	21	16	32	124	31
53	Uzbekistan	52	76	39	34	18	11	10	20	119	30
54	Cyprus	44	65	39	34	19	11	15	30	117	29
55	Brazil	53	78	34	29	10	6	19	38	116	29
55	China	54	79	40	34	4	2	18	36	116	29
55	India	45	66	41	35	22	13	8	16	116	29
55	Oman	47	69	33	28	26	15	10	20	116	29
59	Dominican Republic	46	68	30	26	24	14	15	30	115	29
62	Turkey	57	84	29	25	9	5	14	28	109	27
62	Ukraine	55	81	31	27	7	4	16	32	109	27
65	Trinidad and Tobago	50	74	39	34	12	7	6	12	107	27
67	Thailand	50	74	31	27	15	9	9	18	105	26
68	Russian Federation	49	72	28	24	15	9	12	24	104	26

Publicity

Regarding publicity activities any formal activities have not been done although there is an activity plan ready, which was prepared by a consultancy group, whereas countries, which are thought to have effective E-Government Systems have been paying serious attention to it. Those countries especially use social media tools as well as mobile devices to serve and

promote their services to citizens. As there has not been any publicity activity established, where people learn more about the services, They have created their own web pages and using social media tools like “Facebook” and “Twitter” to share their experiences with each other about E-Government services and developments. (Figure 3.8, figure 3.9 and figure 3.10)



Figure 3.8 E-Government services introduction web page



Figure 3.9 E-Government services introduction web page on “Twitter”.

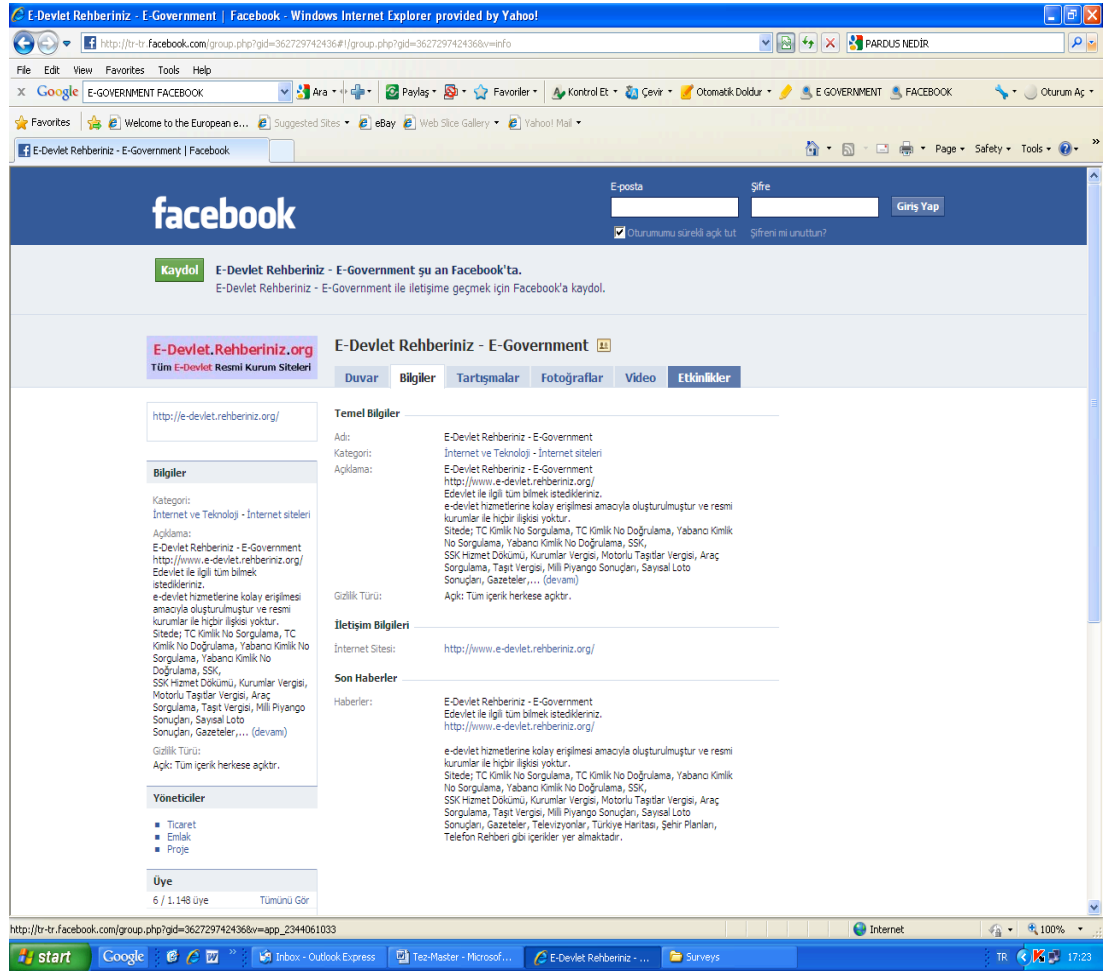


Figure 3.10 E-Government related web page on “Facebook”.

“Facebook” has been used as a public sphere environment by citizens, whom discuss E-Government related issues (Figure 3.11).

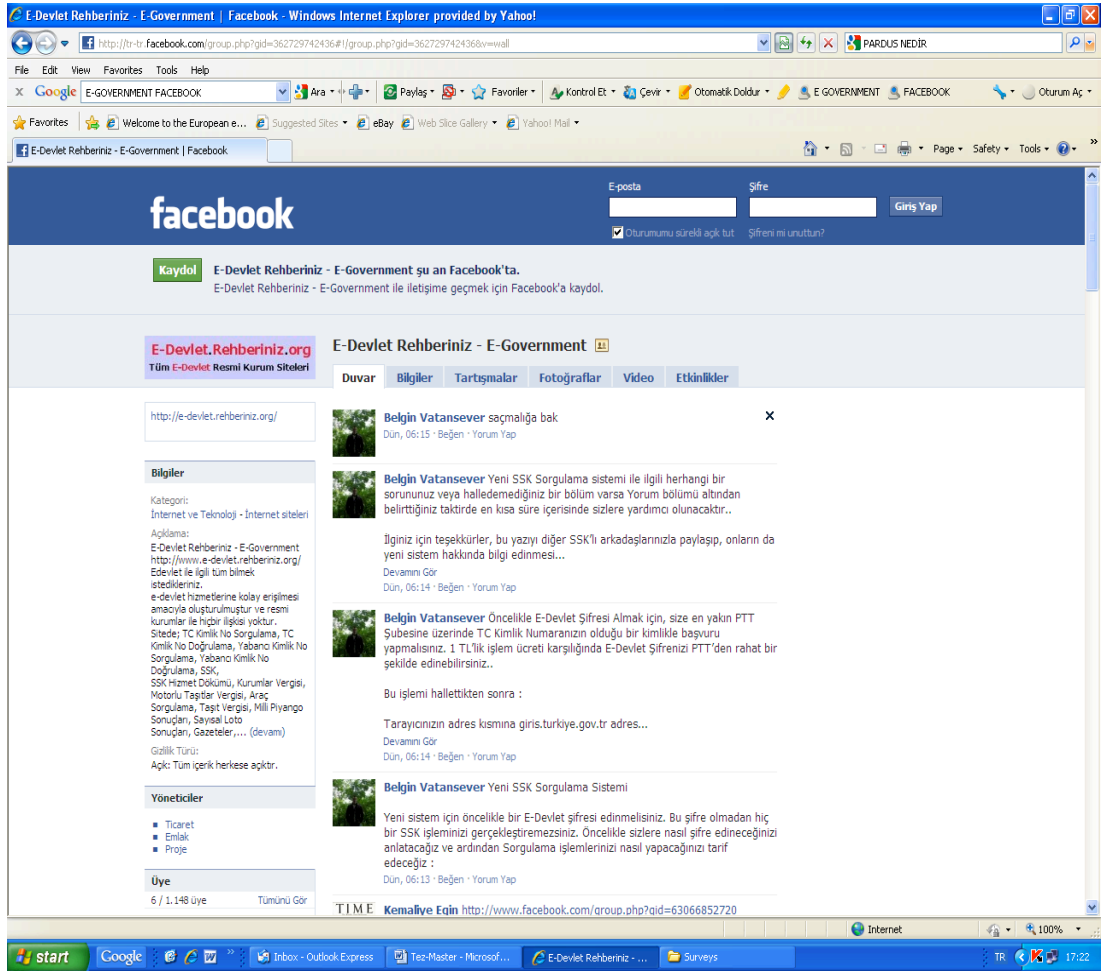


Figure 3.11 E-Government related web page's usage as Public Sphere on “Facebook”.

Being user-oriented

High-ranking countries in a successful E-Government System implementation seem to be paying a real attention to users and their expectation as to realize a successful transformation in serving their citizens. Easy and user-friendly applications and useful daily information are conspicuous on their E-Government Gateways. VCD principles have been applied, mobile device adaptable applications in use. Interactive environments and social media tools like “Facebook” and “YouTube” and “Twitter” are highly used in serving the citizens in those countries. Those activities indicate that countries, which have ideal E-Government Systems, have been taken each and every possible opportunities to reach their citizens for their feedbacks as to satisfy them more. Conversely, Turkish E-Government Gateway does not seem to have much of what those countries' have on their

gateways. It can be said that it is an indicate of not willing to pay much attention to the users.

E-participation

E-participation is at its inception stage amongst UN Countries. It is the case especially for developing countries. So, Turkey does not have any distinguished way of contacting citizens to solicit their thoughts, expectations and experiences of E-Government services in order to provide them with more user-centric services. The only connection way with citizens about E-Government services seems to be contact icon on E-Government web pages. Turkey, like other countries needs to come up with innovative and creative solutions to realize that. Effectiveness and increase in usage of E-Government System and its services will come along accordingly.

According to UN's survey done in 2010, Turkish E-Government System was placed among under 30% countries and was ranked as 55th in terms of e-information, e-consultation and e-decision-making (Table 3.10 and 3.11).

Table 3.10 United Nations' Ranking for Quality of e-participation websites (UN, 2010:87).

Range	Country	Score (%)			
		E-Information	E-consultation	E-decision making	Total
Over 60%	Republic of Korea	87.50	78.79	75.00	78.95
	Australia	100.00	60.61	68.75	68.42
	Kazakhstan	87.50	66.67	62.50	68.42
	Bahrain	75.00	66.67	56.25	64.91
30-60%	Spain	75.00	63.64	37.50	57.89
	Kyrgyzstan	50.00	63.64	31.25	52.63
	Mongolia	62.50	54.55	43.75	52.63
	Israel	50.00	51.52	50.00	50.88
	New Zealand	50.00	54.55	43.75	50.88
	United Kingdom of Great Britain	50.00	60.61	31.25	50.88
	Japan	87.50	39.39	50.00	49.12
	United States of America	50.00	54.55	37.50	49.12
	Canada	75.00	36.36	50.00	45.61
	China	37.50	39.39	62.50	45.61
	Colombia	75.00	39.39	43.75	45.61
	Mexico	87.50	51.52	12.50	45.61
	Slovenia	50.00	45.45	43.75	45.61
	Chile	75.00	39.39	31.25	42.11
	Cyprus	50.00	30.30	62.50	42.11
	Estonia	50.00	42.42	31.25	40.35
	Singapore	50.00	48.48	18.75	40.35
Under 30%	Belarus	37.50	33.33	18.75	29.82
	France	37.50	36.36	12.50	29.82
	Netherlands	75.00	18.18	31.25	29.82
	Belgium	62.50	12.12	43.75	28.07
	Kenya	37.50	33.33	12.50	28.07
	Kuwait	75.00	21.21	18.75	28.07
	Turkey	37.50	18.18	37.50	26.32

Table 3.11 United Nations' Ranking for e-participation index (UN, 2010:87)

Rank	Country	Index value
55	TFYR Macedonia	0.2143
55	Turkey	0.2143
58	Argentina	0.2000
58	Bolivia	0.2000
58	Costa Rica	0.2000
58	India	0.2000
58	Republic of Moldova	0.2000
58	Switzerland	0.2000
64	Dominican Republic	0.1857
64	Philippines	0.1857
64	Romania	0.1857
64	South Africa	0.1857
68	Azerbaijan	0.1714
68	Brunei Darussalam	0.1714
68	Cape Verde	0.1714
68	Côte d'Ivoire	0.1714
68	Libya	0.1714
68	Luxembourg	0.1714
68	Pakistan	0.1714
68	Peru	0.1714
76	Antigua and Barbuda	0.1571
76	Cameroon	0.1571
76	Congo	0.1571
76	Ecuador	0.1571
76	Montenegro	0.1571
76	Oman	0.1571
82	Andorra	0.1429
82	Grenada	0.1429
82	Sri Lanka	0.1429
82	Venezuela	0.1429

Human capital

One of the most important components of infrastructure in transition to information society is technology related capacity of human resources. The proportion of individuals who have not received any kind of education or training on information technologies (IT) is 92% (SPO, 2006). This high proportion seems to be the most important obstacle that is in front of Turkey to run an effective E-Government System.

Turkish E-Government System was ranked as 108th in terms of human capital index of United Nations' same survey (Table 3.12).

Table 3.12 United Nations' Ranking for Human Capital Index (UN, 2010:123)

Rank	Country	Index value	Adult literacy rate (%)	Combined gross enrolment ratio for primary, secondary and tertiary schools (%)
105	Jamaica	0.8361	86.00	78.82
106	Saudi Arabia	0.8346	85.00	80.39
107	Sri Lanka	0.8343	90.80	68.68
108	Turkey	0.8339	88.70	72.76
109	Ecuador	0.8231	84.20	78.52
110	United Arab Emirates	0.8192	90.00	65.76
111	Saint Vincent and the Grenadines	0.8172	88.10	68.95
112	Namibia	0.8135	88.00	68.05
113	São Tomé and Príncipe	0.8131	87.90	68.12
114	Viet Nam	0.8098	90.30	62.33
115	Honduras	0.8007	83.60	73.01
116	Oman	0.7980	86.70	66.00
117	El Salvador	0.7935	82.00	74.05
118	Iran (Islamic Republic of)	0.7927	82.30	73.20
119	Zimbabwe	0.7895	91.20	54.44
120	Botswana	0.7881	82.90	70.62
121	Equatorial Guinea	0.7868	87.00	62.04
122	Cape Verde	0.7858	83.80	68.14
123	Syrian Arab Republic	0.7769	83.10	66.86
124	Swaziland	0.7742	83.80	64.67
125	Congo	0.7742	84.70	62.86
126	Tunisia	0.7710	77.70	75.91
127	Myanmar	0.7643	89.90	49.50
128	Nicaragua	0.7626	78.00	72.77
129	Belize	0.7609	75.10	78.07
130	Lesotho	0.7529	82.20	61.46
131	Algeria	0.7377	75.40	70.52
132	Guatemala	0.7229	73.20	70.47
133	Vanuatu	0.7134	78.10	57.81
134	Kenya	0.7027	73.60	63.60
135	Cambodia	0.7019	76.30	57.97
136	Zambia	0.7008	70.60	69.05
137	Uganda	0.6997	73.60	62.70
138	Egypt	0.6973	66.40	76.40
139	Iraq	0.6956	74.10	60.47
140	Lao People's Democratic Republic	0.6845	72.70	59.94

System Accessibility

Technological infrastructure is crucial for E-Government Systems as to maintain all time secure accessibility to the system and the information. Insufficient technical infrastructure hinders to induce citizens to use E-Government services. Citizens are supposed to trust the system and use the services without any hesitation regarding interruption and security.

System may cause dissatisfaction and frustration otherwise. E-Government implementation process is a transformation process and trusting to the system is the most important thing during the transformation period. Ambiguity and frustration, caused by a system does not work fast and properly, needs to be minimized to build the trust towards the system. Therefore, E-Government System should have a sufficient and trustable system infrastructure. Here are some articles, which have been published in various Turkish newspapers reflecting the infrastructure related problems.

“E-Government application has locked the employees of Social Security Institution.” - Published in Haber Türk Newspaper on December 13, 2010:

“Although the application of viewing the list of Social Security Institution services was transferred to E-Government System on November 1, 2010, since then no one is able to view it. System does not work. Having interfered the system to transfer the data to E-Government System, now the employees of Social Security Institution are not able to view the services and not able to do any transaction either.”

“It is not possible either to enter or to leave Turkey.” - Published in Hürriyet Newspaper on February 2, 2011:

As a result of a failure has occurred in Central Information Technology System of Undersecretaryship of Customs it is not possible to do any transaction at customs gates. The incident has caused long queues in front of the customs gates of Turkey.

In terms of constant accessibility, Turkish E-Government System has still some technical problems that discourage citizens to use and benefit the services. For instance, E-Government System was not in service for entry from 11:12 AM to 15:34 PM on November 3, 2010 through Turkish E-Government gateway. Three different attempts were realized to enter the system. Those attempts were done on different times on November 3, 2010 from 11:12 AM to 15:34 PM. System responded as below during the attempts (Figure 3.12, figure 3.13 and figure 3.14);

First access attempt;

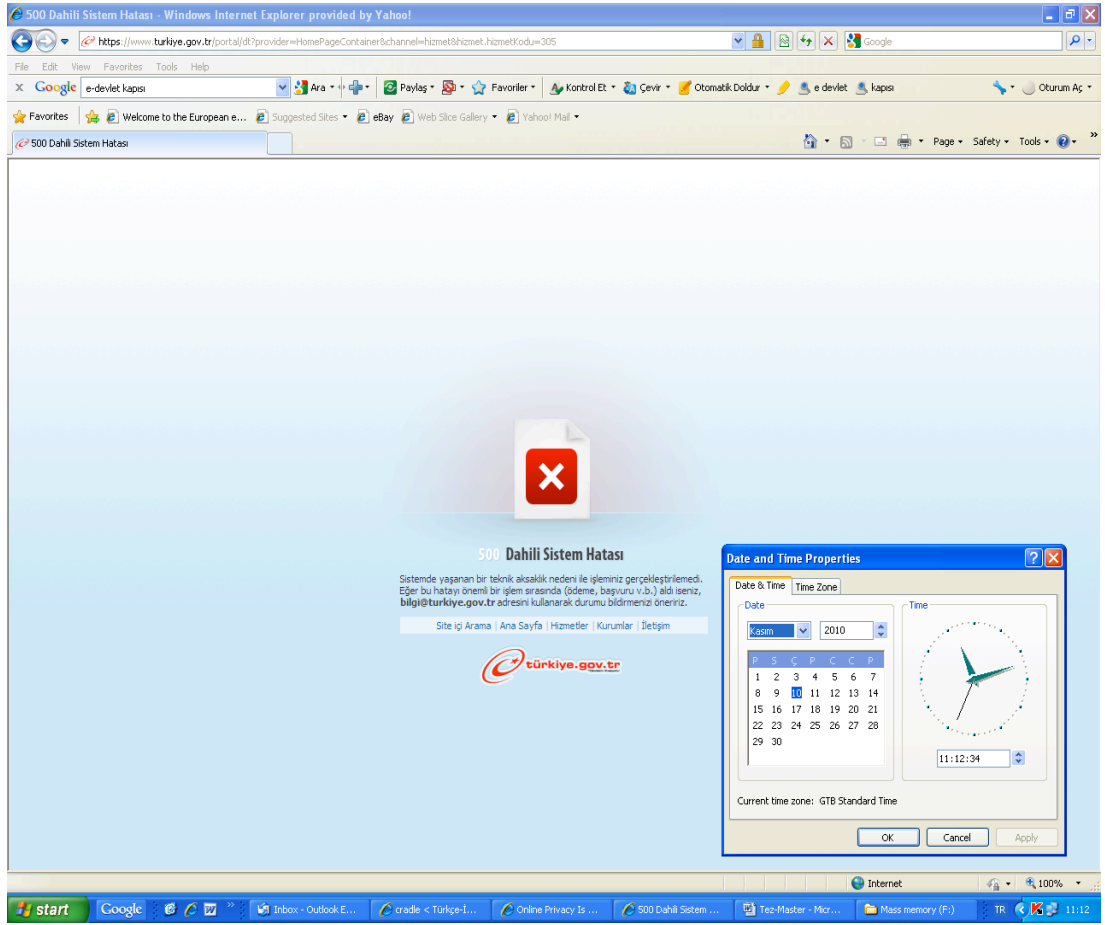


Figure 3.12 Appearance of Turkish E-Government gateway on November 3, 2010 at 11:12 AM

Second access attempt;

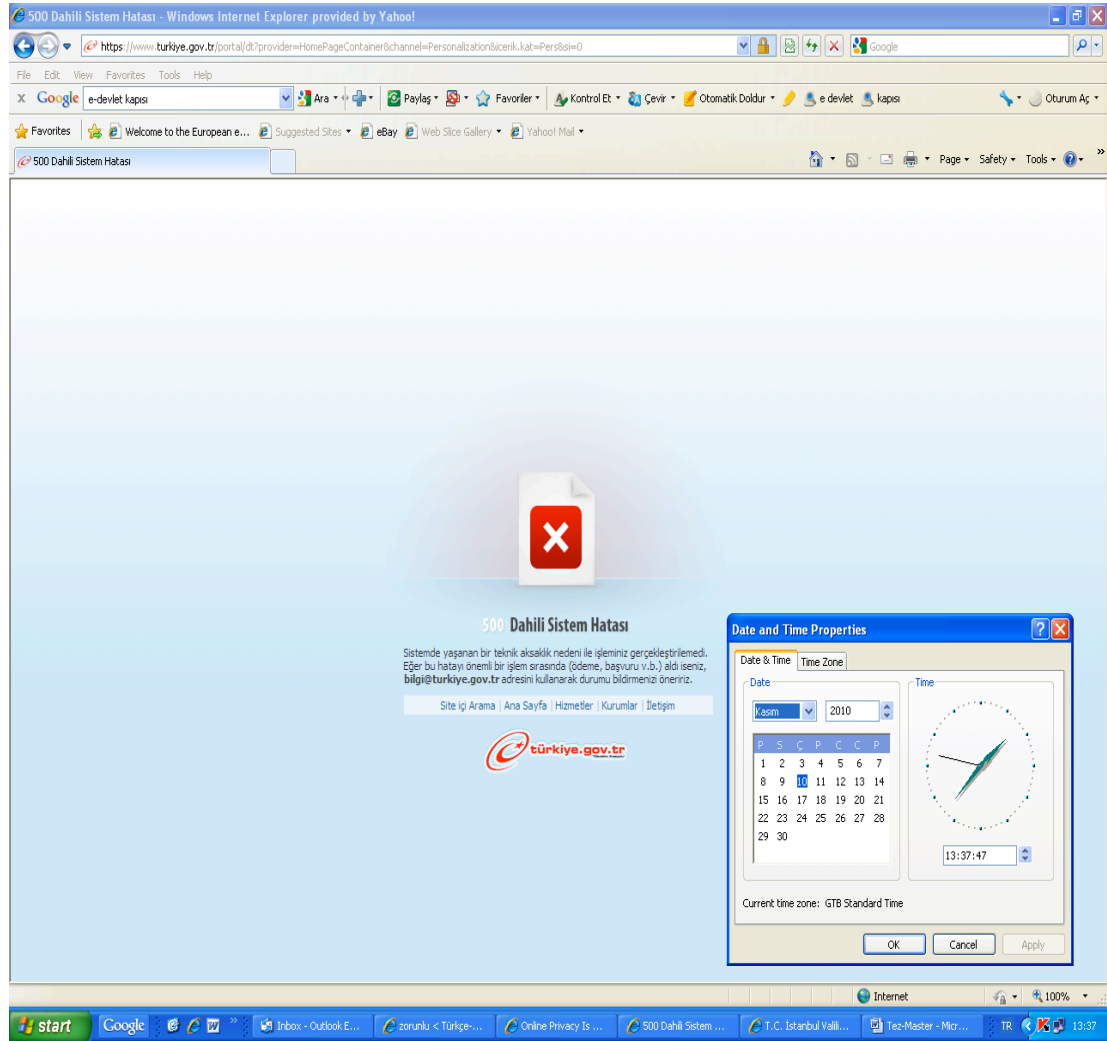


Figure 3.13 Appearance of Turkish E-Government gateway on November 3, 2010 at 13:37.

Third access attempt;

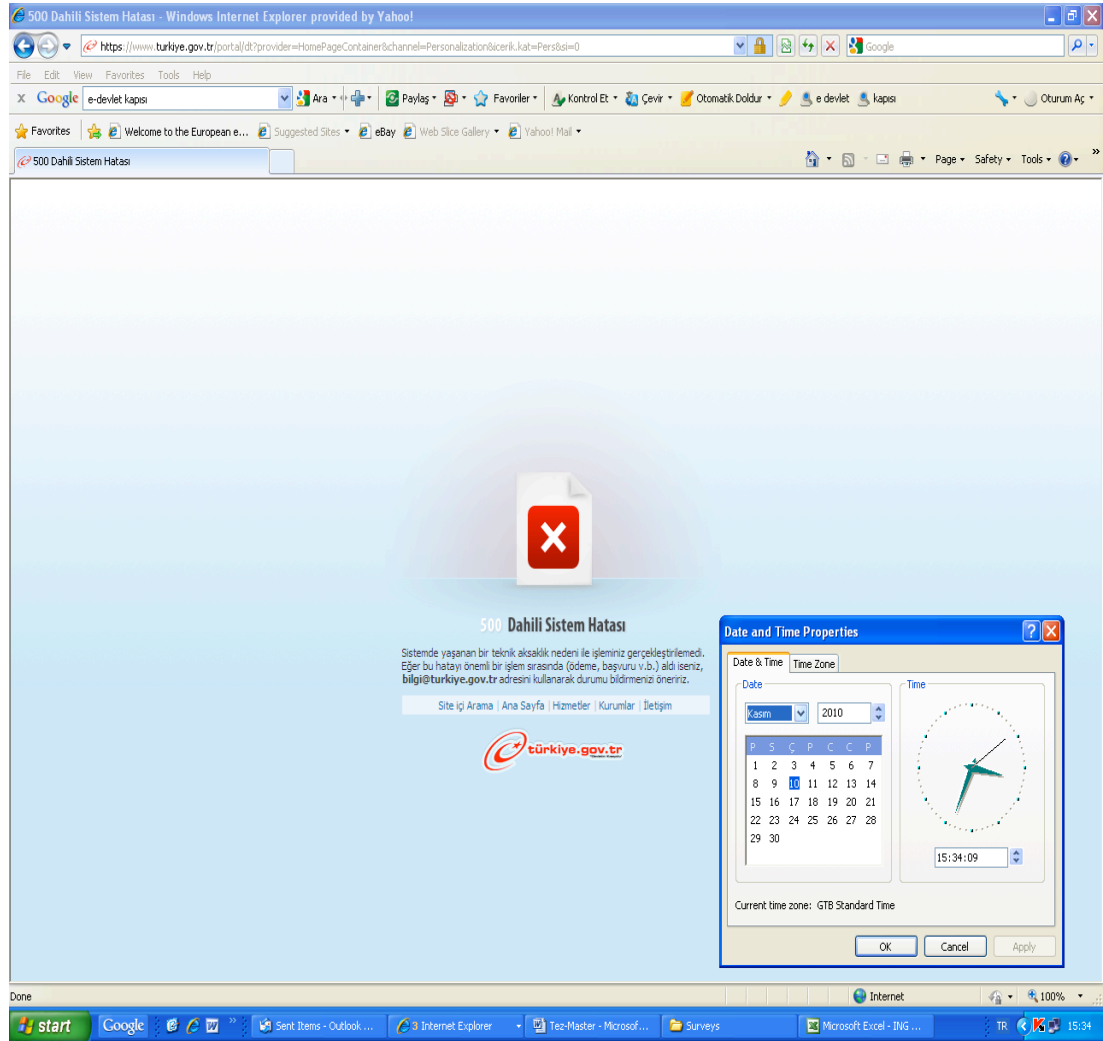


Figure 3.14 Appearance of Turkish E-Government gateway
on November 3, 2010 at 15:34

SGK service, where citizens are supposed to print out their Social Security Institution Service List, of E-Government gateway would not work on November 3, 2010 at 17:27 (Figure 3.15).

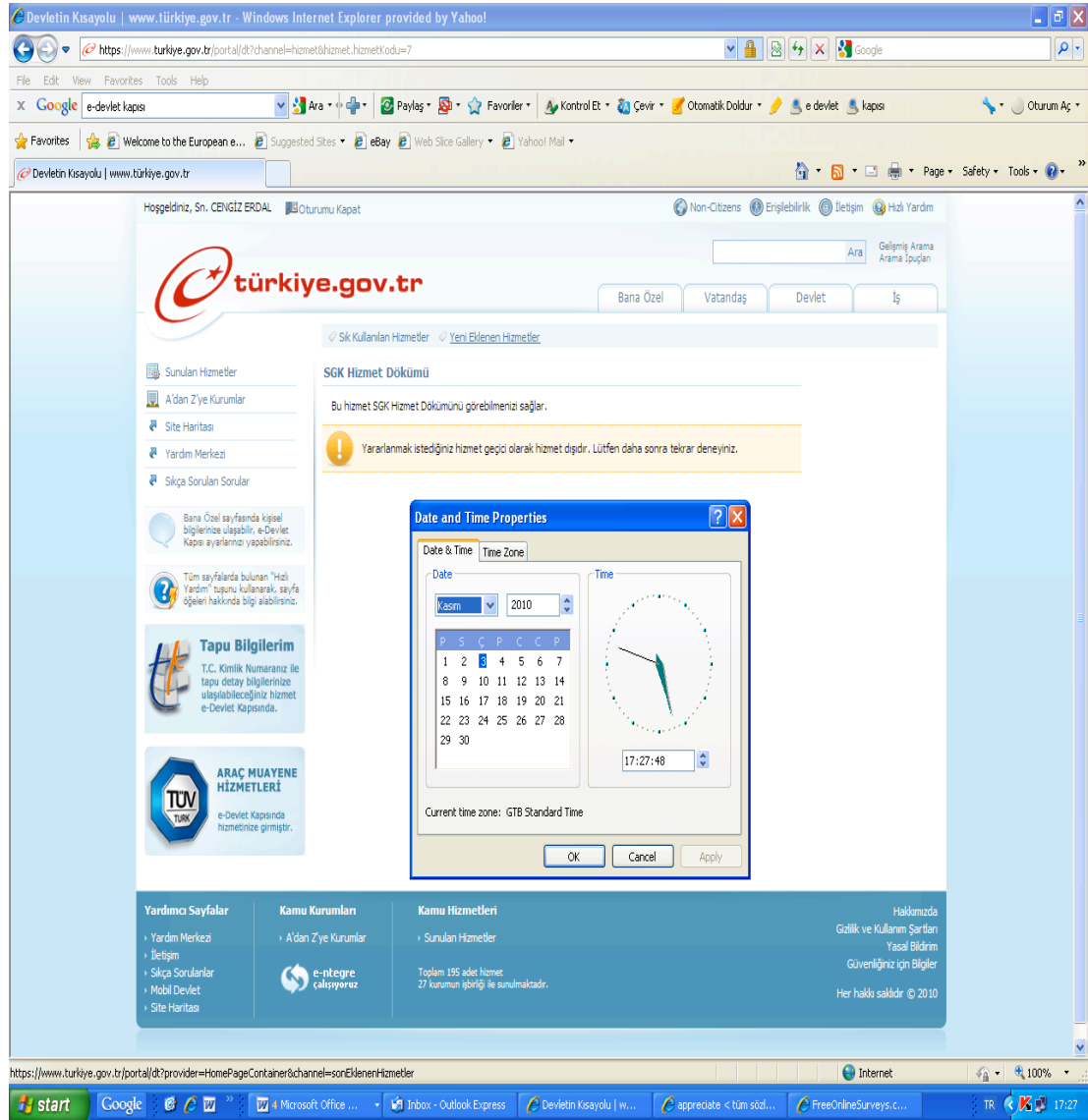


Figure 3.15 SGK Service web page of Turkish E-Government gateway on November 3, 2010 at 17:27.

Visitors section of English version of Turkish E-Government gateway had Turkish space of “Tapu Bilgilerim”, which means “Land Registry Information”, on the bottom of left hand side of the web page on November 3, 2010, which was not supposed to be there. State Planning Organization was informed about the incident during the management survey meeting of this study, which was done with them (Figure 3.16).

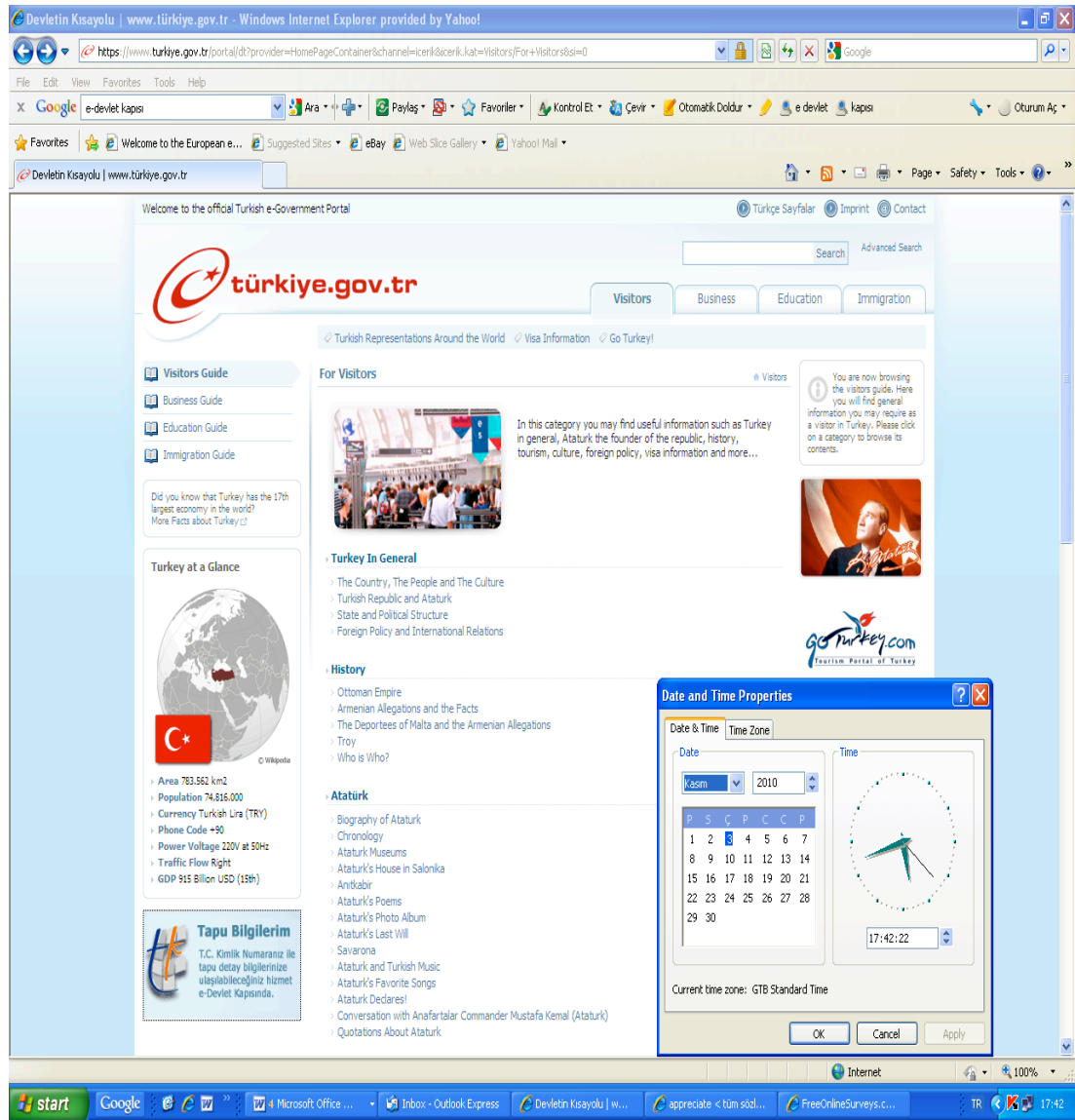


Figure 3.16 Visitors section of English version of Turkish E-Government gateway on November 3, 2010

As mentioned above, as of today although more than three months passed that State Planning Organization had been informed about visitors section of English version of Turkish E-Government gateway that had Turkish icon of “Tapu Bilgilerim”, which means “Land Registry Information”, on the bottom of left hand side of the web page on November 3, 2010. It was not supposed to be there and error does not seem to be corrected. Besides that icon, another Turkish icon of “Araç Muayene Hizmetleri”, which means “Car Inspection Services”, on the bottom of “Tapu Harçlarım” appeared on visitors web page on February 8, 2011 (Figure 3.17).



Figure 3.17 Visitors section of English version of Turkish E-Government gateway on February 8, 2011.

When the icon of “Tapu Bilgilerim” is clicked on English version of Turkish Government gateway some of English sections of the web page turn into Turkish and warning appeared in Turkish saying that “you have not entered the system yet” on November 3, 2010 at 17:43 (Figure 3.18).

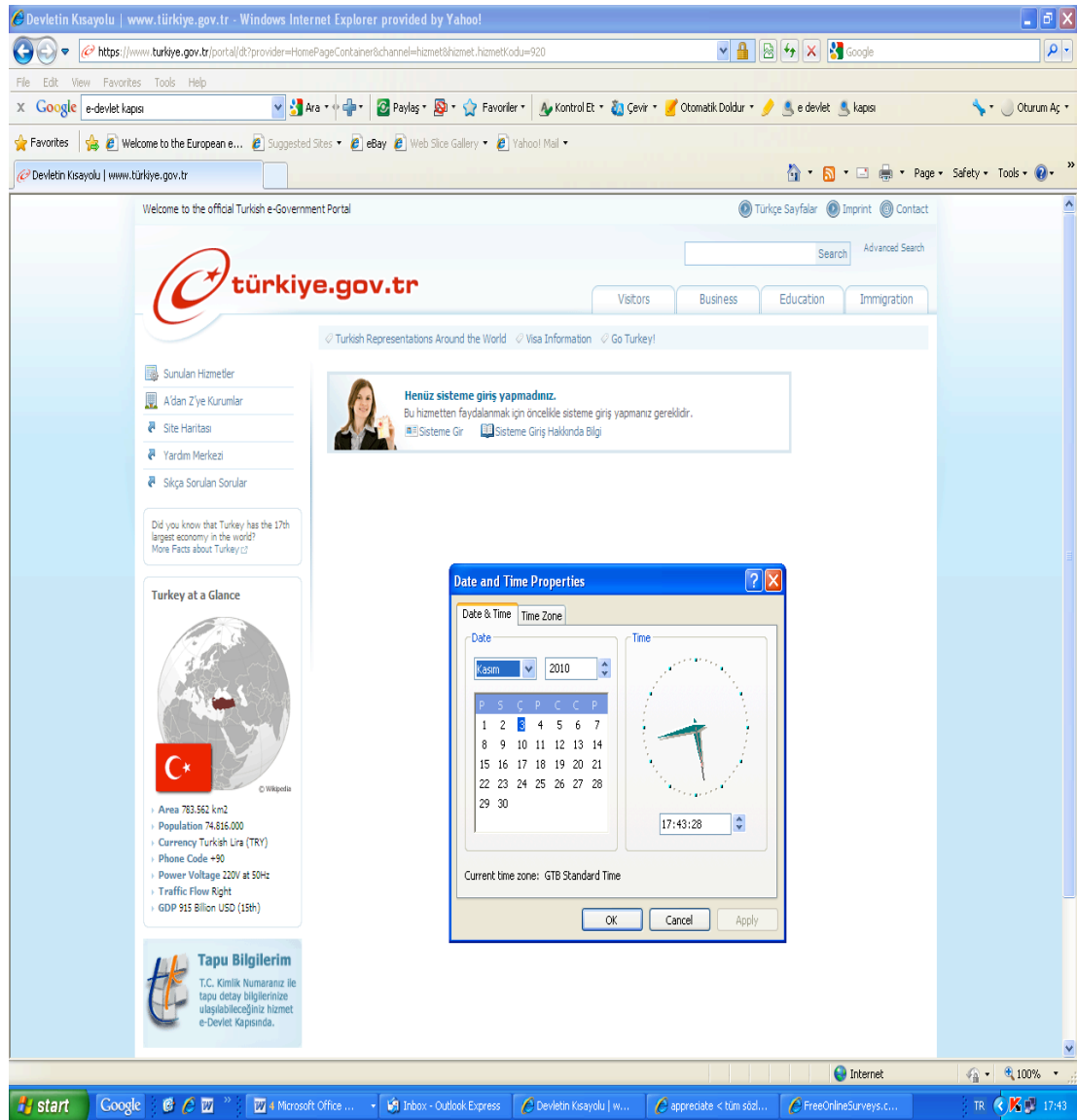


Figure 3.18 Clicking the icon of “Tapu Bilgilerim” on Turkish E-Government gateway on November 3, 2010 at 17:43.

Turkish E-Government System would not allow to inquire for “E.G.M. Sürücü Belgesi Sorgulama”, which means “Driving licence penalty score” on February 8, 2011 at 15:41 (Figure 3.19).

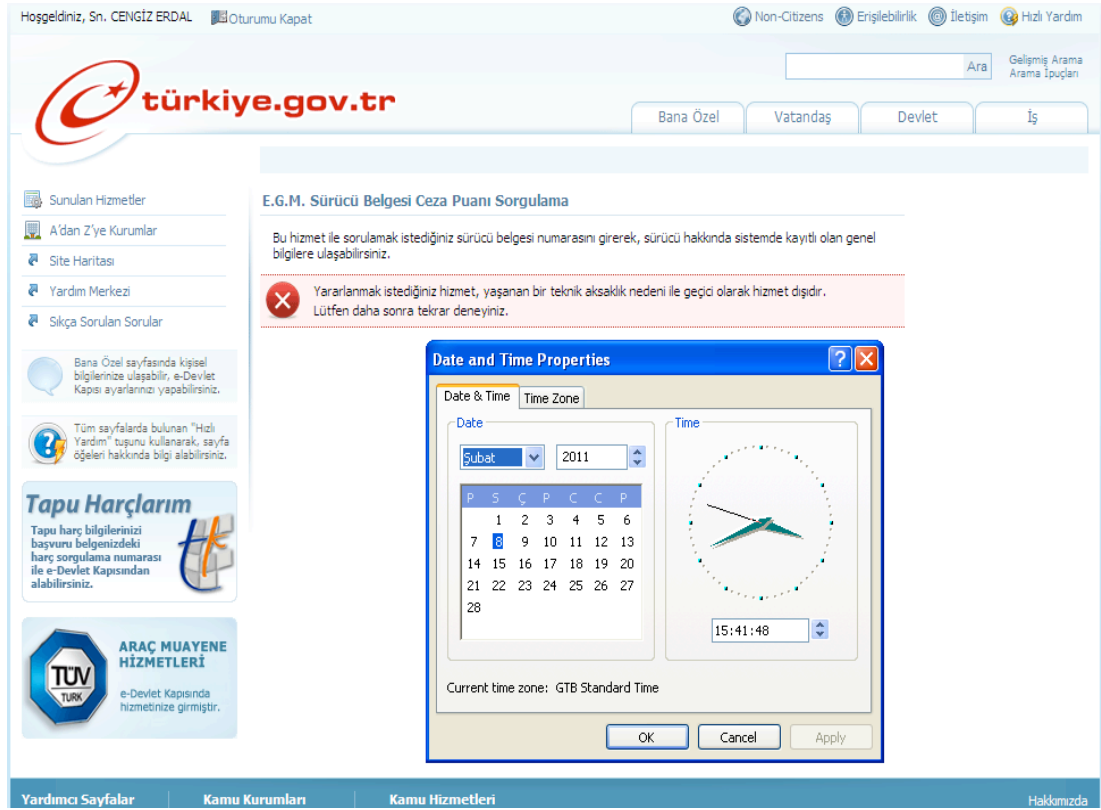


Figure 3.19 Clicking the icon of “E.G.M. Sürücü Belgesi Sorgulama”, of Turkish E-Government System’s web page on February 8, 2011 at 15:41.

Telecommunication infrastructure

Telecommunication infrastructure plays a key role in achieving an effective and inclusive E-Government System. Turkey was ranked as 68th in terms of telecommunication infrastructure by United Nations’ E-Government survey carried out around the world in 2010 (Table 3.13).

Table 3.13 United Nations' survey result for telecommunication infrastructure (UN,2010)

Rank	Country	Index value	Estimated internet users per 100 inhabitants	Main fixed telephone lines per 100 inhabitants	Mobile subscribers per 100 inhabitants	Personal computers per 100 inhabitants	Total fixed broadband per 100 inhabitants
56	Uruguay	0.3183	40.01	28.64	104.73	13.53	8.59
57	Qatar	0.3168	34.04	20.56	131.39	15.69	8.07
58	Romania	0.3093	23.99	23.58	114.54	19.32	11.75
59	Seychelles	0.3037	38.17	27.70	101.78	21.59	4.08
60	Maldives	0.2886	23.52	15.38	142.82	20.24	5.15
61	Jamaica	0.2820	56.88	11.69	100.58	6.71	3.61
62	Argentina	0.2812	28.11	24.15	116.61	9.04	7.99
63	Russian Federation	0.2765	21.14	31.14	132.61	13.33	2.82
64	Chile	0.2711	32.47	20.99	88.05	14.11	8.49
65	Brunei Darussalam	0.2703	48.82	19.91	90.66	8.92	2.91
66	Serbia	0.2695	23.99	31.35	97.76	18.31	4.59
67	Mauritius	0.2647	29.69	28.48	80.74	17.43	5.71
68	Turkey	0.2581	33.12	23.68	89.05	6.10	7.78
69	Palau	0.2546	26.97	36.71	52.65	33.58	0.48
70	Brazil	0.2538	33.83	21.43	78.47	16.12	5.26
71	Kuwait	0.2524	31.57	18.61	97.28	22.22	0.93
72	Bosnia and Herzegovina	0.2505	34.66	27.33	84.26	6.40	4.99
73	Ukraine	0.2487	22.51	28.65	121.09	4.55	3.48
74	Costa Rica	0.2424	32.31	31.81	41.75	23.10	3.90
75	Colombia	0.2421	38.03	15.15	91.90	7.92	4.23
76	Grenada	0.2408	22.29	27.60	57.97	15.66	9.79
77	Venezuela	0.2321	25.49	22.42	96.31	9.26	3.90
78	Trinidad and Tobago	0.2304	16.02	23.14	113.67	13.21	2.67
79	Viet Nam	0.2261	23.92	33.13	80.37	9.54	2.35
80	Panama	0.2202	22.91	14.59	111.94	4.56	4.63
81	Mexico	0.2161	21.43	18.92	69.37	14.10	7.01
82	Iran (Islamic Republic of)	0.2157	31.37	33.83	58.65	10.37	0.41
83	Oman	0.2092	16.84	9.84	115.58	16.88	1.15
84	Belarus	0.2081	28.89	37.76	71.57	0.80	0.12
85	Lebanon	0.1965	37.72	16.76	34.10	10.18	4.80
86	Tunisia	0.1942	27.53	12.18	84.27	7.62	2.24
87	Republic of Moldova	0.1933	19.09	29.44	66.60	11.43	1.29
88	El Salvador	0.1923	12.49	17.56	113.32	5.78	2.01
89	China	0.1913	22.28	27.51	47.41	5.61	6.23
90	Jordan	0.1806	24.46	8.46	86.60	7.20	2.09
91	Kazakhstan	0.1797	12.34	21.97	96.06		3.64
92	Peru	0.1789	24.72	9.98	72.66	10.06	2.52
93	Morocco	0.1769	32.59	9.46	72.19	3.52	1.53
94	Thailand	0.1746	20.03	10.49	92.01	6.68	1.36
95	Tuvalu	0.1717	40.63	13.20	18.28	8.60	3.56
96	Dominican Republic	0.1658	25.75	9.90	72.45	3.49	2.27

Legal infrastructure

Current laws do not sufficient to be adapted to cyberspace related crimes. To be able to prevent those crimes and induce more citizens to trust and use E-Government System current laws need to be renewed and developed to serve aforementioned crimes as well as new laws need to be constituted. Regarding legal infrastructure another important issue is to constitute a law for protection of personal information, which has not been prepared and legislated yet. Until it is ready and legislated Public institutions do not seem to believe in that their information which they share with E- government system will be secure. Having constituted that law substantial increase in usage of E-Government System can be noticed as ambiguity in transaction security, which is thought to be one of the main obstacles in

front of low usage, will be eliminated. Naralan states that as electronic transactions to gain general and legal validation a legal ground needs to be created. Also, current laws which regulate original signature and paper-based transactions need to be renewed embracing electronic transactions. (Naralan, 2008).

There are certain laws, which have been included in to Turkish laws regarding electronic transactions and E-Government System (Table 3.14).

Table 3.14 Electronic Transaction Issues Included in Turkish Law (Naralan, 2008:30).

E-signature	Date, law came into force: 23/07/2004
E-agreement	Date, regulation came into force: 14/6/2003
Law of electronic tax paying	Date, law came into force: 7/8/2003
Secrecy of records	Clause numbers of 135, 136 and 138 of Turkish Criminal Law numbered 5237 regulated data captured from electronic venue as crime.
Security of electronic transactions	Date, came into force: 23/7/2004. It was regulated with clause numbers 4 th . and 14 th . law of e-signature numbered 5070.
Intellectual property	Date, came into force: 5/12/1951. The law numbered 4630 changed this law dated 21/2/2001.
Right to acquire information	Date, law came into force: 24/4/2004.
Universal service	Date, law came into force: 25/6/2005.
Consumer protection	Date, law came into force: 23/2/1995. The law changed this law dated 6/3/2003.
Internet service providers	Date, law came into force: 4/5/2007 for regulation of publications published in internet venue and struggle against the crimes committed via those publications.

Internet access

One of the major obstacles that Turkey faces is that cost of internet access is relatively high in Turkey in terms of per capita income (Figure 3.20).

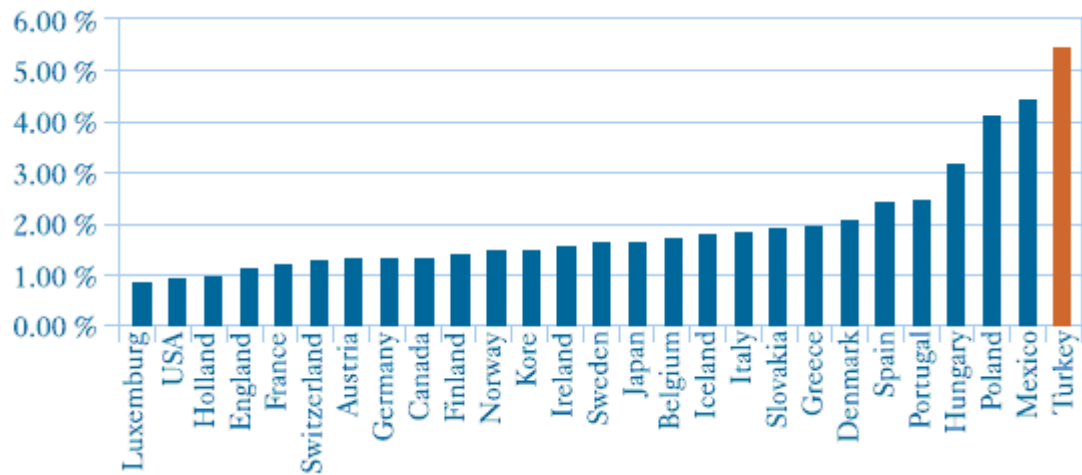


Figure 3.20 Ratio of broadband access cost to average per capita income (SPO, 2006).

Turkey's broadband internet connection speed is relatively low considering other countries (Figure 3.21).

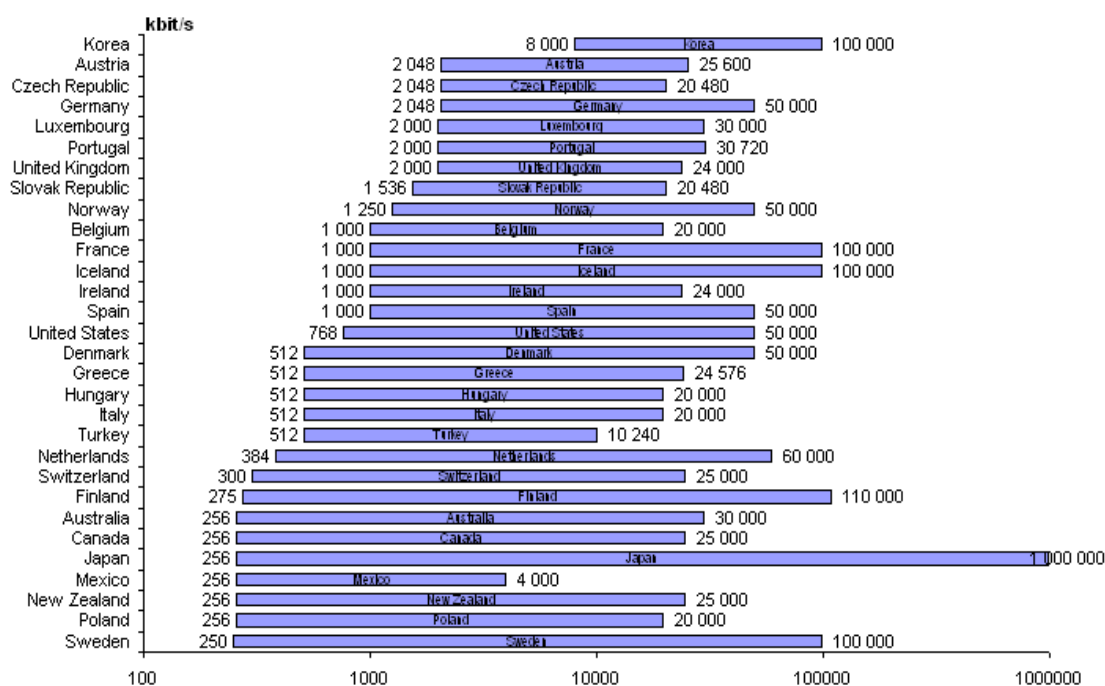


Figure 3.21 Countries' broadband connection speed ranges
(http://www.oecd.org/document/44/0,3746,en_2649_34225_43435308_1_1_1_1,00.html)

The range of broadband prices per Mbit/s is also relatively expensive in Turkey considering the broadband connection speeds (Figure 3.22).

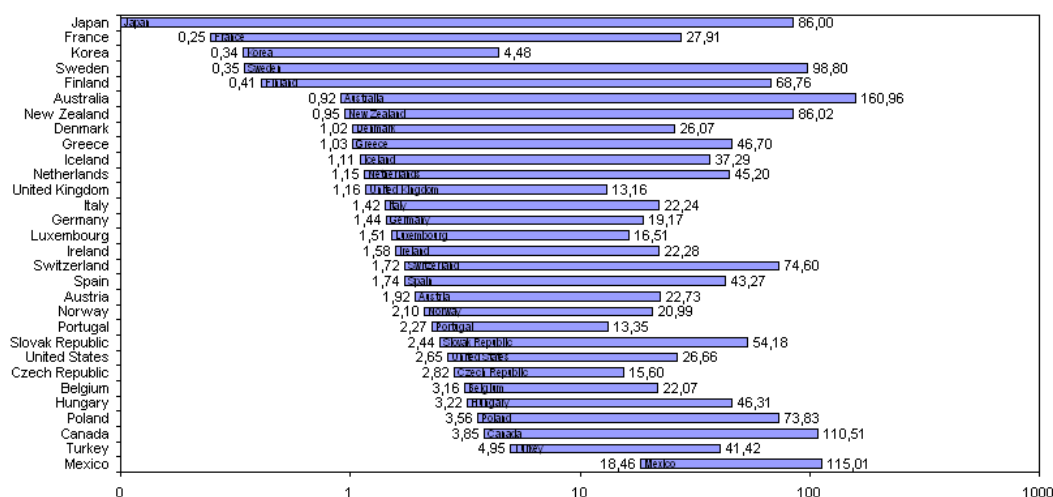


Figure 3.22 Range of broadband prices per Mbit/s, all platforms, logarithmic scale, October 2006, USD PPP
(http://www.oecd.org/document/44/0,3746,en_2649_34225_43435308_1_1_1_1,00.html)

Funds allocated to ICT

Considering many other countries Turkey allocates far less fund for ICT development and saturation in the country (Figure 3.23).

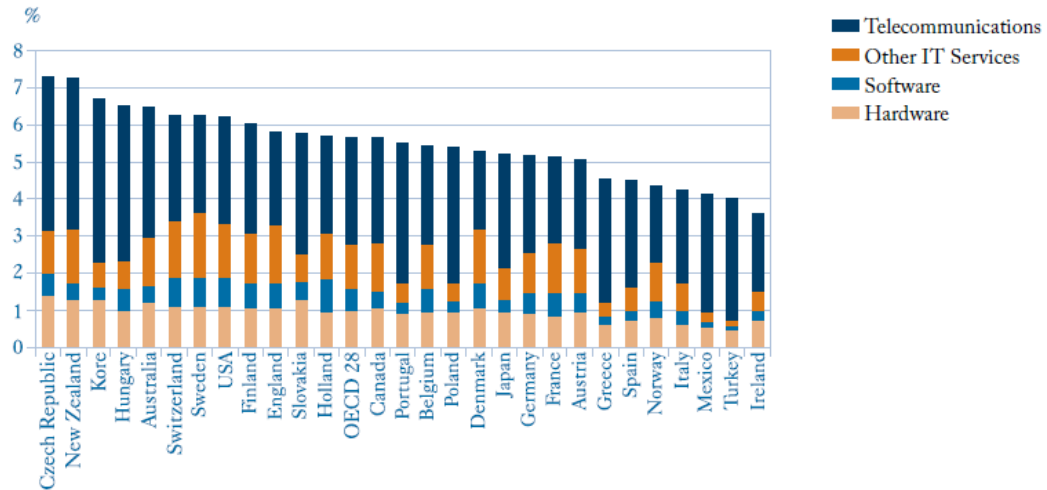


Figure 3.23 Share of ICT expenditures in the GDP (SPO, 2006).

ICT adaptation

According to a survey done in 2005, low ICT adaptation is another problem to be overcome among enterprises in Turkey (Figure 3.24).

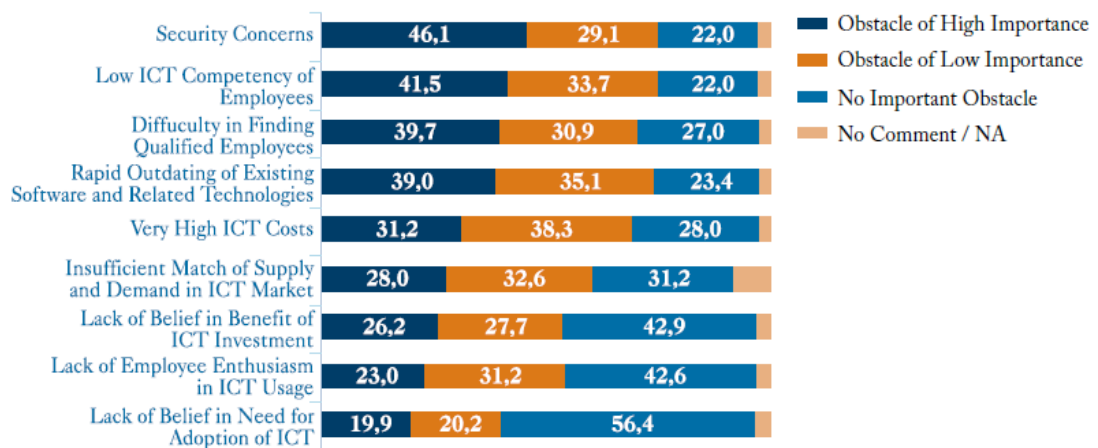


Figure 3.24 Obstacles to ICT adaptation among enterprises (SPO, 2006)

3.3.2. E-Government System implementation approach for Turkey

In this part of the study, an E-Government System implementation approach for Turkey is submitted. The approach presented here is not flawless. It is restricted with;

- Results of an online citizen survey, which has been answered by 401 participants,
- Face to face deep interviews with some high-ranking officers of E-Government System implementation of Turkey along with its back stage users,
- Reviewing of literature, subject related reports and articles published during the research on various Turkish newspapers.

3.3.2.1. Strategic structural components to be applied and improved

There are certain structural components that Turkey need to apply and improve in implementation process.

Management systems:

It'd be appropriate to start the approach from a strategic key component, which is transformation. It needs to be well understood that E-Government System implementation is a transformation period from lots of perspectives, in which many habits, traditional ways of doing business, procedures, principles and priorities need to be changed. Bureaucracy needs to be diminished. ICT should be adapted to all work processes, which also need to be reconstructed and renewed according to citizens' expectations, as it is another priorities of E-Government System is so called user-centricity. Consequently, traditional perspective of being agency oriented should be shifted to being user-oriented for governments. It might be hard to get used to and deal with this change, as citizens will play an active role in governance rather than a passive role. This change requires the government putting participative management into practice in order to get citizens involved in governance. Advantage of interactive environments, social media tools and mobile devices can be used in achieving this goal as many countries have been practicing. Citizens' recommendations on various subjects such as, expenditures, cost-cutting areas in services provided and investments can be asked through those tools. Having done that many users will be inclined to use E-Government System more.

It is essential for an effective change that all beneficiaries need to be participated and believed in it. Less implementation period takes time, more likely it turns out to be successful as participants would likely lose their believes in it otherwise. It also enables the government to be able to utilize available resources effectively. So, implementation processes need to be well organized, perfectly managed and constantly possessed. Current management structure of Turkey comprises three implementation committees: Executive committee, responsible from general coordination and organization, consultancy committee contains representatives of private sector, NGOs, Turkish Industrialists and Businessmen Association and similar institutions and change leaders committee encompasses public authorities, strategy chairpersons and IT managers of public institutions. Although operational flow seems to be working, some serious changes need to be done in management structure of implementation process. In terms of making all beneficiaries participate in implementation processes, the most important missing part is citizens who are final users of the system. It should always be remembered that the main goal of E-Government System is to make its services user-oriented through simplifying the transactions and service processes according to users' needs. Consequently, achieving the participation of final users is crucial as to be able to gain and pay attention to their thoughts, expectations and priorities that lead to high rates of uptake, which is thought to be one of the most important performance indicators of the system. Existence of interactive communication environment makes it easy to put it into practice effectively. An interactive environment can be created or well-known social media tools can be used to achieve that. Same method can also be used for back stage users of the system to consider their expectations and needs also.

Management Structure:

Regarding management structure, as E-Government System is a multidimensional concept subsuming complex components, it is vital for implementation processes to be steered seamlessly as to achieve the most effective use of available resources in hand. Therefore, a separate government department or office, which will be responsible only from information and E-Government System implementation, should be established to manage the implementation processes professionally. Some countries have allocated even additional responsibilities to that office such as social and administrative works. A CIO should be appointed to lead the information office. Executive committee is expected to work with and to support CIO and information office in executing decisions taken during

board meetings. Members of implementation committees have obviously other responsibilities to deal with apart from E-Government implementation, which prevent them from specifically focusing on it. Therefore, Executive Committee has not met for about 18 months. So, they do not seem to be concentrating on transformation and implementation process as much as required. Optimum and effective use of limited resources require to be focused on implementation as to achieve the goal of transformation in time. Thus, Constant and periodic meetings of those committees also need to be carried out with out any interruption. Besides those committees need to make sure that all decisions taken during the meetings are conveyed well from top to bottom and all back stage users' problems are reached to the committees as to be discussed and solved during those meetings. In order to make sure that aforementioned information flow works impeccably, an effective communication network needs to be established.

In addition to those adjustments, some additional boards responsible from infrastructure, training needs, security, performance evaluation, communication and publicity need to be constituted. High-ranking public and private sector representatives need to be participated in those boards. All members of the boards need to have comprehensive knowledge of management systems such as change management, strategic management, project management and evaluation management in order to execute ideal implementation processes.

E-Government System implementation requires all ICT departments of government agencies to be connected to information office as to make them work in coordination. Having done that successful E-Government applications and their performances can be easily chosen and evaluated enabling those applications to be applied to other agencies preventing them from investing on different applications along with maximizing effectiveness of available resources to gain the same results.

Resource optimization, such as minimizing number of staff working, transaction costs and equipment used is one of the advantages of E-Government System. So, performance evaluation of staff working in implementation processes, feasibility works of investments, measuring return on ICT investments along with others need to be done periodically as to ensure optimum use of resources and to take necessary actions in time if needed. All E-Government expenditures of various affiliated agencies should be controlled and managed

professionally to prevent different ICT investments for the same solution. Besides, effective agency applications of ICT need to be observed as to adapt those to others owing to prevent wasting time and money. Executive committee needs to do necessary arrangements to put those activities into action. It should be considered that all or some of those controls can be outsourced to a professional institution.

Inducing internet usage:

Some efforts like inducing internet cafes to be opened, opening computer classes in the schools and training soldiers on ICT during their services have been done to induce internet usage along with creating ICT competent society, but more activities need to be put into practice especially as to eliminate digital divide and to increase inclusion. In achieving those goals, all citizens need to be provided with the equal chances for having access to internet, benefiting from ICT and E-Government services. What more can be done is that internet connection fees are still expensive in Turkey considering the average house hold income. Those prices are to be decreased and taxes, which are added on them, can also be lessened or completely repealed. Besides, some innovative solutions are to be put into practice to make disadvantaged, disabled and old citizens who do not use internet and mobile devices benefit the system and its services effectively. As UN's report states that even simple solutions to various problems can result in meaningful regional efficiency achievements and raised public satisfaction (UN, 2010).

More internet access points, where citizens benefit from internet free, can be opened along with providing citizens with free computer and internet services. Free ICT trainings can be organized realizing train the trainer courses. So, more citizens get trained, more they become trainer then they train others. On the other hand, increase in communication infrastructure should be targeted as to become a leading country on ICT. Subsidizing private sector on ICT and R&D, new investments on those fields are stimulated.

System accessibility:

Sustainability of system access and its speed are particularly important for E-Government System as to increase number of users and to gain and maintain their trust towards the system. There are two important specifications of an effective software for E-Government System: First, software should be developed as an open system. This characteristic enables it to work together with other software applications. Second, software should have same

functionality with where it will be applied. For instance, a software developed for e-business may not be appropriate to E-Government System (TBD, 2002). Having an effective technical infrastructure would ensure Turkish Government to provide constant access to the services.

Publicity activities:

Research results shows that more people know about E-Government System, more they find it secure. In other words, publicity activities and security of the system have a positive correlation between them. So, system should be introduced more to the public as to build security perception for the system as well as for the personal information. A publicity activity plan that has been prepared by Rogers & Peppers Consulting Group needs to be put into practice adjusting it with the current expectations.

Apparently, many users do not know what E-Government Gateway is. Being aware of E-Government Gateway is related to publicity activities and it makes users realize that E-Government System is beneficial. Thus, its introduction to public is also important.

Standardization:

According to the research results of this study, although some improvements have been made, standardization of software, services, forms and work processes used by government agencies have not been completed yet. It needs to be realized in the near future as to be able to realize interoperability of the system, which also requires exchanging and sharing information among government agencies. It seems to be quite a challenge for Turkey to overcome as both not sharing of information and working in cooperation have become a tradition among government agencies. They do not seem to be eager to waive the privilege they think they have possessing the information. Having achieved interoperability, each government agency will be able to utilize all information stored in the system for all kinds of services, which are provided by other affiliated agencies. There is no doubt that it would help the government to increase users' satisfaction.

Interoperability:

It is essential for government agencies to share the information they have between each other to achieve interoperability. Although they seem to be participating in using the system, they do not seem to be doing what is necessary to realize interoperability through

which user-centricity and then their satisfaction is gained accordingly. This goal can be reached only through successful change management activities and standardization of forms, files, applications used by all government agencies.

Participation:

Active and constant e-participation of government agencies and high number of users should to be achieved. There are certain hurdles to be overcome to succeed it, such as sharing of information among government agencies and also with citizens, creating need for E-Government System, being open to citizens, making them participate in constituting services and decision making processes. Participation of all beneficiaries is essential to achieve an ideal E-Government System.

Inclusion:

As male users find E-Government System more beneficial and as they are more technology competent according to the survey results, females should be more focused on as to increase their technology competencies and their assessment of the system accordingly. Students should also be paid attention as they are the ones who do not find it necessary to create needs for E-Government System and use the system and its services the least along with unemployed users.

In realizing inclusion effectively, some innovative applications are to be developed for disabled, disadvantaged and old people to make the system embrace those people.

Applying VCD principles on websites:

VCD principles should be focused on creating websites of E-Government System as to be able to attract more users in achieving user-centricity in serving the citizens. It will also help to raise uptake rates of those websites.

User-centricity:

When the same information is reached from different web pages of E-Government System, users believe that E-Government System is user-centric as well as it is secure. More and more users are attracted to use and experience the system and its services are thought to be more beneficial. It will also make citizens feel that they communicate better with the

Government thinking that infrastructure of E-Government System's implementation process is good.

It is thought to be essential for E-Government System to do different transactions with the same data on various web pages. It makes users to think that system is beneficial, user-oriented and secure. So, having realized that users are induced to utilize the system more believing that the system is worthwhile.

Updating all information and forms on E-Government System makes users experience the system more. Having realized that citizens believe that they communicate well with the Government and infrastructure of E-Government System's implementation process is fine.

Asking users for their opinion in forming E-Government services makes them find E-Government System as user-centric and secure. Asking for their opinion is also perceived as a publicity activity among users.

More internet access should be provided to users as to establish a user-centric and a beneficial system achieving the highest rate for inclusion along with minimizing digital divide. It is obvious that it will make more users to utilize the system being able to communicate with the Government more. According to TSI's research done in 2010, 48,9% of the people who constitute labor power use the internet, while only 26,9% of those who are not included in labor power use it. Huge difference between two groups is caused by economic difficulties, as those people's priority is probably to live on. Besides, considering only 5% of disabled people among those who are not included in labor force utilize the internet, Turkey should realize better effectuations to achieve the goal of inclusion.

3.3.2.2. Specific areas to be improved

There are also some specific areas that Turkey need to improve

ICT and how to use training for users:

Education background plays an important role in increasing usage of the system and finding it beneficial. Users who have less educational backgrounds find E-Government

System the least beneficial. So, those people should be inclined to use the system more through certain trainings and providing information they might be interested in.

More users get older more they feel like they are discriminated from the society in terms of technological dexterity. They should be provided with constant ICT related trainings as to make them keep utilizing the system.

Giving training to the users on E-Government System makes them believe the system is user-centric and then more they incline experiencing E-Government services. Consequently, as more of the citizens will be able to use the system, more they will feel that they communicate better with the Government.

Using social media tools in communication:

As new social media tools like “Facebook”, “Twitter” and mobile devices are found secure and the increase communication opportunities. Those ways of providing service should be considered seriously. Consequently, establishing an interactive communication channel will help the Government to achieve a seamless communication system in reaching citizens, realizing a successful E-Government System initiative. In order to succeed that approach Turkish E-Government Executive Committee needs to get at least an interactive social media environment set up for the users on E-Government portal as to share their perspectives of current services, applications and information provided through Turkish E-Government Gateway. Having done that a kind of public sphere would be created providing E-Government Executive Committee with further information flow apart from suggestion/complaint icons currently available on the web pages of E-Government portal as to make necessary adjustments and renewals on the system to submit a flawless citizen-based services and information to its citizens considering their current needs and expectations.

Coordination of ICT departments:

Coordination of ICT departments, which Turkey does not seem to have in its implementation process, is especially important for saving resources like time and money along with realizing effective and correct investments. It also helps to realize standardization and interoperability. Having done that, good and successful applications

can be figured out easily as to adapt those to other agencies, which help to realize optimum use of resources in achieving an effective E-Government System.

Mobile devices adaptable applications and services:

As use of mobile devices and mobile phone subscriptions have boomed (Figure 3.25), applications adaptable to mobile phones and mobile devices seem to be the future of E-Government. Advent of mobile internet and broadband internet connection that enables substantial amount of information to be transferred in seconds, are the most important developments caused rapid spreading of mobile devices. Consequently, Turkey should emphasize spreading of broadband internet as the statistics show that penetration rate of broadband is relatively slow in Turkey considering other countries (Figure 3.26).

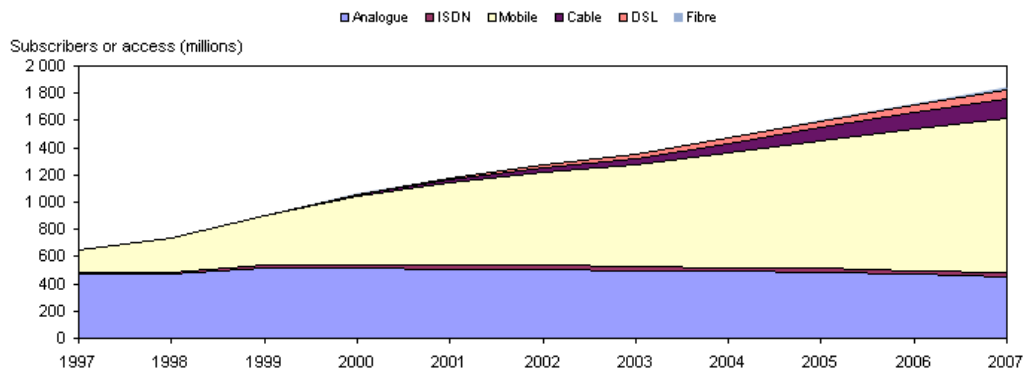


Figure 3.25 Internet access growth in OECD countries
(http://www.oecd.org/document/44/0,3746,en_2649_34225_43435308_1_1_1_1,00.html)

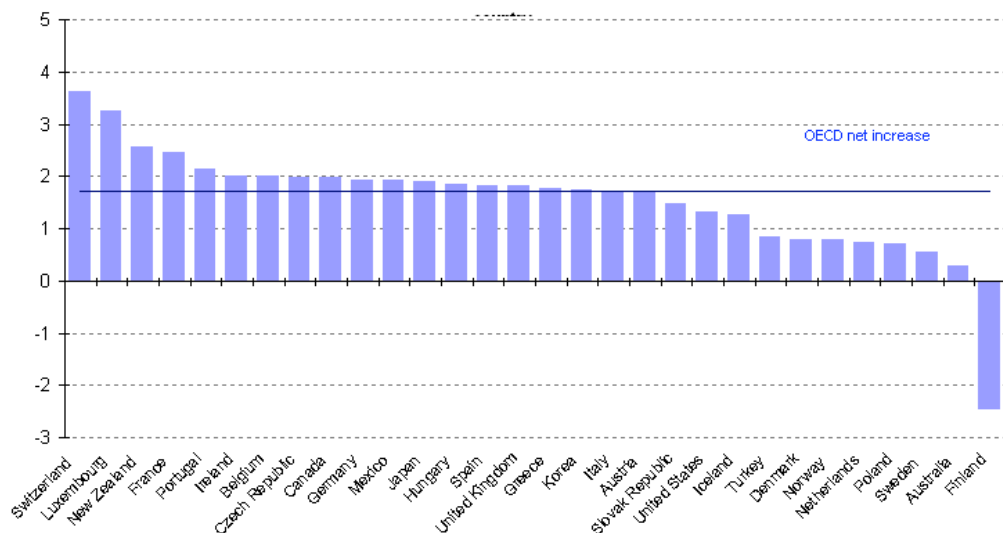


Figure 3.26 OECD fixed broadband penetration, per 100 inhabitants, net increase, June (2009-2010)
(http://www.oecd.org/document/44/0,3746,en_2649_34225_43435308_1_1_1_1,00.html)

Developments indicate that mobile devices have been becoming the most favorite tools of ICT. So, opportunity of spreading of mobile devices should be taken to attract more users to E-Government System. Some European countries and US Government has already started to use mobile applications for certain intentions, such as asking for citizens' opinion and requiring support on certain subjects, which effect their future. Turkish Government should also consider and not to be late emphasizing those applications as to be able to catch the latest trend in governance. Being user-centric in serving the citizens requires adapting those services and applications into E-Government System in realization of a more democratic and pluralist environment.

In conclusion, some actions need to be taken owing to increase end-users' satisfaction of E-Government System paying attention to their needs and expectations along with making them actively participate in governance. Having done that the system will be more user-oriented and user participation in decision-making process will be ensured, achieving the goal of an ideal and an effective system. More Turkish Government induces users to experience the system, more they will find the system beneficial. So, publicity activities and creating need for E-Government System are essential along with providing citizens with how to use trainings to realize it. Having done that more and more citizens will have the opportunity to utilize the system. Publicity activities also increase the perception of users' system security along with infrastructure success of E-Government System's implementation process. As to increase users' perception of E-Government System's benefits, technology competencies of the users should also be raised (Figure 3.27).

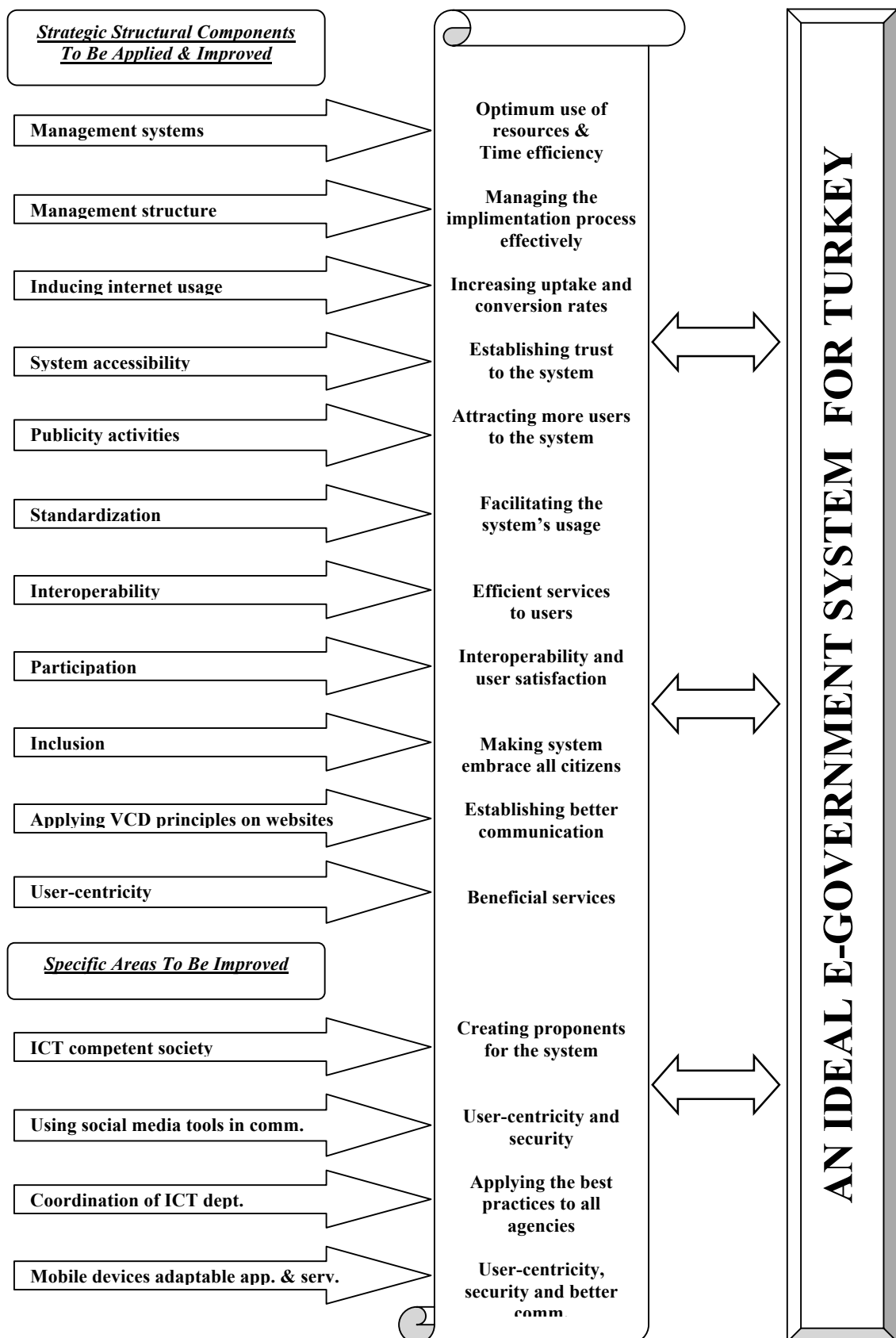


Figure 3.27 Flow chart of an E-Government System approach for Turkey.

4. RESEARCH ON E-GOVERNMENT SYSTEM IN TURKEY

The research has been conducted as to reveal the problems encountered during implementation process of E-Government System of Turkey along with whether the system is being implemented according to users' expectations.

4.1. Research Methodology

Some randomly chosen high-ranking Turkish public officials, who are responsible from E-Government implementation in Turkey, and some back stage users of E-Government System, were applied deep interviews in November 2010 through some open-ended questions during 60 to 75 minutes meetings. Those meetings have been recorded to a voice recorder with interviewers consent. In some institutions more than one person attended to the interviews to answer the questions. During the face to face deep interviews, officials have been set free to interpret on the subjects of the open-ended questions owing to create a friendly environment as to be able to get further information about the subjects.

The reason why deep interview model has been chosen as the methodology of the interviews is to learn thoughts aspects and perspectives of executives and officials of public institutions interviewed about E-Government System through their interpretations. Main subjects of the interviews are as below;

- E-Government implementation team
- Change Management
- Internet usage
- Creating technology competent society
- Security of E-Government System and citizens
- User friendliness of E-Government System
- Standardization of the services and the forms
- Interoperability and E-Government portal
- Accessibility
- Inclusion
- Publicity activities

- Participation
- CRM – Renewal and improvement of the system
- Performance Management

Also a survey were conducted to 401 Turkish Citizens over the internet during December 2010. Population of the survey is all Turkish Citizens and sampling is internet users. A pilot application has been done regarding the survey among 30 people to see if any correction is needed for questions. Having done that some corrections have been done in the survey. Then, it has been sent to citizens over the internet.

As to gain the subject related information during preparation of interview and survey questions some researches have been made at the libraries among related literature. Also formal reports and academic studies prepared by national and international institutions and academies about ICT and E-Government studies have been examined along with articles published in Turkish newspapers about Turkish E-Government System to observe current E-Government related problems, which final users of the system face, from the perspective of Turkish media.

The reason why internet was chosen for survey to be put into practice is to be able reach as many different users from different backgrounds, education level and age groups as possible along with being able to evaluate how successful the internet access among people have been succeeded depending on their age, education and regional differences. Answers given to the surveys have been put through the SPSS Program and results gained from it have been deciphered.

Main subjects of the survey are as below;

- User-centricity of E-Government system
- Benefits of E-Government system
- User experiences of E-Government system
- Communicating with the government through E-Government system
- Creating need for E-Government system
- Security of E-Government system
- Developing R&D & ICT in Turkey

- Infrastructure of E-Government system's implementation process
- Technological competencies of the users
- Publicity activities for E-Government system

4.1.1. Aim of the research

The aims of this study are to find out the difficulties faced and current situation of E-Government implementation process in Turkey from the perspectives of public officials and Turkish Citizens along with submitting an implementation approach to Turkey. Besides, constituting a standard roadmap for E-Government System implementations and related transformations, which can be adapted to any country. In order to achieve those goals, some randomly chosen managers and executives of public institutions have been deeply interviewed as to figure out the predicaments, impediments and the restrictions that those high-ranking public administrators face during E-Government implementation process and also to see if the implementation process has been managed according to its strategies. Then, a survey has been applied to some randomly chosen people as to be able to reveal Turkish Citizens' perspective for E-Government services and to see if there is any gap between citizens' expectations and government authorities' actions regarding implementation and operating the system. Moreover, subject related literature and articles published in various Turkish newspapers have been reviewed. Consequently, in this thesis, strategic structural components of E-Government System implementation are defined and then an E-Government implementation approach for Turkey is submitted.

4.1.2. Research question

What are the impediments in Turkey's E-Government System implementation process in terms of Turkish Government's officials and Turkish citizens' expectations?

4.1.2.1. Research hypotheses

As E-Government System is supposed to comprise user-centric services, it is vital to make end-users participate in shaping those services. It is also important to introduce those

services to its users as to increase uptake and conversion rates. Raising technological dexterity of citizens is also support that.

Updating information on web pages of the system constantly and reaching the private information from various web pages being able to do different transactions with it are user-centric applications that attract more users to utilize E-Government System.

Main hypotheses of the research are as below:

- There is a significant difference between the various answers given to the question of “I have been trained on E-Government System” in terms of answers given to the question of “User experiences of E-Government System”.
- There is a significant difference between the various answers given to the question of “I know what E-Government gateway is” in terms of answers given to the question of “Benefits of E-Government System”.
- There is a significant difference between the various answers given to the question of “I’ve been asked for my opinion constituting E-Government services” in terms of answers given to the question of “Communicating with the Government through E-Government System”.
- There is a significant difference between the various answers given to the question of “I’d also prefer to reach E-Government services through social media tools like “Facebook” and “Twitter” in terms of answers given to the question of “Communicating with the Government through E-Government System”.
- There is a significant difference between the various answers given to the question of “I’d also prefer to have all E-Government services through mobile devices” in terms of answers given to the question of “Communicating with the Government through E-Government System”.
- H1: There is a significant difference between the various answers given to the question of “When I put any personal information on a web page of E-Government System I can do different transactions with it on any other web page of the system” in terms of answers given to the question of “User experiences of E-Government System”.

4.1.3. Research restrictions

Within the research, some number of face to face deep interviews were realized in November 2010 with some back stage users and some randomly chosen low and high-ranking officers of Turkish E-Government System implementation occupied with various jobs. During the interviews, some open-ended questions have been asked to low and high-ranking officials of Turkish Public Institutions. A survey has been sent to randomly chosen people over the internet during December 2010, which has been answered by 401 participants. Various Turkish newspapers have been reviewed to analyze the reflections of the problems that Turkish citizens face on the media.

Regarding the interviews many government agencies have helped the study a lot allocating their valuable times. The only obstacle with the interviews was not being able to interview any official from Institution of TÜRKSAT. Although countless attempts have been done to set an interview, they would not seem to be interested in returning the calls.

So, research is restricted with face to face interviews with some government agencies' officers and back stage users and a survey answered by 401 Turkish citizens. The reason why survey has only been conducted among internet users is because Turkish E-Government System has not got any service to offer to those who do not use internet. Some literature research has also been done along with reviewing subject related reports and articles published in various Turkish newspapers regarding Turkish E-Government as to be able to prepare survey and interview questions.

4.2. Survey Findings

Research findings, which was gained through SPSS Program, encompass reliability, factor analysis, rotated component matrix, frequency tables, correlations, Mann-Whitney Tests between two groups and Kruskal-Wallis Tests between two groups.

4.2.1. Reliability of survey

Reliability statistic of the research is 0,902 (Table 4.1).

Table 4.1 Reliability statistics.

Reliability Statistics	
Cronbach's Alpha	N of Items
,902	51

4.2.2. Factor analysis of survey

Kaiser-Meyer-Olkin Measure of Sampling Adequacy for the research is 0,872 and significance value is 0,000 (Table 4.2).

Table 4.2 Factor analysis of survey

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		,872
Bartlett's Test of Sphericity	Approx. Chi-Square	8655,666
	df	1275
	Sig.	,000

4.2.3. Rotated component matrix of survey

48 questions of the survey have been categorized to 10 groups listed below (Table 4.3-Table 4.12).

Table 4.3 User-centricity of E-Government System

User-centricity of E-Government System	All information I may need placed where it should be on the web pages of E-Government System.	,789
	It is easy for me to reach the information about how I reach the services on E-Government System.	,779
	Information on help menus of E-Government System's web pages is easy to understand.	,767
	In order to obtain the service I want it is clearly explained what to do and how to do it on the web pages of E-Government System.	,764
	I find what information or form I need on E-Government System easily.	,747
	All information and forms on E-Government System are standardized.	,653
	There are all kinds of forms and information I my need on web pages of E-Government services.	,627
	It is easy to understand which transactions cause what sort of important changes on the information stored in E-Government System.	,617
	Noticing important information on the web pages of E-Government System easier than less important information.	,575
	Obtaining of information and services and filling out the forms (tax statement, information request) of E-Government System have been facilitated comparing the same services gained from government offices.	,333

Table 4.4 Benefits of E-Government System

Benefits of E-Government System	E-Government services increase government's transparency and accountability.	,785
	E-Government System diminishes corruptions.	,759
	E-Government System minimizes favoritism and whopper.	,729
	E-Government System increases government's productivity and efficiency.	,697
	E-Government System enables government to use its resources more effectively.	,690
	Widespread usage of E-Government System increases tax collection performance.	,566
	E-Government services need improvement.	,432
	E-Government services have minimized the bureaucracy at public offices.	,366

Table 4.5 User experiences of E-Government System

User experiences of E-Government System	I'm using E-Government services for my personal needs.	,851
	I'm using E-Government services for my business needs.	,815
	I always use "E-Government gateway" to benefit E-Government services.	,507
	I communicate with the Government easier through E-Government System.	,428
	I know exactly what kind of services I may get from E-Government System.	,426
	I'm satisfied with E-Government services.	,405
	I recommend E-Government services to everybody.	,386

Table 4.6 Communicating with the government through e-government system

Communicating with the government through E-Government system	I feel my self more informed about government's activities because of e-government system.	,375
	Ever since I started using e-government services I participate more in government's decision-making process.	,651
	I feel myself closer to the government ever since I started to use e-government services.	,720
	E-government system has increased my trust towards the government.	,711

Table 4.7 Creating need for E-Government System

Creating need for E-Government System	I'd like to discuss E-Government services with other citizens on an internet environment.	,674
	I'd like citizens and organizations to participate in constituting the services in E-Government System with their ideas.	,630
	Internet access fees are expensive in Turkey.	,608
	Turkey needs a social transformation of "Information Society".	,552
	E-Government services lead the Government to a more modern public administration.	,512
	E-Government System is necessary for Turkey.	,438

Table 4.8 Security of E-Government System

Security of E-Government System	My personal information on E-Government System is safe.	,834
	It is secure to send personal information to government over internet.	,820
	E-Government System is secure against virtual attacks.	,730

Table 4.9 Developing R&D & ICT in Turkey

Developing R&D & ICT in Turkey	ICT has become an important part of business life.	,693
	Nowadays the number of internet access points around me have increased.	,687
	Competition in ICT sector has significantly increased in Turkey.	,625

Table 4.10 Infrastructure of E-Government System's implementation process

Infrastructure of E-Government System's implementation	I access E-Government System whenever I want at any time of the day at all times without any interruption.	,630
	E-Government System provides services that each citizen can access and benefit equally.	,591
	E-Government project is run in a professional way in Turkey.	,390

Table 4.11 Technological competencies of the users

Technological competencies of the users	I benefit from E-Government services without having much technical skills.	,612
	My computer skills are good enough to use E-Government System.	,468

Table 4.12 Publicity activities for E-Government System

Publicity activities for E-Government System	Adequate promotion activities are carried out for E-Government System and its services.	,673
	I know E-Government services because of E-Government System's publicity activities.	,507

4.2.4. Frequency tables of survey participants

Age statistics of the participants:

Most of the participants of the survey are comprised by young, middle and upper middle age people as almost 50% of surveys have been done by the age group of 30-60 and 42,4% of the participants are from the age group of 17-30 (See Appendix B.1).

Gender statistics of the participants:

Participation of different gender is almost equal. 45% of the participants are women, the rest are men (See Appendix B.2).

Occupation statistics of the participants:

37,2% of the participants are students, 25,7% of them are retired and others, 18% of them are employees, 17,7% of them are self-employed and 1,5% of them are unemployed (See Appendix B.3).

Location statistics of the participants:

İstanbul is the leading city of the participants. 401 citizens from 19 different cities have attended the survey over the internet. 82,5% of the participants (331 persons) are from İstanbul, 4,7% of them (19 persons) are from Ankara, 4,2% of them (17 persons) are from

Eskişehir, 2% of them (8 persons) are from İzmir and 1,2% of them (5 persons) are from Antalya the rest of them are under 1% (See Appendix B.4).

Education statistics of the participants:

64,8% of the participants have university education, 13% of them have high school education, 11,5% of them have PhD degree 10,5% of them have master degree and only one person is with primary education background (See Appendix B.5).

Internet connection types of the participants:

According to the results of the survey connection type of ADSL, which is a broadband connection, have spread amongst citizens. 87,3% of the participants connect the internet from home through ADSL. Connection to the internet over mobile phones has not been rampant enough among citizens as 15,7% of the participants connect the internet from home using mobile phones (See Appendix B.6).

Internet connection durations of the participants:

Almost 67% of the participants connect to the internet 3 to 5 hours or more every day. Considering four hours of watching TV is accepted to be an addiction, apparently internet has become a kind of addiction for Turkish internet users. Besides, the higher marked period of this question amongst the groups is 1 to 3 hours, which has been answered by 25,7% of the participants. It indicates that internet is about to become a habit for them also (See Appendix B.7).

Do citizens find the Internet connection fees expensive?

74,8% of the participants (300 people) find internet connection fees expensive (See Appendix B.8).

Does Turkey need a social transformation of “Information Society”?

86,8% of the participants support and find it necessary for Turkey to have a transformation of “information society” (See Appendix B.9).

Do citizens know what kind of services they may get from E-Government System?

51,6% of the people know what kind of services they may acquire from E-Government System (See Appendix B.10).

Do people think that E-Government System is necessary for Turkey?

%76 of the participants (205 people) think that E-Government System is essential for Turkey (See Appendix B.11).

How often do citizens use E-Government services for their individual needs?

44,6% of the participants do not use the system, while 19,5% of the citizens use the system at least once a year for their individual needs (See Appendix B.12).

How often do citizens use E-Government services for their business needs?

52,4% of the participants do not use the system, while 15,7% of the citizens use the system at least once a year for their individual needs (See Appendix B.13).

Would the citizens benefit from E-Government services if they were given free computer training for how to use E-Government System?

54,7% of the participants would use the system, while 45,3% of them would not use the system even if they were given free computer training (See Appendix B.14).

Would the citizens have the chance to have internet access at anywhere and at all times they benefited from E-Government services more?

70,8% of the citizens participated in the survey would use the E-Government services more (See Appendix B.15).

Have the citizens' opinion been asked constituting E-Government services?

92,8% of the citizens' opinion have not been asked constituting E-Government services (See Appendix B.16).

Have citizens' organizations or the organizations', where they work, opinion been asked constituting E-Government services?

Opinions of 60,3% of the citizens' organizations or the organizations', where they work, have not been asked constituting E-Government services (See Appendix B.17).

Would citizens like themselves and the organizations to participate in constituting the services in E-Government System with their ideas?

78,5% of the citizens wish to participate in constituting the services in E-Government System with their ideas (See Appendix B.18).

Would the citizens like to discuss E-Government services with other citizens on an internet environment?

67,9% of the citizens would like to discuss E-Government services with other citizens on an internet environment (See Appendix B.19).

Is it secure to send personal information to government over the internet?

50,6% of the citizens do not find it secure to send personal information to government over the internet (See Appendix B.20).

Do E-Government services need improvement?

66,4% of the citizens think that E-Government services need improvement (See Appendix B.21).

Do E-Government services increase government's transparency and accountability?

51,2% of the citizens think that E-Government services increase government's transparency and accountability (See Appendix B.22).

4.2.5. Correlations between questions

“User-centricity of E-Government System” vs. “Benefits of E-Government System”:

There is a high significant ($p=0,000$) positive correlation ($r=0,230$) between “User-centricity of E-Government System” and “Benefits of E-Government System”, which means that more the E-Government System is user-centric, more beneficial it is (See Appendix C.1).

“User-centricity of E-Government System” vs. “User experiences of E-Government System”:

There is a high significant ($p=0,000$) positive correlation ($r=0,278$) between “User-centricity of E-Government System” and “User experiences of E-Government System”, which shows that more the E-Government System is user-centric, more users experience E-Government System (See Appendix C.2).

“User-centricity of E-Government System” vs. “Communicating with the Government through E-Government System”:

There is a high significant ($p=0,000$) positive correlation ($r=0,396$) between “User-centricity of E-Government System” and “Communicating with the Government through E-Government System”, which indicates that more the E-Government System is user-

centric, more users feel that they communicate with the Government through E-Government System (See Appendix C.3).

“User-centricity of E-Government System” vs. “Security of E-Government System”:

There is a high significant ($p=0,000$) positive correlation ($r=0,370$) between “User-centricity of E-Government System” and “Security of E-Government System”, which delineates that more the E-Government System is user-centric, more users find E-Government System secure (See Appendix C.4).

“User-centricity of E-Government System” vs. “Infrastructure of E-Government System’s implementation process”:

There is a high significant ($p=0,000$) positive correlation ($r=0,456$) between “User-centricity of E-Government System” and “Infrastructure of E-Government System’s implementation process”, which discloses that more the E-Government System is user-centric, more users feel that infrastructure of E-Government System’s implementation process is successful (See Appendix C.5).

“User-centricity of E-Government System” vs. “Technology competencies of the users”:

There is a high significant ($p=0,000$) positive correlation ($r=0,204$) between “User-centricity of E-Government System” and “Technology competencies of the users”, which indicates when E-Government System’s user-centricity increases, so does technology competencies of the users (See Appendix C.6).

“User-centricity of E-Government System” vs. “Publicity activities of E-Government System”:

There is a high significant ($p=0,000$) positive correlation ($r=0,201$) between “User-centricity of E-Government System” and “Publicity activities of E-Government System”, which shows that when E-Government System’s user-centricity raises, so does publicity activities of E-Government System (See Appendix C.7).

“Benefits of E-Government System” vs. “User experiences of E-Government System”:

There is a high significant ($p=0,000$) positive correlation ($r=0,322$) between “Benefits of E-Government System” and “User-centricity of E-Government System”, which indicates that more users experience E-Government System, more they realize the benefits of it (See Appendix C.8).

“Benefits of E-Government System” vs. “Communicating with the Government through E-Government System”:

There is a high significant ($p=0,000$) positive correlation ($r=0,327$) between “Benefits of E-Government System” and “Communicating with the Government through E-Government System”, which states that when benefits of E-Government System increases, communicating with the Government through E-Government System also raises (See Appendix C.9).

“Benefits of E-Government System” vs. “Creating need for E-Government System”:

There is a high significant ($p=0,000$) positive correlation ($r=0,395$) between “Benefits of E-Government System” and “Creating need for E-Government System”, which delineates that more creating need for E-Government System increases, more benefits of E-Government System raises (See Appendix C.10).

“Benefits of E-Government System” vs. “Security of E-Government System”:

There is a high significant ($p=0,000$) positive correlation ($r=0,179$) between “Benefits of E-Government System” and “Security of E-Government System”, which states that more secure the system is, more benefits of it are realized (See Appendix C.11).

“Benefits of E-Government System” vs. “Developing R&D & ICT in Turkey”:

There is a high significant ($p=0,000$) positive correlation ($r=0,178$) between “Benefits of E-Government System” and “Developing R&D & ICT in Turkey”, which states that increase in R&D & ICT development in Turkey reflects benefits of E-Government System positively that users feel it more beneficial (See Appendix C.12).

“Benefits of E-Government System” vs. “Infrastructure of E-Government System’s implementation process”:

There is a high significant ($p=0,000$) positive correlation ($r=0,216$) between “Benefits of E-Government System” and “Infrastructure of E-Government System’s implementation process”, which shows that when benefits of E-Government System increases, infrastructure of E-Government System’s implementation process also raises (See Appendix C.13).

“Benefits of E-Government System” vs. “Technology competencies of the users”:

There is a high significant ($p=0,000$) positive correlation ($r=0,301$) between “Benefits of E-Government System” and “Technology competencies of the users”, which shows that more technology competent the users are, more they realize the benefits of E-Government System (See Appendix C.14).

“Benefits of E-Government System” vs. “Publicity activities of E-Government System”:

There is a significant ($p=0,000$) positive correlation ($r=0,121$) between “Benefits of E-Government System” and “Publicity activities of E-Government System”, which delineates that when publicity activities of E-Government System raises, benefits of E-Government System also increases (See Appendix C.15).

“User experiences of E-Government System” vs. “Communicating with the Government through E-Government System”:

There is a high significant ($p=0,000$) positive correlation ($r=0,340$) between “User experiences of E-Government System” and “Communicating with the Government through E-Government System”, which shows that more users experience the E-Government System, more they feel they communicate with the Government through E-Government System (See Appendix C.16).

“User experiences of E-Government System” vs. “Creating need for E-Government System”:

There is a high significant ($p=0,001$) positive correlation ($r=0,170$) between “User experiences of E-Government System” and “Creating need for E-Government System”, which indicates that when users experience of E-Government System increases, so does creating need for E-Government System (See Appendix C.17).

“User experiences of E-Government System” vs. “Security of E-Government System”:

There is a high significant ($p=0,000$) positive correlation ($r=0,229$) between “User experiences of E-Government System” and “Security of E-Government System”, which reveals that more users experience the E-Government System, more they find E-Government System secure (See Appendix C.18).

“User experiences of E-Government System” vs. “Infrastructure of E-Government System’s implementation process”:

There is a high significant ($p=0,000$) positive correlation ($r=0,278$) between “User experiences of E-Government System” and “Infrastructure of E-Government System’s implementation process”, which states that more infrastructure of E-Government System’s implementation process increases, more users experience the E-Government System (See Appendix C.19).

“User experiences of E-Government System” vs. “Technology competencies of the users”:

There is a high significant ($p=0,000$) positive correlation ($r=0,219$) between “User experiences of E-Government System” and “Technology competencies of the users”, which indicates that more the users are technologically competent, more they experience E-Government System (See Appendix C.20).

“User experiences of E-Government System” vs. “Publicity activities of E-Government System”:

There is a high significant ($p=0,000$) positive correlation ($r=0,335$) between “User experiences of E-Government System” and “Publicity activities of E-Government System”, which shows that more publicity activities are done, more users experience E-Government System (See Appendix C.21).

“Communicating with the Government through E-Government System” vs. “Security of E-Government System”:

There is a high significant ($p=0,000$) positive correlation ($r=0,358$) between “Communicating with the Government through E-Government System” and “Security of E-Government System”, which states that when communicating with the Government through E-Government System increases, so does security of E-Government System (See Appendix C.22).

“Communicating with the Government through E-Government System” vs. “Infrastructure of E-Government System’s implementation process”:

There is a high significant ($p=0,000$) positive correlation ($r=0,351$) between “Communicating with the Government through E-Government System” and “Infrastructure of E-Government System’s implementation process”, which indicates that when communicating with the Government through E-Government System raises, so does infrastructure of E-Government System’s implementation process (See Appendix C.23).

“Communicating with the Government through E-Government System” vs. “Technology competencies of the users”:

There is a high significant ($p=0,004$) positive correlation ($r=0,145$) between “Communicating with the Government through E-Government System” and “Technology competencies of the users”, which reveals that when communicating with the Government through E-Government System increases, technology competencies of the users also raises (See Appendix C.24).

“Communicating with the Government through E-Government System” vs. “Publicity activities of E-Government System”:

There is a high significant ($p=0,000$) positive correlation ($r=0,302$) between “Communicating with the Government through E-Government System” and “Publicity activities of E-Government System”, which indicates that more communicating with the Government through E-Government System increases, more publicity activities of E-Government System raises (See Appendix C.25).

“Creating need for E-Government System” vs. “Developing R&D & ICT in Turkey”:

There is a high significant ($p=0,000$) positive correlation ($r=0,233$) between “Creating need for E-Government System” and “Developing R&D & ICT in Turkey”, which says that when creating need for E-Government System raises, so does developing R&D & ICT in Turkey (See Appendix C.26).

“Creating need for E-Government System” vs. “Technology competencies of the users”:

There is a high significant ($p=0,000$) positive correlation ($r=0,233$) between “Creating need for E-Government System” and “Technology competencies of the users”, which reveals that more creating need for E-Government System raises, more technology competencies of the users increases (See Appendix C.27).

“Security of E-Government System” vs. “Infrastructure of E-Government System’s implementation process”:

There is a high significant ($p=0,000$) positive correlation ($r=0,233$) between “Security of E-Government System” and “Infrastructure of E-Government System’s implementation process”, which shows that more infrastructure of E-Government System’s implementation process raises, more users think that E-Government System is secure (See Appendix C.28).

“Security of E-Government System” vs. “Publicity activities of E-Government System”:

There is a high significant ($p=0,000$) positive correlation ($r=0,275$) between “Security of E-Government System” and “Publicity activities of E-Government System”, which shows that more publicity activities of E-Government System are done, more users think that E-Government System is secure (See Appendix C.29).

“Developing R&D & ICT in Turkey” vs. “Technology competencies of the users”:

There is a high significant ($p=0,000$) positive correlation ($r=0,198$) between “Developing R&D & ICT in Turkey” and “Technology competencies of the users”, which delineates that when developing R&D & ICT in Turkey increases, technology competencies of the users also raises (See Appendix C.30).

“Infrastructure of E-Government System’s implementation process” vs. “Technology competencies of the users”:

There is a high significant ($p=0,004$) positive correlation ($r=0,144$) between “Infrastructure of E-Government System’s implementation process” and “Technology competencies of the users”, which shows that when infrastructure of E-Government System’s implementation process increases, technology competencies of the users also raises (See Appendix C.31).

“Infrastructure of E-Government System’s implementation process” vs. “Publicity activities of E-Government System”:

There is a high significant ($p=0,000$) positive correlation ($r=0,184$) between “Infrastructure of E-Government System’s implementation process” and “Publicity activities of E-Government System”, which reveals that more infrastructure of E-Government System’s implementation process raises, more publicity activities of E-Government System increases (See Appendix C.32).

4.2.6. Significant differences between two groups consist of two choices

“Gender” vs. “Benefits of E-Government System”:

Is there a significant difference between genders in terms of the answers given to the question of “Benefits of E-Government System”?

H0: There is not a significant difference between genders in terms of the answers given to the question of “Benefits of E-Government System”.

H1: There is a significant difference between genders in terms of the answers given to the question of “Benefits of E-Government System”.

As $p=0,013$ is smaller than 0,05 H1 hypothesis is accepted, hence there is a significant difference between genders in terms of the answers given to the question of “Benefits of E-Government System”. Answers of “Man” (213,44) are closer to strongly agree, while answers of “Women” (185,58) are closer to strongly disagree (See Appendix D.1).

“Gender” vs. “Technology competencies of the users”:

Is there a significant difference between genders in terms of the answers given to the question of “Technology competencies of the users”?

H0: There is not a significant difference between genders in terms of the answers given to the question of “Technology competencies of the users”.

H1: There is a significant difference between genders in terms of the answers given to the question of “Technology competencies of the users”.

As $p=0,032$ is smaller than 0,05 H1 hypothesis is accepted. Therefore, there is a significant difference between genders in terms of the answers given to the question of “Technology competencies of the users”. Answers of “Men” (218,65) are closer to strongly agree, while answers of “Women” (179,11) are closer to strongly disagree (See Appendix D.2).

“I have been trained on E-Government System” vs. “User-centricity of E-Government System”:

Is there a significant difference between the various answers given to the question of “I have been trained on E-Government System” in terms of answers given to the question of “User-centricity of E-Government System”?

H0: There is not a significant difference between the various answers given to the question of “I have been trained on E-Government System” in terms of answers given to the question of “User-centricity of E-Government System”.

H1: There is a significant difference between the various answers given to the question of “I have been trained on E-Government System” in terms of answers given to the question of “User-centricity of E-Government System”.

As $p=0,006$ is smaller than 0,05 H1 hypothesis is accepted. Therefore, there is a significant difference between the various answers given to the question of “I have been trained on E-Government System” in terms of answers given to the question of “User-centricity of E-Government System”. Those who answered “Yes” (246,92) are closer to strongly agree, while those who answered “No” (196,47) are closer to strongly disagree (See Appendix D.3).

“I have been trained on E-Government System” vs. “User experiences of E-Government System”:

Is there a significant difference between the various answers given to the question of “I have been trained on E-Government System” in terms of answers given to the question of “User experiences of E-Government System”?

H0: There is not a significant difference between the various answers given to the question of “I have been trained on E-Government System” in terms of answers given to the question of “User experiences of E-Government System”.

H1: There is a significant difference between the various answers given to the question of “I have been trained on E-Government System” in terms of answers given to the question of “User experiences of E-Government System”.

As $p=0,016$ is smaller than 0,05 H1 hypothesis is accepted. Therefore, there is a significant difference between the various answers given to the question of “I have been trained on E-Government System” in terms of answers given to the question of “User experiences of E-Government System”. Those who answered “Yes” (242,56) are closer to strongly agree, while those who answered “No” (196,90) are closer to strongly disagree (See Appendix D.4).

“I have been trained on E-Government System” vs. “Communicating with the Government through E-Government System”:

Is there a significant difference between the various answers given to the question of “I have been trained on E-Government System” in terms of answers given to the question of “Communicating with the Government through E-Government System”?

H0: There is not a significant difference between the various answers given to the question of “I have been trained on E-Government System” in terms of answers given to the question of “Communicating with the Government through E-Government System”.

H1: There is a significant difference between the various answers given to the question of “I have been trained on E-Government System” in terms of answers given to the question of “Communicating with the Government through E-Government System”.

As $p=0,029$ is smaller than 0,05 H1 hypothesis is accepted. Therefore, there is a significant difference between the various answers given to the question of “I have been trained on E-Government System” in terms of answers given to the question of “Communicating with the Government through E-Government System”. Those who answered “Yes” (240,31) are closer to strongly agree, while those who answered “No” (197,12) are closer to strongly disagree (See Appendix D.5).

“I know what E-Government gateway is” vs. “Benefits of E-Government System”:

Is there a significant difference between the various answers given to the question of “I know what E-Government gateway is” in terms of answers given to the question of “Benefits of E-Government System”?

H0: There is not a significant difference between the various answers given to the question of “I know what E-Government gateway is” in terms of answers given to the question of “Benefits of E-Government System”.

H1: There is a significant difference between the various answers given to the question of “I know what E-Government gateway is” in terms of answers given to the question of “Benefits of E-Government System”.

As $p=0,000$ is smaller than 0,05 H1 hypothesis is accepted. Therefore, there is a significant difference between the various answers given to the question of “I know what E-Government gateway is” in terms of answers given to the question of “Benefits of E-Government System”. Those who answered “Yes” (223,84) are closer to strongly agree, while those who answered “No” (182,40) are closer to strongly disagree (See Appendix D.6).

“I know what E-Government gateway is” vs. “User experiences of E-Government System”:

Is there a significant difference between the various answers given to the question of “I know what E-Government gateway is” in terms of answers given to the question of “User experiences of E-Government System”?

H0: There is not a significant difference between the various answers given to the question of “I know what E-Government gateway is” in terms of answers given to the question of “User experiences of E-Government System”.

H1: There is a significant difference between the various answers given to the question of “I know what E-Government gateway is” in terms of answers given to the question of “User experiences of E-Government System”.

As $p=0,000$ is smaller than 0,05 H1 hypothesis is accepted. Therefore, there is a significant difference between the various answers given to the question of “I know what E-Government gateway is” in terms of answers given to the question of “User experiences of E-Government System”. Those who answered “Yes” (244,13) are closer to strongly agree, while those who answered “No” (165,87) are closer to strongly disagree (See Appendix D.7).

“I know what E-Government gateway is” vs. “Creating need for E-Government System”:

Is there a significant difference between the various answers given to the question of “I know what E-Government gateway is” in terms of answers given to the question of “Creating need for E-Government System”?

H0: There is not a significant difference between the various answers given to the question of “I know what E-Government gateway is” in terms of answers given to the question of “Creating need for E-Government System”.

H1: There is a significant difference between the various answers given to the question of “I know what E-Government gateway is” in terms of answers given to the question of “Creating need for E-Government System”.

As $p=0,002$ is smaller than 0,05 H1 hypothesis is accepted. Therefore, there is a significant difference between the various answers given to the question of “I know what E-Government gateway is” in terms of answers given to the question of “Creating need for E-Government System”. Those who answered “Yes” (219,49) are closer to strongly agree, while those who answered “No” (185,94) are closer to strongly disagree (See Appendix D.8).

“I know what E-Government gateway is” vs. “Technology competencies of the users”:

Is there a significant difference between the various answers given to the question of “I know what E-Government gateway is” in terms of answers given to the question of “Technology competencies of the users”?

H0: There is not a significant difference between the various answers given to the question of “I know what E-Government gateway is” in terms of answers given to the question of “Technology competencies of the users”.

H1: There is a significant difference between the various answers given to the question of “I know what E-Government gateway is” in terms of answers given to the question of “Technology competencies of the users”.

As $p=0,001$ is smaller than 0,05 H1 hypothesis is accepted. Therefore, there is a significant difference between the various answers given to the question of “I know what E-Government gateway is” in terms of answers given to the question of “Technology competencies of the users”. Those who answered “Yes” (221,72) are closer to strongly agree, while those who answered “No” (184,12) are closer to strongly disagree (See Appendix D.9).

“I know what E-Government gateway is” vs. “Publicity activities of E-Government System”:

Is there a significant difference between the various answers given to the question of “I know what E-Government gateway is” in terms of answers given to the question of “Publicity activities of E-Government System”?

H0: There is not a significant difference between the various answers given to the question of “I know what E-Government gateway is” in terms of answers given to the question of “Publicity activities of E-Government System”.

H1: There is a significant difference between the various answers given to the question of “I know what E-Government gateway is” in terms of answers given to the question of “Publicity activities of E-Government System”.

As $p=0,000$ is smaller than 0,05 H1 hypothesis is accepted. Therefore, there is a significant difference between the various answers given to the question of “I know what E-Government gateway is” in terms of answers given to the question of “Publicity activities

of E-Government System”. Those who answered “Yes” (225,57) are closer to strongly agree, while those who answered “No” (180,99) are closer to strongly disagree (See Appendix D.10).

“If I had the chance to have internet access at anywhere and at all times I’d benefit from E-Government System more” vs. “User-centricity of E-Government System”:

Is there a significant difference between the various answers given to the question of “If I had the chance to have internet access at anywhere and at all times I’d benefit from E-Government System more” in terms of answers given to the question of “User-centricity of E-Government System”?

H0: There is not a significant difference between the various answers given to the question of “If I had the chance to have internet access at anywhere and at all times I’d benefit from E-Government System more” in terms of answers given to the question of “User-centricity of E-Government System”.

H1: There is a significant difference between the various answers given to the question of “If I had the chance to have internet access at anywhere and at all times I’d benefit from E-Government System more” in terms of answers given to the question of “User-centricity of E-Government System”.

As $p=0,001$ is smaller than 0,05 H1 hypothesis is accepted. Therefore, there is a significant difference between the various answers given to the question of “If I had the chance to have internet access at anywhere and at all times I’d benefit from E-Government System more” in terms of answers given to the question of “User-centricity of E-Government System”. Those who answered “Yes” (212,15) are closer to strongly agree, while those who answered “No” (173,94) are closer to strongly disagree (See Appendix D.11).

“If I had the chance to have internet access at anywhere and at all times I’d benefit from E-Government System more” vs. “Benefits of E-Government System”:

Is there a significant difference between the various answers given to the question of “If I had the chance to have internet access at anywhere and at all times I’d benefit from E-

Government System more” in terms of answers given to the question of “Benefits of E-Government System”?

H0: There is not a significant difference between the various answers given to the question of “If I had the chance to have internet access at anywhere and at all times I’d benefit from E-Government System more” in terms of answers given to the question of “Benefits of E-Government System”.

H1: There is a significant difference between the various answers given to the question of “If I had the chance to have internet access at anywhere and at all times I’d benefit from E-Government System more” in terms of answers given to the question of “Benefits of E-Government System”.

As $p=0,022$ is smaller than 0,05 H1 hypothesis is accepted. Therefore, there is a significant difference between the various answers given to the question of “If I had the chance to have internet access at anywhere and at all times I’d benefit from E-Government System more” in terms of answers given to the question of “Benefits of E-Government System”. Those who answered “Yes” (209,20) are closer to strongly agree, while those who answered “No” (181,10) are closer to strongly disagree (See Appendix D.12).

“If I had the chance to have internet access at anywhere and at all times I’d benefit from E-Government System more” vs. “User experiences of E-Government System”:

Is there a significant difference between the various answers given to the question of “If I had the chance to have internet access at anywhere and at all times I’d benefit from E-Government System more” in terms of answers given to the question of “User experiences of E-Government System”?

H0: There is not a significant difference between the various answers given to the question of “If I had the chance to have internet access at anywhere and at all times I’d benefit from E-Government System more” in terms of answers given to the question of “User experiences of E-Government System”.

H1: There is a significant difference between the various answers given to the question of “If I had the chance to have internet access at anywhere and at all times I’d benefit from E-Government System more” in terms of answers given to the question of “User experiences of E-Government System”.

As $p=0,007$ is smaller than 0,05 H1 hypothesis is accepted. Therefore, there is a significant difference between the various answers given to the question of “If I had the chance to have internet access at anywhere and at all times I’d benefit from E-Government System more” in terms of answers given to the question of “User experiences of E-Government System”. Those who answered “Yes” (210,45) are closer to strongly agree, while those who answered “No” (178,07) are closer to strongly disagree (See Appendix D.13).

“If I had the chance to have internet access at anywhere and at all times I’d benefit from E-Government System more” vs. “Communicating with the Government through E-Government System”:

Is there a significant difference between the various answers given to the question of “If I had the chance to have internet access at anywhere and at all times I’d benefit from E-Government System more” in terms of answers given to the question of “Communicating with the Government through E-Government System”?

H0: There is not a significant difference between the various answers given to the question of “If I had the chance to have internet access at anywhere and at all times I’d benefit from E-Government System more” in terms of answers given to the question of “Communicating with the Government through E-Government System”.

H1: There is a significant difference between the various answers given to the question of “If I had the chance to have internet access at anywhere and at all times I’d benefit from E-Government System more” in terms of answers given to the question of “Communicating with the Government through E-Government System”.

As $p=0,000$ is smaller than 0,05 H1 hypothesis is accepted. Therefore, there is a significant difference between the various answers given to the question of “If I had the chance to have internet access at anywhere and at all times I’d benefit from E-Government System more” in terms of answers given to the question of “Communicating with the Government

through E-Government System”. Those who answered “Yes” (217,69) are closer to strongly agree, while those who answered “No” (160,49) are closer to strongly disagree (See Appendix D.14).

“If I had the chance to have internet access at anywhere and at all times I’d benefit from E-Government System more” vs. “Creating need for E-Government System”:

Is there a significant difference between the various answers given to the question of “If I had the chance to have internet access at anywhere and at all times I’d benefit from E-Government System more” in terms of answers given to the question of “Creating need for E-Government System”?

H0: There is not a significant difference between the various answers given to the question of “If I had the chance to have internet access at anywhere and at all times I’d benefit from E-Government System more” in terms of answers given to the question of “Creating need for E-Government System”.

H1: There is a significant difference between the various answers given to the question of “If I had the chance to have internet access at anywhere and at all times I’d benefit from E-Government System more” in terms of answers given to the question of “Creating need for E-Government System”.

As $p=0,000$ is smaller than 0,05 H1 hypothesis is accepted. Therefore, there is a significant difference between the various answers given to the question of “If I had the chance to have internet access at anywhere and at all times I’d benefit from E-Government System more” in terms of answers given to the question of “Creating need for E-Government System”. Those who answered “Yes” (215,02) are closer to strongly agree, while those who answered “No” (166,97) are closer to strongly disagree (See Appendix D.15).

“If I had the chance to have internet access at anywhere and at all times I’d benefit from E-Government System more” vs. “Security of E-Government System”:

Is there a significant difference between the various answers given to the question of “If I had the chance to have internet access at anywhere and at all times I’d benefit from E-

Government System more” in terms of answers given to the question of “Security of E-Government System”?

H0: There is not a significant difference between the various answers given to the question of “If I had the chance to have internet access at anywhere and at all times I’d benefit from E-Government System more” in terms of answers given to the question of “Security of E-Government System”.

H1: There is a significant difference between the various answers given to the question of “If I had the chance to have internet access at anywhere and at all times I’d benefit from E-Government System more” in terms of answers given to the question of “Security of E-Government System”.

As $p=0,025$ is smaller than 0,05 H1 hypothesis is accepted. Therefore, there is a significant difference between the various answers given to the question of “If I had the chance to have internet access at anywhere and at all times I’d benefit from E-Government System more” in terms of answers given to the question of “Security of E-Government System”. Those who answered “Yes” (284,95) are closer to strongly agree, while those who answered “No” (181,71) are closer to strongly disagree (See Appendix D.16).

“If I had the chance to have internet access at anywhere and at all times I’d benefit from E-Government System more” vs. “Infrastructure of E-Government System’s implementation process”:

Is there a significant difference between the various answers given to the question of “If I had the chance to have internet access at anywhere and at all times I’d benefit from E-Government System more” in terms of answers given to the question of “Infrastructure of E-Government System’s implementation process”?

H0: There is not a significant difference between the various answers given to the question of “If I had the chance to have internet access at anywhere and at all times I’d benefit from E-Government System more” in terms of answers given to the question of “Infrastructure of E-Government System’s implementation process”.

H1: There is a significant difference between the various answers given to the question of “If I had the chance to have internet access at anywhere and at all times I’d benefit from E-Government System more” in terms of answers given to the question of “Infrastructure of E-Government System’s implementation process”.

As $p=0,035$ is smaller than 0,05 H1 hypothesis is accepted. Therefore, there is a significant difference between the various answers given to the question of “If I had the chance to have internet access at anywhere and at all times I’d benefit from E-Government System more” in terms of answers given to the question of “Infrastructure of E-Government System’s implementation process”. Those who answered “Yes” (208,12) are closer to strongly agree, while those who answered “No” (183,71) are closer to strongly disagree (See Appendix D.17).

“If I had the chance to have internet access at anywhere and at all times I’d benefit from E-Government System more” vs. “Publicity activities of E-Government System”:

Is there a significant difference between the various answers given to the question of “If I had the chance to have internet access at anywhere and at all times I’d benefit from E-Government System more” in terms of answers given to the question of “Publicity activities of E-Government System”?

H0: There is not a significant difference between the various answers given to the question of “If I had the chance to have internet access at anywhere and at all times I’d benefit from E-Government System more” in terms of answers given to the question of “Publicity activities of E-Government System”.

H1: There is a significant difference between the various answers given to the question of “If I had the chance to have internet access at anywhere and at all times I’d benefit from E-Government System more” in terms of answers given to the question of “Publicity activities of E-Government System”.

As $p=0,003$ is smaller than 0,05 H1 hypothesis is accepted. Therefore, there is a significant difference between the various answers given to the question of “If I had the chance to have internet access at anywhere and at all times I’d benefit from E-Government System

more” in terms of answers given to the question of “Publicity activities of E-Government System”. Those who answered “Yes” (221,86) are closer to strongly agree, while those who answered “No” (174,65) are closer to strongly disagree (See Appendix D.18).

“I’ve been asked for my opinion constituting E-Government services” vs. “User-centricity of E-Government System”:

Is there a significant difference between the various answers given to the question of “I’ve been asked for my opinion constituting E-Government services” in terms of answers given to the question of “User-centricity of E-Government System”?

H0: There is not a significant difference between the various answers given to the question of “I’ve been asked for my opinion constituting E-Government services” in terms of answers given to the question of “User-centricity of E-Government System”.

H1: There is a significant difference between the various answers given to the question of “I’ve been asked for my opinion constituting E-Government services” in terms of answers given to the question of “User-centricity of E-Government System”.

As $p=0,003$ is smaller than 0,05 H1 hypothesis is accepted. Therefore, there is a significant difference between the various answers given to the question of “I’ve been asked for my opinion constituting E-Government services” in terms of answers given to the question of “User-centricity of E-Government System”. Those who answered “Yes” (255,71) are closer to strongly agree, while those who answered “No” (196,74) are closer to strongly disagree (See Appendix D.19).

“I’ve been asked for my opinion constituting E-Government services” vs. “User experiences of E-Government System”:

Is there a significant difference between the various answers given to the question of “I’ve been asked for my opinion constituting E-Government services” in terms of answers given to the question of “User experiences of E-Government System”?

H0: There is not a significant difference between the various answers given to the question of “I’ve been asked for my opinion constituting E-Government services” in terms of answers given to the question of “User experiences of E-Government System”.

H1: There is a significant difference between the various answers given to the question of “I’ve been asked for my opinion constituting E-Government services” in terms of answers given to the question of “User experiences of E-Government System”.

As $p=0,025$ is smaller than 0,05 H1 hypothesis is accepted. Therefore, there is a significant difference between the various answers given to the question of “I’ve been asked for my opinion constituting E-Government services” in terms of answers given to the question of “User experiences of E-Government System”. Those who answered “Yes” (244,53) are closer to strongly agree, while those who answered “No” (197,61) are closer to strongly disagree (See Appendix D.20).

“I’ve been asked for my opinion constituting E-Government services” vs. “Communicating with the Government through E-Government System”:

Is there a significant difference between the various answers given to the question of “I’ve been asked for my opinion constituting E-Government services” in terms of answers given to the question of “Communicating with the Government through E-Government System”?

H0: There is not a significant difference between the various answers given to the question of “I’ve been asked for my opinion constituting E-Government services” in terms of answers given to the question of “Communicating with the Government through E-Government System”.

H1: There is a significant difference between the various answers given to the question of “I’ve been asked for my opinion constituting E-Government services” in terms of answers given to the question of “Communicating with the Government through E-Government System”.

As $p=0,006$ is smaller than 0,05 H1 hypothesis is accepted. Therefore, there is a significant difference between the various answers given to the question of “I’ve been asked for my

opinion constituting E-Government services” in terms of answers given to the question of “Communicating with the Government through E-Government System”. Those who answered “Yes” (256,41) are closer to strongly agree, while those who answered “No” (196,68) are closer to strongly disagree (See Appendix D.21).

“I’ve been asked for my opinion constituting E-Government services” vs. “Creating need for E-Government System”:

Is there a significant difference between the various answers given to the question of “I’ve been asked for my opinion constituting E-Government services” in terms of answers given to the question of “Creating need for E-Government System”?

H0: There is not a significant difference between the various answers given to the question of “I’ve been asked for my opinion constituting E-Government services” in terms of answers given to the question of “Creating need for E-Government System”.

H1: There is a significant difference between the various answers given to the question of “I’ve been asked for my opinion constituting E-Government services” in terms of answers given to the question of “Creating need for E-Government System”.

As $p=0,036$ is smaller than 0,05 H1 hypothesis is accepted. Therefore, there is a significant difference between the various answers given to the question of “I’ve been asked for my opinion constituting E-Government services” in terms of answers given to the question of “Creating need for E-Government System”. Those who answered “Yes” (160,53) are closer to strongly disagree, while those who answered “No” (204,15) are closer to strongly agree (See Appendix D.22).

“I’ve been asked for my opinion constituting E-Government services” vs. “Security of E-Government System”:

Is there a significant difference between the various answers given to the question of “I’ve been asked for my opinion constituting E-Government services” in terms of answers given to the question of “Security of E-Government System”?

H0: There is not a significant difference between the various answers given to the question of “I’ve been asked for my opinion constituting E-Government services” in terms of answers given to the question of “Security of E-Government System”.

H1: There is a significant difference between the various answers given to the question of “I’ve been asked for my opinion constituting E-Government services” in terms of answers given to the question of “Security of E-Government System”.

As $p=0,010$ is smaller than 0,05 H1 hypothesis is accepted. Therefore, there is a significant difference between the various answers given to the question of “I’ve been asked for my opinion constituting E-Government services” in terms of answers given to the question of “Security of E-Government System”. Those who answered “Yes” (252,03) are closer to strongly agree, while those who answered “No” (197,02) are closer to strongly disagree (See Appendix D.23).

“I’ve been asked for my opinion constituting E-Government services” vs. “Publicity activities of E-Government System”:

Is there a significant difference between the various answers given to the question of “I’ve been asked for my opinion constituting E-Government services” in terms of answers given to the question of “Publicity activities of E-Government System”?

H0: There is not a significant difference between the various answers given to the question of “I’ve been asked for my opinion constituting E-Government services” in terms of answers given to the question of “Publicity activities of E-Government System”.

H1: There is a significant difference between the various answers given to the question of “I’ve been asked for my opinion constituting E-Government services” in terms of answers given to the question of “Publicity activities of E-Government System”.

As $p=0,000$ is smaller than 0,05 H1 hypothesis is accepted. Therefore, there is a significant difference between the various answers given to the question of “I’ve been asked for my opinion constituting E-Government services” in terms of answers given to the question of “Publicity activities of E-Government System”. Those who answered “Yes” (277,86) are

closer to strongly agree, while those who answered “No” (195,01) are closer to strongly disagree (See Appendix D.24).

“I’d also prefer to reach E-Government services through social media tools like “Facebook” and “Twitter” vs. “User-centricity of E-Government System”:

Is there a significant difference between the various answers given to the question of “I’d also prefer to reach E-Government services through social media tools like “Facebook” and “Twitter” in terms of answers given to the question of “User-centricity of E-Government System”?

H0: There is not a significant difference between the various answers given to the question of “I’d also prefer to reach E-Government services through social media tools like “Facebook” and “Twitter” in terms of answers given to the question of “User-centricity of E-Government System”.

H1: There is a significant difference between the various answers given to the question of “I’d also prefer to reach E-Government services through social media tools like “Facebook” and “Twitter” in terms of answers given to the question of “User-centricity of E-Government System”.

As $p=0,016$ is smaller than 0,05 H1 hypothesis is accepted. Therefore, there is a significant difference between the various answers given to the question of “I’d also prefer to reach E-Government services through social media tools like “Facebook” and “Twitter”” in terms of answers given to the question of “User-centricity of E-Government System”. Those who answered “Yes” (216,50) are closer to strongly agree, while those who answered “No” (190,92) are closer to strongly disagree (See Appendix D.25).

“I’d also prefer to reach E-Government services through social media tools like “Facebook” and “Twitter” vs. “Communicating with the Government through E-Government System”:

Is there a significant difference between the various answers given to the question of “I’d also prefer to reach E-Government services through social media tools like “Facebook”

and “Twitter” in terms of answers given to the question of “Communicating with the Government through E-Government System”?

H0: There is not a significant difference between the various answers given to the question of “I’d also prefer to reach E-Government services through social media tools like “Facebook” and “Twitter” in terms of answers given to the question of “Communicating with the Government through E-Government System”.

H1: There is a significant difference between the various answers given to the question of “I’d also prefer to reach E-Government services through social media tools like “Facebook” and “Twitter” in terms of answers given to the question of “Communicating with the Government through E-Government System”.

As $p=0,002$ is smaller than 0,05 H1 hypothesis is accepted. Therefore, there is a significant difference between the various answers given to the question of “I’d also prefer to reach E-Government services through social media tools like “Facebook” and “Twitter”” in terms of answers given to the question of “Communicating with the Government through E-Government System”. Those who answered “Yes” (222,98) are closer to strongly agree, while those who answered “No” (186,71) are closer to strongly disagree (See Appendix D.26).

“I’d also prefer to reach E-Government services through social media tools like “Facebook” and “Twitter” vs. “Security of E-Government System”:

Is there a significant difference between the various answers given to the question of “I’d also prefer to reach E-Government services through social media tools like “Facebook” and “Twitter” in terms of answers given to the question of “Security of E-Government System”?

H0: There is not a significant difference between the various answers given to the question of “I’d also prefer to reach E-Government services through social media tools like “Facebook” and “Twitter” in terms of answers given to the question of “Security of E-Government System”.

H1: There is a significant difference between the various answers given to the question of “I’d also prefer to reach E-Government services through social media tools like “Facebook” and “Twitter” in terms of answers given to the question of “Security of E-Government System”.

As $p=0,007$ is smaller than 0,05 H1 hypothesis is accepted. Therefore, there is a significant difference between the various answers given to the question of “I’d also prefer to reach E-Government services through social media tools like “Facebook” and “Twitter” in terms of answers given to the question of “Security of E-Government System”. Those who answered “Yes” (219,41) are closer to strongly agree, while those who answered “No” (189,03) are closer to strongly disagree (See Appendix D.27).

“I’d also prefer to reach E-Government services through social media tools like “Facebook” and “Twitter” vs. “Infrastructure of E-Government System’s implementation process”:

Is there a significant difference between the various answers given to the question of “I’d also prefer to reach E-Government services through social media tools like “Facebook” and “Twitter” in terms of answers given to the question of “Infrastructure of E-Government System’s implementation process”?

H0: There is not a significant difference between the various answers given to the question of “I’d also prefer to reach E-Government services through social media tools like “Facebook” and “Twitter” in terms of answers given to the question of “Infrastructure of E-Government System’s implementation process”.

H1: There is a significant difference between the various answers given to the question of “I’d also prefer to reach E-Government services through social media tools like “Facebook” and “Twitter” in terms of answers given to the question of “Infrastructure of E-Government System’s implementation process”.

As $p=0,007$ is smaller than 0,05 H1 hypothesis is accepted. Therefore, there is a significant difference between the various answers given to the question of “I’d also prefer to reach E-Government services through social media tools like “Facebook” and “Twitter” in terms of answers given to the question of “Infrastructure of E-Government System’s

implementation process”. Those who answered “Yes” (218,59) are closer to strongly agree, while those who answered “No” (189,56) are closer to strongly disagree (See Appendix D.28).

“I’d also prefer to have all E-Government services through mobile devices” vs. “User-centricity of E-Government System”:

Is there a significant difference between the various answers given to the question of “I’d also prefer to have all E-Government services through mobile devices” in terms of answers given to the question of “User-centricity of E-Government System”?

H0: There is not a significant difference between the various answers given to the question of “I’d also prefer to have all E-Government services through mobile devices” in terms of answers given to the question of “User-centricity of E-Government System”.

H1: There is a significant difference between the various answers given to the question of “I’d also prefer to have all E-Government services through mobile devices” in terms of answers given to the question of “User-centricity of E-Government System”.

As $p=0,002$ is smaller than 0,05 H1 hypothesis is accepted. Therefore, there is a significant difference between the various answers given to the question of “I’d also prefer to have all E-Government services through mobile devices” in terms of answers given to the question of “User-centricity of E-Government System”. Those who answered “Yes” (210,08) are closer to strongly agree, while those who answered “No” (172,55) are closer to strongly disagree (See Appendix D.29).

“I’d also prefer to have all E-Government services through mobile devices” vs. “Benefits of E-Government System”:

Is there a significant difference between the various answers given to the question of “I’d also prefer to have all E-Government services through mobile devices” in terms of answers given to the question of “Benefits of E-Government System”?

H0: There is not a significant difference between the various answers given to the question of “I’d also prefer to have all E-Government services through mobile devices” in terms of answers given to the question of “Benefits of E-Government System”.

H1: There is a significant difference between the various answers given to the question of “I’d also prefer to have all E-Government services through mobile devices” in terms of answers given to the question of “Benefits of E-Government System”.

As $p=0,000$ is smaller than 0,05 H1 hypothesis is accepted. Therefore, there is a significant difference between the various answers given to the question of “I’d also prefer to have all E-Government services through mobile devices” in terms of answers given to the question of “Benefits of E-Government System”. Those who answered “Yes” (213,51) are closer to strongly agree, while those who answered “No” (161,78) are closer to strongly disagree (See Appendix D.30).

“I’d also prefer to have all E-Government services through mobile devices” vs. “User experiences of E-Government System”:

Is there a significant difference between the various answers given to the question of “I’d also prefer to have all E-Government services through mobile devices” in terms of answers given to the question of “User experiences of E-Government System”?

H0: There is not a significant difference between the various answers given to the question of “I’d also prefer to have all E-Government services through mobile devices” in terms of answers given to the question of “Users experiences of E-Government System”.

H1: There is a significant difference between the various answers given to the question of “I’d also prefer to have all E-Government services through mobile devices” in terms of answers given to the question of “Users experiences of E-Government System”.

As $p=0,001$ is smaller than 0,05 H1 hypothesis is accepted. Therefore, there is a significant difference between the various answers given to the question of “I’d also prefer to have all E-Government services through mobile devices” in terms of answers given to the question of “Users experiences of E-Government System”. Those who answered “Yes” (211,47) are

closer to strongly agree, while those who answered “No” (168,18) are closer to strongly disagree (See Appendix D.31).

“I’d also prefer to have all E-Government services through mobile devices” vs. “Communicating with the Government through E-Government System”:

Is there a significant difference between the various answers given to the question of “I’d also prefer to have all E-Government services through mobile devices” in terms of answers given to the question of “Communicating with the Government through E-Government System”?

H0: There is not a significant difference between the various answers given to the question of “I’d also prefer to have all E-Government services through mobile devices” in terms of answers given to the question of “Communicating with the Government through E-Government System”.

H1: There is a significant difference between the various answers given to the question of “I’d also prefer to have all E-Government services through mobile devices” in terms of answers given to the question of “Communicating with the Government through E-Government System”.

As $p=0,000$ is smaller than 0,05 H1 hypothesis is accepted. Therefore, there is a significant difference between the various answers given to the question of “I’d also prefer to have all E-Government services through mobile devices” in terms of answers given to the question of “Communicating with the Government through E-Government System”. Those who answered “Yes” (213,41) are closer to strongly agree, while those who answered “No” (162,10) are closer to strongly disagree (See Appendix D.32).

“I’d also prefer to have all E-Government services through mobile devices” vs. “Creating need for E-Government System”:

Is there a significant difference between the various answers given to the question of “I’d also prefer to have all E-Government services through mobile devices” in terms of answers given to the question of “Creating need for E-Government System”?

H0: There is not a significant difference between the various answers given to the question of “I’d also prefer to have all E-Government services through mobile devices” in terms of answers given to the question of “Creating need for E-Government System”.

H1: There is a significant difference between the various answers given to the question of “I’d also prefer to have all E-Government services through mobile devices” in terms of answers given to the question of “Creating need for E-Government System”.

As $p=0,005$ is smaller than 0,05 H1 hypothesis is accepted. Therefore, there is a significant difference between the various answers given to the question of “I’d also prefer to have all E-Government services through mobile devices” in terms of answers given to the question of “Creating need for E-Government System”. Those who answered “Yes” (209,49) are closer to strongly agree, while those who answered “No” (174,39) are closer to strongly disagree (See Appendix D.33).

“I’d also prefer to have all E-Government services through mobile devices” vs. “Security of E-Government System”:

Is there a significant difference between the various answers given to the question of “I’d also prefer to have all E-Government services through mobile devices” in terms of answers given to the question of “Security of E-Government System”?

H0: There is not a significant difference between the various answers given to the question of “I’d also prefer to have all E-Government services through mobile devices” in terms of answers given to the question of “Security of E-Government System”.

H1: There is a significant difference between the various answers given to the question of “I’d also prefer to have all E-Government services through mobile devices” in terms of answers given to the question of “Security of E-Government System”.

As $p=0,000$ is smaller than 0,05 H1 hypothesis is accepted. Therefore, there is a significant difference between the various answers given to the question of “I’d also prefer to have all E-Government services through mobile devices” in terms of answers given to the question of “Security of E-Government System”. Those who answered “Yes” (217,31) are closer to

strongly agree, while those who answered “No” (149,88) are closer to strongly disagree (See Appendix D.34).

“I’d also prefer to have all E-Government services through mobile devices” vs. “Infrastructure of E-Government System’s implementation process”:

Is there a significant difference between the various answers given to the question of “I’d also prefer to have all E-Government services through mobile devices” in terms of answers given to the question of “Infrastructure of E-Government System’s implementation process”?

H0: There is not a significant difference between the various answers given to the question of “I’d also prefer to have all E-Government services through mobile devices” in terms of answers given to the question of “Infrastructure of E-Government System’s implementation process”.

H1: There is a significant difference between the various answers given to the question of “I’d also prefer to have all E-Government services through mobile devices” in terms of answers given to the question of “Infrastructure of E-Government System’s implementation process”.

As $p=0,009$ is smaller than 0,05 H1 hypothesis is accepted. Therefore, there is a significant difference between the various answers given to the question of “I’d also prefer to have all E-Government services through mobile devices” in terms of answers given to the question of “Infrastructure of E-Government System’s implementation process”. Those who answered “Yes” (208,73) are closer to strongly agree, while those who answered “No” (176,77) are closer to strongly disagree (See Appendix D.35).

“I’d also prefer to have all E-Government services through mobile devices” vs. “Technology competencies of the users”:

Is there a significant difference between the various answers given to the question of “I’d also prefer to have all E-Government services through mobile devices” in terms of answers given to the question of “Technology competencies of the users”?

H0: There is not a significant difference between the various answers given to the question of “I’d also prefer to have all E-Government services through mobile devices” in terms of answers given to the question of “Technology competencies of the users”.

H1: There is a significant difference between the various answers given to the question of “I’d also prefer to have all E-Government services through mobile devices” in terms of answers given to the question of “Technology competencies of the users”.

As $p=0,000$ is smaller than 0,05 H1 hypothesis is accepted. Therefore, there is a significant difference between the various answers given to the question of “I’d also prefer to have all E-Government services through mobile devices” in terms of answers given to the question of “Technology competencies of the users”. Those who answered “Yes” (214,22) are closer to strongly agree, while those who answered “No” (159,56) are closer to strongly disagree (See Appendix D.36).

4.2.7. Significant differences between two groups consist of more than two choices

“Age” vs. “User experiences of E-Government System”:

Is there a significant difference between the “Age” groups in terms of the answers given to the question of “User experiences of E-Government System”?

H0: There is not a significant difference between the “Age” groups in terms of the answers given to the question of “User experiences of E-Government System”.

H1: There is a significant difference between the “Age” groups in terms of the answers given to the question of “User experiences of E-Government System”.

As $p=0,042$ is smaller than 0,05 H1 hypothesis is accepted, hence there is a significant difference between the “Age” groups in terms of the answers given to the question of “User experiences of E-Government System”. The answer of the person who is from the “Age” group of “70 and older” (339,00) is the closest to strongly agree, while the answers of those who are from the “Age” group of “17-30” (181,60) are the closest to strongly disagree (See Appendix E.1).

“Age” vs. “Creating need for E-Government System”:

Is there a significant difference between the “Age” groups in terms of the answers given to the question of “Creating need for E-Government System”?

H0: There is not a significant difference between the “Age” groups in terms of the answers given to the question of “Creating need for E-Government System”.

H1: There is a significant difference between the “Age” groups in terms of the answers given to the question of “Creating need for E-Government System”.

As $p=0,004$ is smaller than 0,05 H1 hypothesis is accepted. Therefore, there is a significant difference between the “Age” groups in terms of the answers given to the question of “Creating need for E-Government System”. The answers of those who are from the “Age” group of “60-70” (228,87) are the closest to strongly agree, while the answers of those who are from the “Age” group of “17-30” (174,93) are the closest to strongly disagree (See Appendix E.2).

“Age” vs. “Technology competencies of the users”:

Is there a significant difference between the “Age” groups in terms of the answers given to the question of “Technology competencies of the users”?

H0: There is not a significant difference between the “Age” groups in terms of the answers given to the question of “Technology competencies of the users”.

H1: There is a significant difference between the “Age” groups in terms of the answers given to the question of “Technology competencies of the users”.

As $p=0,000$ is smaller than 0,05 H1 hypothesis is accepted. Therefore, there is a significant difference between the “Age” groups in terms of the answers given to the question of “Technology competencies of the users”. The answers of those who are from the “Age” group of “30-40” (224,97) are the closest to strongly agree, while the answer of the person

who is from the “Age” group of “70 and older” (83) is the closest to strongly disagree (See Appendix E.3).

“Age” vs. “Publicity activities of E-Government System”:

Is there a significant difference between the “Age” groups in terms of the answers given to the question of “Publicity activities of E-Government System”?

H0: There is not a significant difference between the “Age” groups in terms of the answers given to the question of “Publicity activities of E-Government System”.

H1: There is a significant difference between the “Age” groups in terms of the answers given to the question of “Publicity activities of E-Government System”.

As $p=0,015$ is smaller than 0,05 H1 hypothesis is accepted. Therefore, there is a significant difference between the “Age” groups in terms of the answers given to the question of “Publicity activities of E-Government System”. The answer of the person who is from the “Age” group of “70 and older” (290,50) is the closest to strongly agree, while the answers of those who are from the “Age” group of “30-40” (173,98) are the closest to strongly disagree (See Appendix E.4).

“Occupation” vs. “Benefits of E-Government System”:

Is there a significant difference between the “Occupation” groups in terms of the answers given to the question of “Benefits of E-Government System”?

H0: There is not a significant difference between the “Occupation” groups in terms of the answers given to the question of “Benefits of E-Government System”.

H1: There is a significant difference between the “Occupation” groups in terms of the answers given to the question of “Benefits of E-Government System”.

As $p=0,008$ is smaller than 0,05 H1 hypothesis is accepted. Therefore, there is a significant difference between the “Occupation” groups in terms of the answers given to the question

of “Benefits of E-Government System”. The answers of those who are from the “Occupation” group of “Employee” (233,39) are the closest to strongly agree, while the answers of those who are from the “Occupation” group of “Unemployed” (167,08) are the closest to strongly disagree (See Appendix E.5).

“Occupation” vs. “Creating need for E-Government System”:

Is there a significant difference between the “Occupation” groups in terms of the answers given to the question of “Creating need for E-Government System”?

H0: There is not a significant difference between the “Occupation” groups in terms of the answers given to the question of “Creating need for E-Government System”.

H1: There is a significant difference between the “Occupation” groups in terms of the answers given to the question of “Creating need for E-Government System”.

As $p=0,000$ is smaller than 0,05 H1 hypothesis is accepted. Therefore, there is a significant difference between the “Occupation” groups in terms of the answers given to the question of “Creating need for E-Government System”. The answers of the those who are from the “Occupation” group of “Self-employed” (240,49) are the closest to strongly agree, while the answers of those who are from the “Occupation” group of “Student” (167,68) are the closest to strongly disagree (See Appendix E.6).

“Occupation” vs. “Developing R&D & ICT in Turkey”:

Is there a significant difference between the “Occupation” groups in terms of the answers given to the question of “Developing R&D & ICT in Turkey”?

H0: There is not a significant difference between the “Occupation” groups in terms of the answers given to the question of “Developing R&D & ICT in Turkey”.

H1: There is a significant difference between the “Occupation” groups in terms of the answers given to the question of “Developing R&D & ICT in Turkey”.

As $p=0,000$ is smaller than 0,05 H1 hypothesis is accepted. Therefore, there is a significant difference between the “Occupation” groups in terms of the answers given to the question of “Developing R&D & ICT in Turkey”. The answers of the those who are from the “Occupation” group of “Self-employed” (232,52) are the closest to strongly agree, while the answers of those who are from the “Occupation” group of “Unemployed” (152,33) are the closest to strongly disagree (See Appendix E.7).

“Education” vs. “Benefits of E-Government System”:

Is there a significant difference between the “Education” groups in terms of the answers given to the question of “Benefits of E-Government System”?

H0: There is not a significant difference between the “Education” groups in terms of the answers given to the question of “Benefits of E-Government System”.

H1: There is a significant difference between the “Education” groups in terms of the answers given to the question of “Benefits of E-Government System”.

As $p=0,007$ is smaller than 0,05 H1 hypothesis is accepted. Therefore, there is a significant difference between the “Education” groups in terms of the answers given to the question of “Benefits of E-Government System”. The answers of the those who are from the “Education” group of “Master degree” (244,79) are the closest to strongly agree, while the answer of the person who is from the “Education groups of “Primary school” (46,00) and “High school” (172,44) are the closest to strongly disagree (See Appendix E.8).

“Education” vs. “User experiences of E-Government System”:

Is there a significant difference between the “Education” groups in terms of the answers given to the question of “User experiences of E-Government System”?

H0: There is not a significant difference between the “Education” groups in terms of the answers given to the question of “User experiences of E-Government System”.

H1: There is a significant difference between the “Education” groups in terms of the answers given to the question of “User experiences of E-Government System”.

As $p=0,036$ is smaller than 0,05 H1 hypothesis is accepted. Therefore, there is a significant difference between the “Education” groups in terms of the answers given to the question of “User experiences of E-Government System”. The answers of the those who are from the “Education” group of “Master degree” (243,39) are the closest to strongly agree, while the answers of those who are from the “Education group of “High school” (175,66) are the closest to strongly disagree (See Appendix E.9).

“Education” vs. “Technology competencies of the users”:

Is there a significant difference between the “Education” groups in terms of the answers given to the question of “Technology competencies of the users”?

H0: There is not a significant difference between the “Education” groups in terms of the answers given to the question of “Technology competencies of the users”.

H1: There is a significant difference between the “Education” groups in terms of the answers given to the question of “Technology competencies of the users”.

As $p=0,006$ is smaller than 0,05 H1 hypothesis is accepted. Therefore, there is a significant difference between the “Education” groups in terms of the answers given to the question of “Technology competencies of the users”. The answers of the those who are from the “Education” group of “Master degree” (253,86) are the closest to strongly agree, while the answer of the person who is from the “Education groups of “Primary school” (33,50) “High school” (175,63) are the closest to strongly disagree (See Appendix E.10).

“I know what E-Government System is” vs. “Benefits of E-Government System”:

Is there a significant difference between the various answers given to the question of “I know what E-Government System is” in terms of answers given to the question of “Benefits of E-Government System”?

H0: There is not a significant difference between the various answers given to the question “I know what E-Government System is” in terms of answers given to the question of “Benefits of E-Government System”.

H1: There is a significant difference between the various answers given to the question of “I know what E-Government System is” in terms of answers given to the question of “Benefits of E-Government System”.

As $p=0,000$ is smaller than 0,05 H1 hypothesis is accepted. Therefore, there is a significant difference between the various answers given to the question of “I know what E-Government System is” in terms of answers given to the question of “Benefits of E-Government System”. Those who answered “Yes” (216,95) are closer to strongly agree, while those who answered “No” (159,83) are closer to strongly disagree (See Appendix E.11).

“I know what E-Government System is” vs. “User experiences of E-Government System”:

Is there a significant difference between the various answers given to the question of “I know what E-Government System is” in terms of answers given to the question of “User experiences of E-Government System”?

H0: There is not a significant difference between the various answers given to the question “I know what E-Government System is” in terms of answers given to the question of “User experiences of E-Government System”.

H1: There is a significant difference between the various answers given to the question of “I know what E-Government System is” in terms of answers given to the question of “User experiences of E-Government System”.

As $p=0,000$ is smaller than 0,05 H1 hypothesis is accepted. Therefore, there is a significant difference between the various answers given to the question of “I know what E-Government System is” in terms of answers given to the question of “User experiences of E-Government System”. Those who answered “Yes” (217,04) are closer to strongly agree,

while those who answered “No” (127,42) are closer to strongly disagree (See Appendix E.12).

“I know what E-Government System is” vs. “Creating need for E-Government System”:

Is there a significant difference between the various answers given to the question of “I know what E-Government System is” in terms of answers given to the question of “Creating need for E-Government System”?

H0: There is not a significant difference between the various answers given to the question “I know what E-Government System is” in terms of answers given to the question of “Creating need for E-Government System”.

H1: There is a significant difference between the various answers given to the question of “I know what E-Government System is” in terms of answers given to the question of “Creating need for E-Government System”.

As $p=0,000$ is smaller than 0,05 H1 hypothesis is accepted. Therefore, there is a significant difference between the various answers given to the question of “I know what E-Government System is” in terms of answers given to the question of “Creating need for E-Government System”. Those who answered “Yes” (217,68) are closer to strongly agree, while those who answered “No” (130,19) are closer to strongly disagree (See Appendix E.13).

“I know what E-Government System is” vs. “Technology competencies of the users”:

Is there a significant difference between the various answers given to the question of “I know what E-Government System is” in terms of answers given to the question of “Technology competencies of the users”?

H0: There is not a significant difference between the various answers given to the question “I know what E-Government System is” in terms of answers given to the question of “Technology competencies of the users”.

H1: There is a significant difference between the various answers given to the question of “I know what E-Government System is” in terms of answers given to the question of “Technology competencies of the users”.

As $p=0,000$ is smaller than 0,05 H1 hypothesis is accepted. Therefore, there is a significant difference between the various answers given to the question of “I know what E-Government System is” in terms of answers given to the question of “Technology competencies of the users”. Those who answered “Yes” (217,38) are closer to strongly agree, while those who answered “No” (127,78) are closer to strongly disagree (See Appendix E.14).

“I know what E-Government System is” vs. “Publicity activities of E-Government System”:

Is there a significant difference between the various answers given to the question of “I know what E-Government System is” in terms of answers given to the question of “Publicity activities of E-Government System”?

H0: There is not a significant difference between the various answers given to the question “I know what E-Government System is” in terms of answers given to the question of “Publicity activities of E-Government System”.

H1: There is a significant difference between the various answers given to the question of “I know what E-Government System is” in terms of answers given to the question of “Publicity activities of E-Government System”.

As $p=0,021$ is smaller than 0,05 H1 hypothesis is accepted. Therefore, there is a significant difference between the various answers given to the question of “I know what E-Government System is” in terms of answers given to the question of “Publicity activities of E-Government System”. Those who answered “Yes” (208,07) are closer to strongly agree, while those who answered “No” (135,58) are closer to strongly disagree (See Appendix E.15).

“My organization’s or the organization’s, where I work, opinion constituting E-Government services has been asked” vs. “User-centricity of E-Government System”:

Is there a significant difference between the various answers given to the question of “My organization’s or the organization’s, where I work, opinion constituting E-Government services has been asked” in terms of answers given to the question of “User-centricity of E-Government System”?

H0: There is not a significant difference between the various answers given to the question “My organization’s or the organization’s, where I work, opinion constituting E-Government services has been asked” in terms of answers given to the question of “User-centricity of E-Government System”.

H1: There is a significant difference between the various answers given to the question of “My organization’s or the organization’s, where I work, opinion constituting E-Government services has been asked” in terms of answers given to the question of “User-centricity of E-Government System”.

As $p=0,018$ is smaller than 0,05 H1 hypothesis is accepted. Therefore, there is a significant difference between the various answers given to the question of “My organization’s or the organization’s, where I work, opinion constituting E-Government services has been asked” in terms of answers given to the question of “User-centricity of E-Government System”. Those who answered “Yes” (262,50) are closer to strongly agree, while those who answered “No” (195,36) are closer to strongly disagree (See Appendix E.16).

“My organization’s or the organization’s, where I work, opinion constituting E-Government services has been asked” vs. “User experiences of E-Government System”:

Is there a significant difference between the various answers given to the question of “My organization’s or the organization’s, where I work, opinion constituting E-Government services has been asked” in terms of answers given to the question of “User experiences of E-Government System”?

H0: There is not a significant difference between the various answers given to the question “My organization’s or the organization’s, where I work, opinion constituting E-Government services has been asked” in terms of answers given to the question of “User experiences of E-Government System”.

H1: There is a significant difference between the various answers given to the question of “My organization’s or the organization’s, where I work, opinion constituting E-Government services has been asked” in terms of answers given to the question of “User experiences of E-Government System”.

As $p=0,000$ is smaller than 0,05 H1 hypothesis is accepted. Therefore, there is a significant difference between the various answers given to the question of “My organization’s or the organization’s, where I work, opinion constituting E-Government services has been asked” in terms of answers given to the question of “User experiences of E-Government System”. Those who answered “Yes” (266,69) are closer to strongly agree, while those who answered “No” (185,34) are closer to strongly disagree (See Appendix E.17).

“My organization’s or the organization’s, where I work, opinion constituting E-Government services has been asked” vs. “Communicating with the Government through E-Government System”:

Is there a significant difference between the various answers given to the question of “My organization’s or the organization’s, where I work, opinion constituting E-Government services has been asked” in terms of answers given to the question of “Communicating with the Government through E-Government System”?

H0: There is not a significant difference between the various answers given to the question “My organization’s or the organization’s, where I work, opinion constituting E-Government services has been asked” in terms of answers given to the question of “Communicating with the Government through E-Government System”.

H1: There is a significant difference between the various answers given to the question of “My organization’s or the organization’s, where I work, opinion constituting E-

Government services has been asked” in terms of answers given to the question of “Communicating with the Government through E-Government System”.

As $p=0,000$ is smaller than 0,05 H1 hypothesis is accepted. Therefore, there is a significant difference between the various answers given to the question of “My organization’s or the organization’s, where I work, opinion constituting E-Government services has been asked” in terms of answers given to the question of “Communicating with the Government through E-Government System”. Those who answered “Yes” (280,29) are closer to strongly agree, while those who answered “No” (181,86) are closer to strongly disagree (See Appendix E.18).

“My organization’s or the organization’s, where I work, opinion constituting E-Government services has been asked” vs. “Security of E-Government System”:

Is there a significant difference between the various answers given to the question of “My organization’s or the organization’s, where I work, opinion constituting E-Government services has been asked” in terms of answers given to the question of “Security of E-Government System”?

H0: There is not a significant difference between the various answers given to the question “My organization’s or the organization’s, where I work, opinion constituting E-Government services has been asked” in terms of answers given to the question of “Security of E-Government System”.

H1: There is a significant difference between the various answers given to the question of “My organization’s or the organization’s, where I work, opinion constituting E-Government services has been asked” in terms of answers given to the question of “Security of E-Government System”.

As $p=0,000$ is smaller than 0,05 H1 hypothesis is accepted. Therefore, there is a significant difference between the various answers given to the question of “My organization’s or the organization’s, where I work, opinion constituting E-Government services has been asked”. Those who answered “Yes” (266,67) are closer to strongly agree, while those who answered “No” (184,18) are closer to strongly disagree (See Appendix E.19).

“My organization’s or the organization’s, where I work, opinion constituting E-Government services has been asked” vs. “Infrastructure of E-Government System’s implementation process”:

Is there a significant difference between the various answers given to the question of “My organization’s or the organization’s, where I work, opinion constituting E-Government services has been asked” in terms of answers given to the question of “Infrastructure of E-Government System’s implementation process”?

H0: There is not a significant difference between the various answers given to the question “My organization’s or the organization’s, where I work, opinion constituting E-Government services has been asked” in terms of answers given to the question of “Infrastructure of E-Government System’s implementation process”.

H1: There is a significant difference between the various answers given to the question of “My organization’s or the organization’s, where I work, opinion constituting E-Government services has been asked” in terms of answers given to the question of “Infrastructure of E-Government System’s implementation process”.

As $p=0,006$ is smaller than 0,05 H1 hypothesis is accepted. Therefore, there is a significant difference between the various answers given to the question of “My organization’s or the organization’s, where I work, opinion constituting E-Government services has been asked” in terms of answers given to the question of “Infrastructure of E-Government System’s implementation process”. Those who answered “Yes” (255,45) are closer to strongly agree, while those who answered “No” (189,55) are closer to strongly disagree (See Appendix E.20).

“My organization’s or the organization’s, where I work, opinion constituting E-Government services has been asked” vs. “Publicity activities of E-Government System”:

Is there a significant difference between the various answers given to the question of “My organization’s or the organization’s, where I work, opinion constituting E-Government

services has been asked” in terms of answers given to the question of “Publicity activities of E-Government System”?

H0: There is not a significant difference between the various answers given to the question “My organization’s or the organization’s, where I work, opinion constituting E-Government services has been asked” in terms of answers given to the question of “Publicity activities of E-Government System”.

H1: There is a significant difference between the various answers given to the question of “My organization’s or the organization’s, where I work, opinion constituting E-Government services has been asked” in terms of answers given to the question of “Publicity activities of E-Government System”.

As $p=0,000$ is smaller than 0,05 H1 hypothesis is accepted. Therefore, there is a significant difference between the various answers given to the question of “My organization’s or the organization’s, where I work, opinion constituting E-Government services has been asked” in terms of answers given to the question of “Publicity activities of E-Government System”. Those who answered “Yes” (294,26) are closer to strongly agree, while those who answered “No” (182,90) are closer to strongly disagree (See Appendix E.21).

“I reach all my private updated information from all different web pages of E-Government System” vs. “User-centricity of E-Government System”:

Is there a significant difference between the various answers given to the question of “I reach all my private updated information from all different web pages of E-Government System” in terms of answers given to the question of “User-centricity of E-Government System”?

H0: There is not a significant difference between the various answers given to the question “I reach all my private updated information from all different web pages of E-Government System” in terms of answers given to the question of “User-centricity of E-Government System”.

H1: There is a significant difference between the various answers given to the question of “I reach all my private updated information from all different web pages of E-Government System” in terms of answers given to the question of “User-centricity of E-Government System”.

As $p=0,000$ is smaller than 0,05 H1 hypothesis is accepted. Therefore, there is a significant difference between the various answers given to the question of “I reach all my private updated information from all different web pages of E-Government System” in terms of answers given to the question of “User-centricity of E-Government System”. Those who answered “Yes” (242,60) are closer to strongly agree, while those who answered “No” (167,27) are closer to strongly disagree (See Appendix E.22).

“I reach all my private updated information from all different web pages of E-Government System” vs. “Benefits of E-Government System”:

Is there a significant difference between the various answers given to the question of “I reach all my private updated information from all different web pages of E-Government System” in terms of answers given to the question of “Benefits of E-Government System”?

H0: There is not a significant difference between the various answers given to the question “I reach all my private updated information from all different web pages of E-Government System” in terms of answers given to the question of “Benefits of E-Government System”.

H1: There is a significant difference between the various answers given to the question of “I reach all my private updated information from all different web pages of E-Government System” in terms of answers given to the question of “Benefits of E-Government System”.

As $p=0,000$ is smaller than 0,05 H1 hypothesis is accepted. Therefore, there is a significant difference between the various answers given to the question of “I reach all my private updated information from all different web pages of E-Government System” in terms of answers given to the question of “Benefits of E-Government System”. Those who answered “Yes” (251,78) are closer to strongly agree, while those who answered “No” (152,92) are closer to strongly disagree (See Appendix E.23).

“I reach all my private updated information from all different web pages of E-Government System” vs. “User experiences of E-Government System”:

Is there a significant difference between the various answers given to the question of “I reach all my private updated information from all different web pages of E-Government System” in terms of answers given to the question of “User experiences of E-Government System”?

H0: There is not a significant difference between the various answers given to the question “I reach all my private updated information from all different web pages of E-Government System” in terms of answers given to the question of “User experiences of E-Government System”.

H1: There is a significant difference between the various answers given to the question of “I reach all my private updated information from all different web pages of E-Government System” in terms of answers given to the question of “User experiences of E-Government System”.

As $p=0,001$ is smaller than 0,05 H1 hypothesis is accepted. Therefore, there is a significant difference between the various answers given to the question of “I reach all my private updated information from all different web pages of E-Government System” in terms of answers given to the question of “User experiences of E-Government System”. Those who answered “Yes” (235,11) are closer to strongly agree, while those who answered “No” (166,89) are closer to strongly disagree (See Appendix E.24).

“I reach all my private updated information from all different web pages of E-Government System” vs. “Communicating with the Government through E-Government System”:

Is there a significant difference between the various answers given to the question of “I reach all my private updated information from all different web pages of E-Government System” in terms of answers given to the question of “Communicating with the Government through E-Government System”?

H0: There is not a significant difference between the various answers given to the question “I reach all my private updated information from all different web pages of E-Government System” in terms of answers given to the question of “Communicating with the Government through E-Government System”.

H1: There is a significant difference between the various answers given to the question of “I reach all my private updated information from all different web pages of E-Government System” in terms of answers given to the question of “Communicating with the Government through E-Government System”.

As $p=0,000$ is smaller than 0,05 H1 hypothesis is accepted. Therefore, there is a significant difference between the various answers given to the question of “I reach all my private updated information from all different web pages of E-Government System” in terms of answers given to the question of “Communicating with the Government through E-Government System”. Those who answered “Yes” (250,37) are closer to strongly agree, while those who answered “No” (159,51) are closer to strongly disagree (See Appendix E.25).

“I reach all my private updated information from all different web pages of E-Government System” vs. “Security of E-Government System”:

Is there a significant difference between the various answers given to the question of “I reach all my private updated information from all different web pages of E-Government System” in terms of answers given to the question of “Security of E-Government System”?

H0: There is not a significant difference between the various answers given to the question “I reach all my private updated information from all different web pages of E-Government System” in terms of answers given to the question of “Security of E-Government System”.

H1: There is a significant difference between the various answers given to the question of “I reach all my private updated information from all different web pages of E-Government System” in terms of answers given to the question of “Security of E-Government System”.

As $p=0,000$ is smaller than 0,05 H1 hypothesis is accepted. Therefore, there is a significant difference between the various answers given to the question of “I reach all my private updated information from all different web pages of E-Government System” in terms of answers given to the question of “Security of E-Government System”. Those who answered “Yes” (239,49) are closer to strongly agree, while those who answered “No” (170,59) are closer to strongly disagree (See Appendix E.26).

“I reach all my private updated information from all different web pages of E-Government System” vs. “Infrastructure of E-Government System’s implementation process”:

Is there a significant difference between the various answers given to the question of “I reach all my private updated information from all different web pages of E-Government System” in terms of answers given to the question of “Infrastructure of E-Government System’s implementation process”?

H0: There is not a significant difference between the various answers given to the question “I reach all my private updated information from all different web pages of E-Government System” in terms of answers given to the question of “Infrastructure of E-Government System’s implementation process”.

H1: There is a significant difference between the various answers given to the question of “I reach all my private updated information from all different web pages of E-Government System” in terms of answers given to the question of “Infrastructure of E-Government System’s implementation process”.

As $p=0,000$ is smaller than 0,05 H1 hypothesis is accepted. Therefore, there is a significant difference between the various answers given to the question of “I reach all my private updated information from all different web pages of E-Government System” in terms of answers given to the question of “Infrastructure of E-Government System’s implementation process”. Those who answered “Yes” (247,63) are closer to strongly agree, while those who answered “No” (147,12) are closer to strongly disagree (See Appendix E.27).

“I reach all my private updated information from all different web pages of E-Government System” vs. “Technology competencies of the users”:

Is there a significant difference between the various answers given to the question of “I reach all my private updated information from all different web pages of E-Government System” in terms of answers given to the question of “Technology competencies of the users”?

H0: There is not a significant difference between the various answers given to the question “I reach all my private updated information from all different web pages of E-Government System” in terms of answers given to the question of “Technology competencies of the users”.

H1: There is a significant difference between the various answers given to the question of “I reach all my private updated information from all different web pages of E-Government System” in terms of answers given to the question of “Technology competencies of the users”.

As $p=0,026$ is smaller than 0,05 H1 hypothesis is accepted. Therefore, there is a significant difference between the various answers given to the question of “I reach all my private updated information from all different web pages of E-Government System” in terms of answers given to the question of “Technology competencies of the users”. Those who answered “Yes” (229,97) are closer to strongly agree, while those who answered “No” (183,32) are closer to strongly disagree (See Appendix E.28).

“When I put any personal information on a web page of E-Government System I can do different transactions with it on any other web page of the system” vs. “User-centricity of E-Government System”:

Is there a significant difference between the various answers given to the question of “When I put any personal information on a web page of E-Government System I can do different transactions with it on any other web page of the system” in terms of answers given to the question of “User-centricity of E-Government System”?

H0: There is not a significant difference between the various answers given to the question “When I put any personal information on a web page of E-Government System I can do different transactions with it on any other web page of the system” in terms of answers given to the question of “User-centricity of E-Government System”.

H1: There is a significant difference between the various answers given to the question of “When I put any personal information on a web page of E-Government System I can do different transactions with it on any other web page of the system” in terms of answers given to the question of “User-centricity of E-Government System”.

As $p=0,000$ is smaller than 0,05 H1 hypothesis is accepted. Therefore, there is a significant difference between the various answers given to the question of “When I put any personal information on a web page of E-Government System I can do different transactions with it on any other web page of the system” in terms of answers given to the question of “User-centricity of E-Government System”. Those who answered “Yes” (264,24) are closer to strongly agree, while those who answered “No” (174,81) are closer to strongly disagree (See Appendix E.29).

“When I put any personal information on a web page of E-Government System I can do different transactions with it on any other web page of the system” vs. “Benefits of E-Government System”:

Is there a significant difference between the various answers given to the question of “When I put any personal information on a web page of E-Government System I can do different transactions with it on any other web page of the system” in terms of answers given to the question of “Benefits of E-Government System”?

H0: There is not a significant difference between the various answers given to the question “When I put any personal information on a web page of E-Government System I can do different transactions with it on any other web page of the system” in terms of answers given to the question of “Benefits of E-Government System”.

H1: There is a significant difference between the various answers given to the question of “When I put any personal information on a web page of E-Government System I can do

different transactions with it on any other web page of the system” in terms of answers given to the question of “Benefits of E-Government System”.

As $p=0,001$ is smaller than 0,05 H1 hypothesis is accepted. Therefore, there is a significant difference between the various answers given to the question of “When I put any personal information on a web page of E-Government System I can do different transactions with it on any other web page of the system” in terms of answers given to the question of “Benefits of E-Government System”. Those who answered “Yes” (241,01) are closer to strongly agree, while those who answered “No” (170,38) are closer to strongly disagree (See Appendix E.30).

“When I put any personal information on a web page of E-Government System I can do different transactions with it on any other web page of the system” vs. “User experiences of E-Government System”:

Is there a significant difference between the various answers given to the question of “When I put any personal information on a web page of E-Government System I can do different transactions with it on any other web page of the system” in terms of answers given to the question of “User experiences of E-Government System”?

H0: There is not a significant difference between the various answers given to the question “When I put any personal information on a web page of E-Government System I can do different transactions with it on any other web page of the system” in terms of answers given to the question of “User experiences of E-Government System”.

H1: There is a significant difference between the various answers given to the question of “When I put any personal information on a web page of E-Government System I can do different transactions with it on any other web page of the system” in terms of answers given to the question of “User experiences of E-Government System”.

As $p=0,000$ is smaller than 0,05 H1 hypothesis is accepted. Therefore, there is a significant difference between the various answers given to the question of “When I put any personal information on a web page of E-Government System I can do different transactions with it on any other web page of the system” in terms of answers given to the question of “User

experiences of E-Government System”. Those who answered “Yes” (258,29) are closer to strongly agree, while those who answered “No” (165,40) are closer to strongly disagree (See Appendix E.31).

“When I put any personal information on a web page of E-Government System I can do different transactions with it on any other web page of the system” vs. “Communicating with the Government through E-Government System”:

Is there a significant difference between the various answers given to the question of “When I put any personal information on a web page of E-Government System I can do different transactions with it on any other web page of the system” in terms of answers given to the question of “Communicating with the Government through E-Government System”?

H0: There is not a significant difference between the various answers given to the question “When I put any personal information on a web page of E-Government System I can do different transactions with it on any other web page of the system” in terms of answers given to the question of “Communicating with the Government through E-Government System”.

H1: There is a significant difference between the various answers given to the question of “When I put any personal information on a web page of E-Government System I can do different transactions with it on any other web page of the system” in terms of answers given to the question of “Communicating with the Government through E-Government System”.

As $p=0,000$ is smaller than 0,05 H1 hypothesis is accepted. Therefore, there is a significant difference between the various answers given to the question of “When I put any personal information on a web page of E-Government System I can do different transactions with it on any other web page of the system” in terms of answers given to the question of “Communicating with the Government through E-Government System”. Those who answered “Yes” (245,77) are closer to strongly agree, while those who answered “No” (174,67) are closer to strongly disagree (See Appendix E.32).

“When I put any personal information on a web page of E-Government System I can do different transactions with it on any other web page of the system” vs. “Security of E-Government System”:

Is there a significant difference between the various answers given to the question of “When I put any personal information on a web page of E-Government System I can do different transactions with it on any other web page of the system” in terms of answers given to the question of “Security of E-Government System”?

H0: There is not a significant difference between the various answers given to the question “When I put any personal information on a web page of E-Government System I can do different transactions with it on any other web page of the system” in terms of answers given to the question of “Security of E-Government System”.

H1: There is a significant difference between the various answers given to the question of “When I put any personal information on a web page of E-Government System I can do different transactions with it on any other web page of the system” in terms of answers given to the question of “Security of E-Government System”.

As $p=0,029$ is smaller than 0,05 H1 hypothesis is accepted. Therefore, there is a significant difference between the various answers given to the question of “When I put any personal information on a web page of E-Government System I can do different transactions with it on any other web page of the system” in terms of answers given to the question of “Security of E-Government System”. Those who answered “Yes” (231,61) are closer to strongly agree, while those who answered “No” (186,15) are closer to strongly disagree (See Appendix E.33).

“When I put any personal information on a web page of E-Government System I can do different transactions with it on any other web page of the system” vs. “Infrastructure of E-Government System’s implementation process”:

Is there a significant difference between the various answers given to the question of “When I put any personal information on a web page of E-Government System I can do different transactions with it on any other web page of the system” in terms of answers

given to the question of “Infrastructure of E-Government System’s implementation process”?

H0: There is not a significant difference between the various answers given to the question “When I put any personal information on a web page of E-Government System I can do different transactions with it on any other web page of the system” in terms of answers given to the question of “Infrastructure of E-Government System’s implementation process”.

H1: There is a significant difference between the various answers given to the question of “When I put any personal information on a web page of E-Government System I can do different transactions with it on any other web page of the system” in terms of answers given to the question of “Infrastructure of E-Government System’s implementation process”.

As $p=0,000$ is smaller than 0,05 H1 hypothesis is accepted. Therefore, there is a significant difference between the various answers given to the question of “When I put any personal information on a web page of E-Government System I can do different transactions with it on any other web page of the system” in terms of answers given to the question of “Infrastructure of E-Government System’s implementation process”. Those who answered “Yes” (247,52) are closer to strongly agree, while those who answered “No” (159,01) are closer to strongly disagree (See Appendix E.34).

“When I put any personal information on a web page of E-Government System I can do different transactions with it on any other web page of the system” vs. “Publicity activities of E-Government System”:

Is there a significant difference between the various answers given to the question of “When I put any personal information on a web page of E-Government System I can do different transactions with it on any other web page of the system” in terms of answers given to the question of “Publicity activities of E-Government System”?

H0: There is not a significant difference between the various answers given to the question “When I put any personal information on a web page of E-Government System I can do

different transactions with it on any other web page of the system” in terms of answers given to the question of “Publicity activities of E-Government System”.

H1: There is a significant difference between the various answers given to the question of “When I put any personal information on a web page of E-Government System I can do different transactions with it on any other web page of the system” in terms of answers given to the question of “Publicity activities of E-Government System”.

As $p=0,011$ is smaller than 0,05 H1 hypothesis is accepted. Therefore, there is a significant difference between the various answers given to the question of “When I put any personal information on a web page of E-Government System I can do different transactions with it on any other web page of the system” in terms of answers given to the question of “Publicity activities of E-Government System”. Those who answered “Yes” (232,11) are closer to strongly agree, while those who answered “No” (174,00) are closer to strongly disagree (See Appendix E.35).

“All information and forms on E-Government System are always up to date” vs. “User-centricity of E-Government System”:

Is there a significant difference between the various answers given to the question of “All information and forms on E-Government System are always up to date” in terms of answers given to the question of “User-centricity of E-Government System”?

H0: There is not a significant difference between the various answers given to the question “All information and forms on E-Government System are always up to date” in terms of answers given to the question of “User-centricity of E-Government System”.

H1: There is a significant difference between the various answers given to the question of “All information and forms on E-Government System are always up to date” in terms of answers given to the question of “User-centricity of E-Government System”.

As $p=0,000$ is smaller than 0,05 H1 hypothesis is accepted. Therefore, there is a significant difference between the various answers given to the question of “All information and forms on E-Government System are always up to date” in terms of answers given to the

question of “User-centricity of E-Government System”. Those who answered “Yes” (265,81) are closer to strongly agree, while those who answered “No” (154,29) are closer to strongly disagree (See Appendix E.36).

“All information and forms on E-Government System are always up to date” vs. “User experiences of E-Government System”:

Is there a significant difference between the various answers given to the question of “All information and forms on E-Government System are always up to date” in terms of answers given to the question of “User experiences of E-Government System”?

H0: There is not a significant difference between the various answers given to the question “All information and forms on E-Government System are always up to date” in terms of answers given to the question of “User experiences of E-Government System”.

H1: There is a significant difference between the various answers given to the question of “All information and forms on E-Government System are always up to date” in terms of answers given to the question of “User experiences of E-Government System”.

As $p=0,003$ is smaller than 0,05 H1 hypothesis is accepted. Therefore, there is a significant difference between the various answers given to the question of “All information and forms on E-Government System are always up to date” in terms of answers given to the question of “User experiences of E-Government System”. Those who answered “Yes” (224,72) are closer to strongly agree, while those who answered “No” (169,47) are closer to strongly disagree (See Appendix E.37).

“All information and forms on E-Government System are always up to date” vs. “Communicating with the Government through E-Government System”:

Is there a significant difference between the various answers given to the question of “All information and forms on E-Government System are always up to date” in terms of answers given to the question of “Communicating with the Government through E-Government System”?

H0: There is not a significant difference between the various answers given to the question “All information and forms on E-Government System are always up to date” in terms of answers given to the question of “Communicating with the Government through E-Government System”.

H1: There is a significant difference between the various answers given to the question of “All information and forms on E-Government System are always up to date” in terms of answers given to the question of “Communicating with the Government through E-Government System”.

As $p=0,008$ is smaller than 0,05 H1 hypothesis is accepted. Therefore, there is a significant difference between the various answers given to the question of “All information and forms on E-Government System are always up to date” in terms of answers given to the question of “Communicating with the Government through E-Government System”. Those who answered “Yes” (236,97) are closer to strongly agree, while those who answered “No” (185,10) are closer to strongly disagree (See Appendix E.38).

“All information and forms on E-Government System are always up to date” vs. “Security of E-Government System”:

Is there a significant difference between the various answers given to the question of “All information and forms on E-Government System are always up to date” in terms of answers given to the question of “Security of E-Government System”?

H0: There is not a significant difference between the various answers given to the question “All information and forms on E-Government System are always up to date” in terms of answers given to the question of “Security of E-Government System”.

H1: There is a significant difference between the various answers given to the question of “All information and forms on E-Government System are always up to date” in terms of answers given to the question of “Security of E-Government System”.

As $p=0,001$ is smaller than 0,05 H1 hypothesis is accepted. Therefore, there is a significant difference between the various answers given to the question of “All information and

forms on E-Government System are always up to date” in terms of answers given to the question of “Security of E-Government System”. Those who answered “Yes” (218,09) are closer to strongly agree, while those who answered “No” (163,57) are closer to strongly disagree (See Appendix E.39).

“All information and forms on E-Government System are always up to date” vs. “Infrastructure of E-Government System’s implementation process”:

Is there a significant difference between the various answers given to the question of “All information and forms on E-Government System are always up to date” in terms of answers given to the question of “Infrastructure of E-Government System’s implementation process”?

H0: There is not a significant difference between the various answers given to the question “All information and forms on E-Government System are always up to date” in terms of answers given to the question of “Infrastructure of E-Government System’s implementation process”.

H1: There is a significant difference between the various answers given to the question of “All information and forms on E-Government System are always up to date” in terms of answers given to the question of “Infrastructure of E-Government System’s implementation process”.

As $p=0,000$ is smaller than 0,05 H1 hypothesis is accepted. Therefore, there is a significant difference between the various answers given to the question of “All information and forms on E-Government System are always up to date” in terms of answers given to the question of “Infrastructure of E-Government System’s implementation process”. Those who answered “Yes” (267,53) are closer to strongly agree, while those who answered “No” (141,27) are closer to strongly disagree (See Appendix E.40).

4.3. Evaluation of Research Results

Research results can be analyzed under two main categories: evaluation of interviews and evaluation of surveys.

4.3.1. Evaluation of interviews

- *Leadership and management performance of Executive Committee:*

Executive Committee does not seem to be steering and observing the implementation processes as effectively as it is expected from them. Almost all government agencies involved in the implementation process have been trying to develop and apply their way of E-Government implementation. In terms of application development and their adaptation, those agencies' endeavors show that they are enthusiastic towards E-Government System. Those efforts do not seem to be guided and evaluated by Executive Committee, which may cause waste of resources.

- *Communication:*

Horizontal and vertical communication between institutions and executive boards are not sufficient. It does not seem to be well established and working properly. Some institutions complain about not being able to get their ideas across to management boards. There seems to be only one-way communication works from up to down. Consequently, implementation processes are not open to back stage employees' recommendations. Although there are some communication applications established by certain institutions within themselves, but whole system do not have such an internal interactive communication system covering all government agencies and affiliated institutions. It may prevent the system from being user-centric as the front stage workers of institutions may get customer feedbacks about the system's operation, which they can't pass to management boards.

Management boards used to meet periodically every three months, but not anymore. Their last meeting took place in July 2009, which is 1,5 year ago from now.

- *Coordination:*

As a result of scarcity of focusing on implementation along with insufficiency of communication between government institutions, also coordination between public institutions, private sector and citizens is weak. Some public institutions realize good practices, but they are not willing to share those successful practices with other government agencies as each of them want to show off with their own findings and applications rather than working in cooperation with each other. Considering circumstances, transformation period will take Turkey longer than it has been planned along with spending more than it has been budgeted.

- *Organization:*

Each of the institutions visited during the research seems to be developing different approaches and applications in E-Government System implementation processes. None of them seem to be working through an organized effort and a shared vision. Most of them are proud of their own developments and the performance they have showed so far transferring their services into electronic versions.

- *Training:*

Most employees of the public institutions have had only basic trainings regarding E-Government applications and computer skills development.

In order to achieve inclusion from the perspective of training Turkish Citizens have not been given any training to eliminate Digital Divide. Therefore increase in E-Government System's usage depends only on spreading of internet access points.

- *Lack of trust in cooperation amongst involved public institutions:*

Most of the public institutions do not believe in the benefits of cooperation which enables interoperability, therefore they are not willing to share the citizen related and general information they have. Another reason why those public institutions do not want to participate in sharing those information is because they do not want to waive the power that they think they have through the possession of those information in order to be seen more distinguished than others.

Lack of trust also reflects on users of the system as some of the government agencies keep asking citizens to submit hard copies of electronically submitted documents and petitions.

- *System's infrastructure, its capacity and speed to provide quality services to citizens:*

According to back stage users system becomes down two or three times a day for approximately 15 or 30 minutes each time. Sometimes it gets slow during the day for a few times. During that time it is hard to use or put something through to system. Again during those times many citizen requests pile up and delayed accordingly.

The systems speed is at the highest of its capacity in central offices like governors' office and gets slower and loses its speed up to 75% away from those offices at affiliated district buildings.

- *Measurement of investments' effectiveness:*

Public officials that have been interviewed, have told that there was no such application put into practice to measure effectiveness and efficiency of applications and investments.

- *Motivation among public institutions and their employees:*

As an important stimulus for the success of transformation public institutions' executives and employees are not motivated and organized for success. Lack of training, equipment and promotion of E-Government, through which benefits and transformation roadmap should have been introduced, seem to be the main reasons for it.

- *Publicity:*

Although Peppers & Rogers Consultancy Group has prepared a professional and elaborated publicity activity plan and submitted to Turkish Government, any formal publicity activity has not been realized in Turkey yet.

4.3.2. Evaluation of surveys

- Most of the participants of the survey have been comprised young, middle and upper middle age people. Almost 50% of surveys have been done by the age group of 30-60 and 42,4% of them have been done by the age group of 17-30.
- Participation of different gender is almost equal. 45% of the participants are women, the rest are men.
- 64,8% of the participants have university education, 13% of them have high school education, 11,5% of them have PhD degree 10,5% of them have master degree and only one person is with primary education background. According to the research done in 2010 by TSI, 2,8% of non-educated people, 14% of primary school graduates and 54% of secondary school graduates in Turkey use the internet, but their participation in survey was extremely low. As the survey have been sent to some thousands of people over the internet it can be deciphered that those people were not particularly interested in participating the survey although they received it. Another reason for this being could be related to finding E-Government System beneficial. According to this study's survey results, more educated the citizens are, more they find it beneficial. So, although some number of people from those particular groups use the internet, it is obvious that they do not care much about E-Government System in spite of average internet usage rates, which indicates that need for the system and its services have not been created enough among those people. Moreover, it should be kept in mind that internet usage rates do not necessarily show what those people are capable of doing over the internet. It can not be overlooked that utilizing E-Government System requires certain level of ICT competency.
- Almost 67% of the participants connect to the internet 3 to 5 hours or more every day. Considering four hours of watching TV is accepted to be an addiction, apparently internet has become a kind of habit for those people. Besides, the higher marked period of this question amongst the groups is 1 to 3 hours, which has been answered by 25,7% of the participants. It indicates that internet is about to become a habit for them also.
- 74,8% of the participants think that internet connection fees are expensive in Turkey.

- 86,8% of the participants support and find it necessary for Turkey to have a transformation of “information society”.
- 51,6% of the people know what kind of services they may acquire from E-Government System.
- %76 of the participants think that E-Government System is essential for Turkey.
- Opinions of 92,8% of the users have not been asked constituting E-Government services. Opinions of 60,3% of citizens’ organizations or organizations, where they work, have not been asked constituting E-Government services.
- 78,5% of the users wish to participate in constituting the services in E-Government System with their ideas.
- 67,9% of the users would like to discuss E-Government services with other citizens on an internet environment.
- 50,6% of the users do not find it secure to send personal information to government over the internet.
- 66,4% of the users think that E-Government services need improvement.
- 51,2% of the users think that E-Government services increase government’s transparency and accountability.
- When E-Government System’s user-centricity is increased more beneficial E-Government System is found.
- More the E-Government System is user-centric, more users communicate with the Government through E-Government System.
- User-centricity is also important for the system’s security as more users find the system secure when it is more user-centric.
- Users also correlate user-centricity along with the success of infrastructure of E-Government System’s implementation process.
- More users experience E-Government System, more they realize the benefits of it.
- More the benefits of E-Government System increases more users feel that they better communicate with the Government through E-Government System.
- Creating need for E-Government System also increases users’ perception of E-Government System’s benefits.
- When security of the system is set, more users are inclined to use it then more they realize the benefits of it.
- More beneficial the system is, more users think that R&D & ICT is increased in Turkey.

- When the users' technology competencies arise, their perceptions of benefits of E-Government System increase.
- It is important for the Government to increase users' experiences of E-Government System as more people use it more they realize that they are able to communicate better with the Government and the system's security increases.
- More users experience E-Government System more they believe they are technology competent.
- Government also should emphasize publicity activities of E-Government System in order to make more people use it.
- Increasing security of the system is also important for the Government as to communicate with the users via E-Government System.
- Users think that more the system is secure, more its infrastructure of implementation process is believed to be good.
- Users also believe that more publicity activities are done, more the system is secured.
- Developing R&D and ICT in Turkey makes users believe that they are technology competent.
- More publicity activities are done, more users incline to believe that infrastructure of E-Government System's implementation process is good.
- Men find E-Government System more beneficial than women do.
- Men think that they are more technology competent than women do.

More users are given training on E-Government System,

- more they think E-Government System is user-centric.
- more they experience E-Government System.
- more they believe that they are able to communicate with the Government through E-Government System.

More users know what E-Government gateway is,

- more they think E-Government System is beneficial.
- more they are technology competent.
- More they think publicity activities for E-Government system is done.

Majority of the users benefit from E-Government System without knowing what E-Government gateway is.

If more users had the chance to have internet accesses at anywhere and at all times, more they'd benefit from E-Government System and they also,

- think E-Government System is user-centric.
- believe that E-Government System is beneficial.
- experience more of E-Government System.
- believe that they are able communicate with the Government through E-Government System.

Those, who also want to reach E-Government Services through social media tools like “Facebook” and “Twitter”,

- find E-Government System user-centric.
- find E-Government System secure.
- believe that infrastructure of E-Government System's implementation process is good.

Those, who want to prefer to have all E-Government services through mobile devices,

- find E-Government System user-centric.
- believe that E-Government System is beneficial.
- believe that they can communicate well with the Government through E-Government System.
- think that E-Government System is secure.
- think that infrastructure of E-Government System's implementation process is good.

Age statistics:

- Users from age group of 60-70 are closer to strongly agree in terms of creating need for E-Government System, while the users from the group of 17-30 are closer to strongly disagree.
- Users from age group 30-40 think that they are the most technology competent, while the user from the group of 70 and older is the least.

Occupational statistics:

- Employees are the most beneficiaries of E-Government System, while unemployed users are the least.
- Self-employed users think the most that needs for E-Government System need to be created, while students are the least to think in that way.

Educational statistics:

- More users have higher education background more they find E-Government System beneficial.
- Users who have master degrees think themselves to be the most E-Government experiencing people, while high school graduates think themselves to be the least.
- Users who have master degrees find themselves to be the most technology competent citizens, while high school graduates find themselves the least.

The Users who know what E-Government System is also,

- think that E-Government System is beneficial.
- wish that need for E-Government System needs to be created.
- think that publicity activities for E-Government System have been done.

More companies' opinion are asked constituting E-Government services,

- more users find the system user-centric.
- more users think that system is secure.
- more users believe that infrastructure of E-Government System's implementation process is good.
- more users think that publicity activities of E-Government System is done.

More the same information is reached from all different web pages of E-Government System,

- more users believe that E-Government System is user-centric.
- more users think that E-Government System is beneficial.
- more users experience E-Government System.
- more users think that they are able to communicate with the Government better through E-Government System.
- more users find E-Government System secure.

- more users believe that infrastructure of E-Government System's implementation process is good.

When it is possible to do different transactions with the same data on various web pages of E-Government System,

- users think that E-Government System is user-centric.
- users believe that E-Government System is beneficial.
- more users experience E-Government System.
- users think that E-Government System is secure.

When all information and forms on E-Government System are up to date,

- users experience E-Government System more.
- users think that system is user-centric.
- users believe that they are able to communicate better with the Government through E-Government System.
- users think that infrastructure of E-Government System's implementation process is fine.

5. CONCLUSION

As a new system of governance, E-Government System does not solely mean integrating ICT into traditional work processes computerizing and transferring all services to their electronic versions, but it also requires substantial changes in governance structure and

services provided. Thus, traditional perception of passive citizen, ways of doing business, delivering services, communication between the government and its citizens and handling transaction processes need to be renewed and developed. Business procedures should be simplified. The concepts of active citizens in governance, new way of doing business, raising quality and value of services, sharing information amongst agencies as well as with citizens and creative and distinctive ways of interactive communication between the government and its citizens should be put into practice and internalized.

Transition period from a traditional governance system to E-Government System encompasses some strategic components, which are accomplished through participative and cooperative endeavors. Thus, making all parties get involved in the transformation process is especially important to achieve a fruitful and a well functioning E-Government System. The most effective way to make those beneficiaries to participate in change is to make them believe in it.

E-Government System needs to be introduced well to all, from back stage users to end users, involved in implementation process as to make them fully support and participate in it along with erasing any kind of ambiguities they may have in mind. Each opportunity should be taken and each media tool should be used to realize its publicity activities before and even during the implementation process. Having done that, the goal of optimum usage of the country's resources is reached and also change period is completed in an acceptable period of time. It should always be remembered that shorter the transformation period is, more successful the results are. Conversely, more implementation period takes time, more participators lose believes in change, which causes wasting the country's valuable resources.

However Turkish Government has made some progress in achieving implementation of E-Government System, there are certain things to be dealt with as to increase its efficiency. In that respect, the most important obstacles to overcome for Turkey as to attract more users to E-Government System seem to be changing the habit of not sharing information among government agencies and also sharing information with citizens and private sector, seeing citizens as customers, consulting them on various subjects, making them participate actively in decision making processes, protection of personal information and privacy of

users along with making the system embrace all citizens including disadvantaged, disabled and old people who do not use internet or mobile devices.

According to the research results of this study, more citizens are aware of E-Government System more they find it secure. So, more and more citizens can be inclined to utilize E-Government System and its services through publicity activities. Conversely, some citizens will not feel themselves secure using E-Government System unless the personal information of citizens is protected by the constitution.

Research results of this study reveal that citizens do not seem to be participating in constituting E-Government Services and related applications in Turkey. An ideal system needs to be built upon users' expectations and needs as to make it more beneficial and useful for them, through which user-centricity can be effectuated. In reaching that goal, social media tools like "Twitter", "Facebook" and "YouTube" can be used as interactive environments or an alternative one can be created and put into practice as to be able contact citizens better and gain their feedbacks accordingly. In that way, Turkish E-Government System would be more user-centric practicing participative management, through which it would also be easy to shape patterns of its services and context of information delivered based on beneficiaries needs. Besides, having achieved that Turkey will realize something that most of the countries have not accomplished yet. According to the survey results of this study, user-centricity for E-Government System is important for users as it provides utility of the system, increases communication between the government and the users and raises security of the system. It is also thought to be one of the most important elements for the success of infrastructure of E-Government System's implementation process.

Another important priority for Turkey should be given to sharing information among government agencies following certain standards and principles as to be able to achieve interoperability. The main obstacle to realize interoperability is not to be willing to waive the power that government agencies think they have possessing the specific information. Having done that Turkish E-Government users will realize the difference in speed, quality and value of services.

One of the most interesting findings is that internet usage has becoming a habit for Turkish internet users like watching TV, considering four hours of watching TV is accepted to be an addiction, as almost 67% of the participants connect to the internet for 3 to 5 hours or more every day.

In conclusion, certain essential steps come forward as a result of this study which need to be put into practice in order to realize the strategic structural components of E-Government System implementation:

- Setting up an ideal executive structure to handle implementation processes effectively employing competent executives for necessary management systems,
- Establishing an office, which is responsible only from information, its flow and E-Government implementation, directly reports to prime minister,
- Providing CIO, executive board and implementation boards with necessary authorization needed for implementation,
- Providing seamless coordination to manage expertise and resources in hand in achieving desired goals of implementation process,
- Identifying specific and agreed goals for change together with beneficiaries,
- Ensuring government's and executive boards' constant full support towards change and implementation processes,
- Establishing interactive communication systems between government, public and private sector to convey directives, needs and problems in time and correctly,
- Being more transparent and accountable in government's actions,
- Putting into practice elaborated publicity activities for E-Government System and its services to ensure high uptake rates,
- Providing government agencies' staff and citizens with the necessary trainings as to adapt them to change and make them get the most out of E-Government System and ICT,
- Supplying reasonably priced internet access and lots of internet access points as to make it easy for citizens to utilize both E-Government services and ICT,
- Reconstructing and modernizing all services provided together with their delivery ways according to beneficiaries' expectations making them participate in reconstruction process constantly while shifting the priority from government agencies to citizens as to achieve user-centricity,

- More citizens are to be benefited from the services more E-Government System is successful.
- Standardization of all infrastructure including, services, forms, software used by government agencies, file formats and transactions,
- Establishing an assessment system, through which performance of implementation processes and ICT investments of the system are observed and doing necessary adjustments on implementation plans and projections accordingly,
- Changing the government agencies' attitude of not to share information among each other as well as with citizens and private sector as to accomplish interoperability, user-centricity and users' satisfaction accordingly,
- Securing the system, users and their personal information along with their privacy,
- Making sure of constant access to the system,
- Establishing a single portal as to simplify to reach the services provided,
- Applying VCD principles on websites considering HCI to ensure a user friendly system,
- Subsidizing R&D together with ICT investments in general and channeling related developments to the public.
- Mobile devices adaptable applications and services need to be emphasized and put into practice as M-Government seems to be the future of E-Government System.

There are also some issues that need to be focused on if any government wants to be ahead of other governments and make a difference in succeeding E-Government implementation along with catching up with future trends in E-Government System. Latest developments indicate that, as a new trend, mobile devices have started to be used for providing E-Government services as to achieve the goal of user-centricity along with increasing conversion rates. Considering how fast mobile phone subscriptions and use of mobile devices even in developing regions spread, it will not be wrong to say that more and more services will be desired to reach through mobile devices as a result of their enabling structure of portability and freedom. Therefore, E-Government applications need to be mobile devices adaptable.

The concept of M-Government seems to be looming and will be the future of E-Government System reinforced by spreading of broadband access, which enables users to connect the internet much faster along with facilitating to transfer substantial amount of

information much quicker than ever. Mobile applications are also important as they create a unique opportunity for the governments enabling them to be connected to their citizens at all times realizing the concept of ubiquitous government.

Green IT is another issue to be focused on. As global warming seems to be seriously looming, citizens more likely will expect their governments to take actions to diminish carbon footprints regarding use of ICT. So, energy efficiency, environmental sustainability and maintaining ecosystem's vividness need be seriously taken care of in creation of Green Government. Cloud computing is a new service delivery model, in which various resources, data and applications are integrated and served to users over the internet, seems to be one of the solutions in succeeding it. It provides the government with optimum resource usage, minimizing human interaction with service provider, energy usage and carbon footprint and reducing operating costs. Besides, usage of services can be easily controlled monitored and reported by cloud computing which also provides transparency for both sides.

E-democracy related applications and environments will spread and gain extreme demand as more and more citizens, especially those who have not had the chance to make their voice heard, have been utilizing new social media environments in an incremental manner that shore up pluralism and representativeness. Besides, more social environments in cyberspace are used to express feelings more they become new venues for new forms of public sphere. So, governments should take the advantage of those environments to communicate better with their citizens and aforementioned applications, in which citizens' participation in decision-making and governance takes place, should be developed and emphasized. It should be always remembered that creating democratic environments and applications have more meaning when they are propped up with respecting and taking care of privacy of users more.

As it is a user-centric action to attract and take citizens seriously, sharing of information with citizens and with private sector should be paid more attention as to create and especially maintain need for E-Government System along with springing up a perception on users of being taken seriously by the government. Therefore, it is one of the fundamentals of increasing trust towards the government.

In order to develop e-services applications and moving their services to an upper level for future E-Government Systems, governments should consider applying “augmented reality” to their services as to make a difference in interactive service providing which minimizes deficiencies of virtual communication over face to face communication. Having realized that user-centricity can be increased through more personalized and customer-tailored services enabling E-Government System to renew itself for each user. It also helps to increase users’ trust and security needs of usage of E-Government System, as they will interact with almost real service providers in appearance being served by individually tailored services.

Deciphering aforementioned predictions it can be said that developing better interactive communication with citizens in serving them will be the critical success factor of E-Government Systems. Consequently, communication tools, social media tools and social networks reinforced by ICT developments seem to remain the most powerful driving forces for E-Government Systems as more and more people have been becoming attracted by those environments and platforms. Concept of “ideal democracy” will be realized through participative electronic services and applications in the virtual environment that enable governments to be ubiquitous whenever and wherever needed in serving their citizens.

APPENDIX A: INTERVIEWS

A.1. Municipality of Kadıköy District of Istanbul City / November 5th. 2010

Şevki Köseoğlu – IT Manager

1. What is your organization's aim and strategies establishing the E-Government System? Is there any shared strategy among public agencies?

Our strategies for 2010 to 2014 are as below;

- Developing effective and efficient personal politics in order to establish highly coordinated internal structure as to provide services with ideal standards.
- Making use of e-municipality a part of daily life in order to increase economic and social advantage.
- Eliminating time waste and increasing service quality to maintain e-municipality.
- Starting the project of virtual municipality (SO-BE) services providing individual video conference and related services to citizens living in Kadıköy District and establish the system to at least one neighborhood until the end of 2014.
- Streamlining the security of IT up to national and international standards as users' expectations.
- In order to make workers of our municipality get the most out of IT and make them use the information effectively inspiring modern business applications will be spread throughout the municipality.
- Owing to provide quality, sustainable, effective and efficient service available systems will be enhanced according to technological developments and needs together with procuring new and advanced systems.

2. Does your organization's E-Government System have an operation team? If yes, have those strategies been supported by that team?

Our operation team of E-Government is our IT department and IT employees support the system.

3. Do you believe that those strategies for E-Government have been achieved? Please elaborate.

We have been realizing those strategies in a period of time.

4. Ever since E-Government project started has any hardware or software been renewed in your organization?

We have planed to up grade and renew our systems that we use including the computers whichever needs to be renewed.

5. Has the number of staff working for your institution changed ever since E-Government project started?

No.

6. Do you need any hardware or software specialist for your institution?

Not necessarily.

7. Do you need any computer for your institution? Do the ones you have enough in terms of their capacity?

We have 526 computers of high technology product in the municipality.

From the human resources perspective as IT department we have only necessary employees. Therefore we outsource some services.

The systems we use are as below;

- XP
- Server 2003 r2
- Aix
- Oracle

Hardware structure can be examined in four groups;

Server:

IBM THINCENTER A50 PC : 3 pieces

IBM X SERIES : 19 pieces

DELL POWER EDGE : 2 pieces

SYSTEM P5 : 3 pieces

SYSTEM STORAGE : 1 piece

IBM RS 6000 SERIES : 2 pieces

Network equipments

SWITCH : 22 pieces

MODEM : 47 pieces

CISCO AIR LAP (ACCESPOINT) : 69 pieces

CISCO CATALYST (SWITCH) : 19 pieces

CISCO SERIES (SWITCH) : 7 pieces

CISCO 4400 WIFI CONT : 1 piece

ETHERNETWAN : 11 pieces

LADOX 8 PORT 100 FX : 19 pieces

3COM FASTETHERNET : 1 piece

PC

Pc : 526 pieces

Printer

NOKTA VURUŞLU : 60 pieces

LAZER : 114 pieces

MÜREKKEP PÜSKÜRTMELİ : 46 pieces

THINCLIENTE : 115 pieces

300 KVA power Source

30 KVA Power Source

SOFTWARE

U-kbs Software, Lotus Domino Notes, Geo-media, TSM Tivoli Storage Manager, Checkpoint FW-1 Next Generation for Vpn, Antivirus Symantec for Multi Platform, IQ suite anti-spam for Domino server, Personal Attendance Tracking Software, Restaurant

Entry Software, Netcad Map Software, On-line Ticket Sale Software, Hospital Automation Software

Db-visit Standard One, Library software, Microsoft Office 2003, Microsoft Office 2007, Microsoft Office XP

WEB

Our websites in operation:

www.kadikoy.bel.tr ogrenciyurdu.kadikoy.bel.tr

www.bmkm.gen.tr www.kadikoyposta.com

www.ckm.gen.tr eatik.kadikoy.bel.tr

www.hkkm.gen.tr yenumutlar.kadikoy.bel.tr

www.sureyyaoperasi.org yenumutlar.kadikoy.bel.tr

www.saglikpoliklinigi.org adm.kadikoy.bel.tr

www.dispoliklinigi.org ehizmetler.kadikoy.bel.tr www.cocukpoliklinigi.org gormeengelliler.kadikoy.bel.tr	www.diyabetmerkezi.org gkkm.kadikoy.bel.tr	ureme.kadikoy.bel.tr meb.kadikoy.bel.tr
engelsizis.kadikoy.bel.tr www.kusdilicayiri.com	www.kadikoykonsey.org www.mahalleevi.com kutuphane.kadikoy.bel.tr/Yordamtk.htm	

8. Ever since E-Government project started was your team been given any computer related training? If yes, what is it?

Whenever we feel the need that a kind of training needs to be given, we provide our staff with those trainings. Sometimes we outsource trainings depending on the content of the training. There are some periodic trainings going on. When we realize that some other kind of trainings needed we outsource those needs.

9. Do you work in collaboration with E-Government coordination team in Ankara? How do you communicate with E-Government executive committee? Do you attend regular meetings regarding E-Government implementation? How often?

We wish if we'd be able to work in collaboration with them but, we do not. We can not suggest anything to them regarding the operation of E-Government System. They simply do not listen and try to help. We have asked for a few things regarding E-Government System such as seeing all Turkish Citizens' information through identification sharing system adapted on E-Government System apart from the ones live in this district, but they no accept it and do not tell us the reason why not. We need it because of tax collection related issues. Our citizens do not have to live in this area although they are registered here. We have submitted a petition as to let them know about it, but it has not been solved yet. What they tell us in return is that because of security reasons all citizens' information can not be opened to every public institutions. Is it possible that a public institution does not trust to another institution. It is publicly said that this service is provided within E-Government System, but in reality it is not. That is why we can not have a complete integration among institutions. Another problem with the system is late update of information. For instance, land registration of sold properties is updated one week behind in E-Government System, which cause us a great deal of problem. It should have been online. I have to call land registration institute to find out update information. We can not call it as an integrated system. It is obvious that there are certain problems on integration amongst institutions.

A new system for public tenders has been adapted to E-Government System. As there is not a web service, where we can enter the information on the system, we have to enter the same information twice. First, we enter it in on our system and then on E-Government System. We wish there was a web service available then we would not have to do the same thing twice.

Also recently another application has been started in E-Government System that permissions for constructions are given by Statistical Institution of Turkey (TÜİK). This system seems to be set up only for data entry. You can not print out any kind of report. As to be able to print out reports for any period of time we also use another system to be able to keep track on information and print out certain reports. Therefore our employees enter the same data to the system twice, first enter it to our system and to E-Government System. Many times we have asked for a web service to be opened, which has not been opened yet.

As Municipality of Kadıköy District we have link to E-Government System but its substance is not sufficient to meet our needs to serve better to the citizens. Other services that we wish to have available on E-Government System are land registers, population registration system

10. Do you believe that everything is going according to road map and time schedule for E-Government implementation?

I can say yes for our part of the implementation. We have time schedule for our services' Change to E-Government services.

11. What kind of hurdles, problems and deficiencies you came across establishing E-Government System in your organization?

We prefer to be heard by E-Government implementation board and work with them in collaboration to be able to communicate with them to convey the problems we have effectively. We do not even have periodic meeting where we can express our situation pertaining E-Government implementation.

12. Do you believe that implementing process of E-Government is an activity of Change Management? If yes, what has been done in your organization accordingly?

Yes it is an activity of Change Management. We train our employees on whatever they may need to be trained according to their needs.

13. Have you or your colleagues been trained on Change Management?

No.

14. How do your employees feel about E-Government project?

They are excited about it.

15. Has cultural structure of Turkey been considered establishing E-Government System?

Do you believe that it is necessary?

I do not know.

16. What sorts of activities have been done or are being done to facilitate internet access for citizens?

I have no idea.

17. Do you believe that decreasing internet prices would positively effects E-Government System usage of citizens?

Yes absolutely. If you wish to compete with other countries all citizens should be able to have an access to internet. More you spread the internet more people use the system.

18. What sorts of activities have been done to spread broadband internet in Turkey?

I have no idea.

19. What kind of trainings have citizens been given on how to use E-Government System?

Citizens have not been given any training about how to use the system. When they have a problem they send us e-mails.

20. What kinds of activities are being done to emerge a society that is not foreign to technology?

I do not know.

21. What kinds of activities have been done in your organization to inspire innovation and to develop Research & Development?

We always keep new applications in IT field and try to adapt those in to our organization as much as we can effort.

22. How long does it take you to answer a request or a complaint coming through your website? Is there any written standard for it? Do you ask a hard copy of that request afterwards? Why?

When we have a request or petition from the citizens we divert those requests to related departments or institutions after minutes of receiving during working hours. Replying duration depends on the content, but according to the law of acquire information it can not be later than 15 days. We do not ask for a hard copy of online applications.

23. How many percent of the services your institution provides have been transferred to your website?

Apart form the transactions such as marriage that citizens have to be seen here in the building individually almost all transactions and services have been transferred to the system.

24. Do you have any standard to follow creating your website?

We design our own website.

25. How often does your organization update current information on E-Government System?

We update our website when it is needed.

26. Do all services of your institution on website work constantly? How often do you check it?

When there is a problem we fix it immediately.

27. Does password of E-Government gateway work for your organization's website? Or do citizens get another password?

It does not work on our website. Citizens dwelling in jurisdiction of Kadıköy District need to get a separate password to use and benefit from our website's services.

28. What kinds of activities have been done in your organization to achieve interoperability of E-Government System with other institutions?

As I explained in the previous questions, although we have asked to benefit from certain services we have not been allowed to benefit from those services to provide a better service to our citizens. Hence, we can not realize interoperability.

29. Is it IT department that responsible from E-Government project in your organization? Which institution they work with in order to maintain interoperability of E-Government System?

Yes it is IT department. We receive circulars from Ministry of Internal Affairs asking us to do certain things regarding E-Government System. Then we do the necessary corrections accordingly.

30. How do you provide security to E-Government System, data and users?

We have many software within our municipality like U-kbs, Geomedia, Tivoli Storage Manager (TSM) Backup Software, Personel Attendance Track software, Restaurant Entry Software, Netcad Map Software, On-line Ticket Sale Software.

31. Do you keep back up of the information which is in your system? Is there any standard for it?

We take back up of the system in our premises as well as out of the premises, where our disaster units are located. We back up the system up to six months earlier.

32. Do you find legal infrastructure adequate for using E-Government System safely?

No we do not. Certain laws need to be legislated.

33. Does your organization do anything to participate citizens in decision-making process of establishing E-Government System?

We care for their opinions creating for instance web our organization's website. Recently we have changed our website. The day after we received many complaints and requests about our citizens did not like it. So, we changed it back to how it was before.

34. Is it one of your priorities that E-Government System is user-centric? What do you do to provide it?

We care about our users and modify our websites according to their needs and expectations.

35. What has been done in terms of standardization of all information and services on E-Government System among public institutions?

We enter the information on the system for standardization.

36. What sort of cooperation does your organization have with private sector in terms of providing standardization on information and services on E-Government System.

We receive circulars from Ministry of Internal Affairs and take necessary actions accordingly.

37. What do you do to provide all time accessibility to E-Government System?

We ensure all time accessibility of the system. When there is a

38. What kind of promotion activities do you do for E-Government System?

We have necessary promotions on our website to introduce the system to our citizens. It is our target to promote the system to as many citizens as we can reach. Therefore, we keep publishing and updating those information on our websites.

39. Do you do any activities to induce more users to E-Government System? If you do, please explain.

We do not do anything.

40. Is there any system adopted in E-Government System to renovate it? If yes, what it is and does it work properly? Has any renovation been done accordingly?

We have recommendation icon on our websites, where the citizens contact us and convey their messages to us. Also blue table application is available for citizens, who might need help or have something to say.

41. How do you measure satisfaction level of citizens on E-Government System?

We have user statistics that we use them to see citizens satisfaction of the system.

42. What is the current situation of E-Government System in terms of usage? Who are the frequent users? How often they use it? What is the user profile (age groups)?

We have almost ten thousand users using our system per day from various IPs.

43. What is the proportion of visitors to gain information and users to gain services of E-Government System? Do you notice increase in user figures?

Almost 20 to 25 % of the taxpayers use our system to pay their taxes. It is a good figure for us. We aim to increase it.

44. How is yield and cost effectiveness of E-Government System measured in your organization? How do you evaluate it?

Citizen satisfaction is our priority so that is why we do not care much about cost-effectiveness.

45. Do you think that what you have done is enough for an ideal E-Government System? What else can be done?

We keep trying to improve services that we provide to our citizens. We plan those improvements in advance in our targets.

46. What is the key success criterion/s in achieving a successful E-Government System?

The key criteria are coordination and also asking for all users' opinions in order to establish an ideal system.

47. If you were the chair person of E-Government project in your organization and/or in Turkey what would you do differently? Why?

I'd do what has not been done so far such as getting all related units of government together to find out what were their needs to realize E-Government System. All back stage users should be included in implementation process of E-Government. It is too late to do that as the implementation process has already started. Therefore I do not think that the project will be a success.

48. What does E-Government mean to you? Do you believe that it is going to be useful for citizens?

I believe that the system would be more useful if the citizens participated in implementation process.

49. Has your organization's website have a link to other websites of your organization and/or E-Government gateway of Turkey?

No.

50. Do you think that E-Government services increase government's transparency and accountability?

We believe so. All requests received through the system are registered and can be seen by our high-ranking officers.

51. What has been done to provide accessibility for disabled citizens to E-Government System?

We have

A.2. Governorship of Kadıköy District / October 27th. 2010

Neşe Akçit - Data Preparation and Control Officer

Ebru Orhon - Data Preparation and Control Officer

Bahar Tokatlı - General Administration Services Officer

Songül Deymaz - Officer

1. What is your organization's aim and strategies establishing the E-Government System? Is there any shared strategy among public agencies?

We have no strategies.

2. Does your organization's E-Government System have an operation team? If yes, have those strategies been supported by that team?

Our organization has no operation team for E-Government System. As officers we all work together in cooperation. Each of us is responsible for our part of E-Government services.

3. Do you believe that those strategies for E-Government have been achieved? Please elaborate.

We have no strategies.

4. Ever since E-Government project started has any hardware or software been renewed in your organization?

We only had 3 new computers together with their screens within E-Government project. They were taken by high-ranking officers in our organization. None of us had one of them. We have been using old computers.

5. Has the number of staff working for your institution changed ever since E-Government project started?

No. Staff number of our team is the same. We have staff shortage.

6. Do you need any hardware or software specialist for your institution?

We have someone. He is not working in the organization. When we have a software or hardware problem we call him and ask him to come.

7. Do you need any computer for your institution? Do the ones you have enough in terms of their capacity?

We need new computers for E-Government applications. The ones we have are not enough in terms of their capacity.

8. Ever since E-Government project started was your team been given any computer related training? If yes, what is it?

Sometimes we are invited to governorship of İstanbul to be given certain types of training for new E-Government applications. Sometimes someone come from there to train us. We have not been given any computer skills related trainings.

9. How do you communicate with E-Government executive committee? Do you attend regular meetings regarding E-Government implementation? How often?

We receive written directives from governorship.

10. Do you believe that everything is going according to road map and time schedule for E-Government implementation?

We do what we are asked to do.

11. What kind of hurdles, problems and deficiencies you came across establishing E-Government System in your organization?

We need additional hardware and human resources in order to be successful.

12. Do you believe that implementing process of E-Government is an activity of Change Management? If yes, what has been done in your organization accordingly?

E-Government is an activity of change. Many ways, with which we do our job, has been changed.

13. Have you or your colleagues been trained on Change Management?

No.

14. How do your employees feel about E-Government project?

It is much better than conventional ways of doing the work. We believe that it is a useful system for us and for citizens.

15. Has cultural structure of Turkey been considered establishing E-Government System? Do you believe that it is necessary?

No idea.

16. What sorts of activities have been done or is being done to facilitate internet access for citizens?

We do not know. But, most of our citizens living in this area already have internet access.

17. Do you believe that decreasing internet prices would positively effect E-Government System usage of citizens?

In this terrain most of our citizens use E-Government services.

18. What sorts of activities have been done to spread broadband internet in Turkey?

We have no idea.

19. What kind of trainings have citizens been given on how to use E-Government System?

Each of us comes across with many wrong applications, which had not come to us. When it happens we send those applications to whichever other public agencies are responsible from. It indicates that citizens need to be trained on how to use E-Government services and need to be told which institution is responsible from which services.

20. What kinds of activities are being done to emerge a society that is not foreign to technology?

We have no idea.

21. What kinds of activities have been done in your organization to develop Research & Development?

None.

22. How long does it take you to answer a request or a complaint coming through your website? Is there any written standard for it? Do you ask a hard copy of that request afterwards? Why?

Yes there are certain laws for the duration of certain questions to be answered. We do not ask for hard copy of any request or application we get from citizens through E-Government services.

23. How many percent of the services your institution provides have been transferred to your website?

Almost all services related to citizens have been transferred to our website.

24. Do you have any standard to follow creating your website?

Ministry of Internal Affairs has defined the patterns of a standard website that we have been using it.

25. How often does your organization update current information on E-Government System?

It depends on the emergency of the information. Ministry of Internal Affairs organize monthly meeting, in which we decide what needs to be updated and do it accordingly. Sometimes information on our website is updated straightaway.

26. Do all services of your institution on website work constantly? How often do you check it?

Once or twice a week E-Government System gets slower for 5-10 minutes. We realize it while we work on the system.

27. Does password of E-Government gateway work for your organization's website? Or do citizens get another password?

We do not ask the citizens for a password to use our website.

28. What kinds of activities have been done in your organization to achieve interoperability of E-Government System with other institutions?

We only share our information with the ministry of Internal Affairs. There is no need to share the information with other institutions via E-Government gateway.

29. Is it IT department that responsible from E-Government project in your organization? Which institution they work with in order to maintain interoperability of E-Government System?

We have an IT staff supporting us from outside. When we need him we just call him and ask him to come to solve the problem. We definitely need someone working here with us

al the time. We believe that in order to maintain interoperability governorship of İstanbul put all the information coming from various governorships of districts together.

30. How do you provide security to E-Government System, data and users?

We use the standards of the ministry of Internal Affairs.

31. Do you keep back up of the information which is in your system? Is there any standard for it?

Ministry of Internal Affairs takes periodic back ups of our system.

32. Do you find legal infrastructure adequate for using E-Government System safely?

We find it adequate.

33. Does your organization do anything to participate citizens in decision-making process of establishing E-Government System?

Our website has recommendation icon where citizens can click and share their ideas and thoughts with us.

34. Is it one of your priorities that E-Government System is user-centric? What do you do to provide it?

Recommendation space of our website is the only way to realize it.

35. What has been done in terms of standardization of all information and services on E-Government System among public institutions?

We do not do anything.

36. What sort of cooperation does your organization have with private sector in terms of providing standardization on information and services on E-Government System.

We do not have any cooperation with private sector.

37. What do you do to provide all time accessibility to E-Government System?

When we have any problem to reach the system we call the person responsible from IT.

38. What kind of promotion activities do you do for E-Government System?

Although we do not do any activities, many citizens living in the area use E-Government services. We believe that governorship of İstanbul does certain activities.

39. Do you do any activities to induce more users to E-Government System? If you do, please explain.

We do not do any activities. Governorship of İstanbul should be doing certain kind of activities to induce more users.

40. Is there any system adopted in E-Government System to renovate it? If yes, what it is and does it work properly? Has any renovation been done accordingly?

The only system we have is recommendation system.

41. How do you measure satisfaction level of citizens on E-Government System?

We have user statistics where we can see how many citizens use our services on yearly base.

42. What is the current situation of E-Government System in terms of usage? Who are the frequent users? How often they use it? What is the user profile (age groups)?

We keep user statistics on yearly bases.

43. What is the proportion of visitors to gain information and users to gain services of E-Government System? Do you notice increase in user figures?

We notice that every year the number of the citizens get service from E-Government services increase.

44. How is yield and cost effectiveness of E-Government System measured in your organization? How do you evaluate it?

We do not do anything to evaluate cost effectiveness.

45. Do you think that what you have done is enough for an ideal E-Government System? What else can be done?

We have heard that websites of district governorships will be taken under a single website.

46. What is the key success criterion/s in achieving a successful E-Government System?

We have no idea.

47. If you were the chair person of E-Government project in your organization and/or in Turkey what would you do differently? Why?

No idea.

48. What does E-Government mean to you? Do you believe that it is going to be useful for citizens?

We believe that it is useful for citizens and also for us as staff.

49. Has your organization's website have a link to other websites of your organization and/or E-Government gateway of Turkey?

50. Do you think that E-Government services increase government's transparency and accountability?

51. What has been done to provide accessibility for disabled citizens to E-Government System?

We do not know.

A.3. Governorship of İstanbul City / November 4th. 2010

Recep Korkmaz – IT Coordinator

1. What is your organization's aim and strategies establishing the E-Government System? Is there any shared strategy among public agencies?

Project is operated by Ministry of Internal Affairs. Our target is to get the infrastructure ready for the system to be established.

2. Does your organization's E-Government System have an operation team? If yes, have those strategies been supported by that team?

Our IT department is responsible from implementation of the system.

3. Do you believe that those strategies for E-Government have been achieved? Please elaborate.

We have been doing what we are supposed to.

4. Ever since E-Government project started has any hardware or software been renewed in your organization?

Purchasing of software of system is done by Ministry of Internal Affairs. What we purchase is mostly hardware apart from the things to provide sustainability of our system. Any hardware or software standards have not been defined by Ministry of Internal Affairs. Ministry of Internal Affairs defines only the capacities of internet connections for maximum users to provide seamless connection to E-Government System.

When the project started by Ministry of Internal Affairs sent us a survey to find out IT related needs of district governorships of İstanbul that are connected to us. We did the survey and sent the results back to Ministry of Internal Affairs. They bought most of the needs by 60 to 70 %. Each unit was given a printer. Last large purchase was done in the year 2007. It has been three years from that large purchase. Considering the technological

developments we can say technology obsolete quickly. Our IT infrastructure is adequate for E-Government System. We have an internet speed of 30 mbps and almost 220 users working here in the premises can connect to the internet concurrently. But, the capacities of IT infrastructures of district governorships of İstanbul are not enough to run an effective E-Government System. The up most capacity they have is 4mbps. So you can imagine how slow the system may get. More affiliated offices are away from the main server more they loose the speed. Therefore the system infrastructure is a real problem. Standardization infrastructure should also be provided. From my point of view the most important thing for a successful E-Government System is speed of the internet.

5. Has the number of staff working for your institution changed ever since E-Government project started?

No. It has not been changed.

6. Do you need any hardware or software specialist for your institution?

We have a specialist. But, district governorships of İstanbul do not have specialists. They have staff shortages regarding that position. The current situation is that one of the employees, who are capable of IT is responsible from maintaining the system.

There should be an IT department presidency on an ideal organizational chart of Ministry of Internal Affairs and there should be IT managements in all cities. But, unfortunately we do not have that organizational structure.

Another problem is budget and wage restrictions. As we can not pay attractive wages we can not get IT experts to work for us.

7. Do you need any computer for your institution? Do the ones you have enough in terms of their capacity?

As Governorship of İstanbul our system's capacity is good. Before we do any purchasing related IT we ask district governorships of İstanbul City for their needs. They pass their

needs to us we do the necessary purchasing accordingly. When they hire a new employee they try to provide that person with a computer through their resources.

8. Ever since E-Government project started was your team been given any computer related training? If yes, what is it?

Ministry of Internal Affairs organizes trainings time to time depending on the needs. Sometimes Ministry of Internal Affairs asks us to go district governorships to train them on a particular subject. For instance last summer we went to those district governorships to realize on the job training informing them on E-Internal Affairs. Some other times we go to Ankara or another city to be trained.

9. How do you communicate with E-Government executive committee? Do you attend regular meetings regarding E-Government implementation? How often?

We do not attend any regular meetings. There is a communication icon on E-internal affairs system, from where we can convey our thoughts to the Ministry.

10. Do you believe that everything is going according to road map and time schedule for E-Government implementation?

We have been doing our best for not to stay behind our schedule.

11. What kind of hurdles, problems and deficiencies you came across establishing E-Government System in your organization?

We need qualified IT personal for an effective E-Government operation. It is hard to get because of budget restrictions.

12. Do you believe that implementing process of E-Government is an activity of Change Management? If yes, what has been done in your organization accordingly?

Yes it is a kind of Change for citizens and the way they get things done.

13. Have you or your colleagues been trained on Change Management?

No we have not been trained on it.

14. How do your employees feel about E-Government project?

We believe that it will be useful for citizens and us.

15. Has cultural structure of Turkey been considered establishing E-Government System? Do you believe that it is necessary?

We have no idea.

16. What sorts of activities have been done or are being done to facilitate internet access for citizens?

We know that certain activities are being planned. For instance internet classrooms have been turned into internet cafes.

17. Do you believe that decreasing internet prices would positively effect E-Government System usage of citizens?

Yes we believe so.

18. What sorts of activities have been done to spread broadband internet in Turkey?

We do not know. What we know is we need it because current infrastructure is not enough to run a smooth E-Government System. Even dial up connections were better in terms of speed than today's infrastructure. For instance for mobile devices more you are closer to source of internet connection more you can use the available capacity of internet connection. Infrastructure of internet connection is not appropriate for E-Government System. Thus infrastructure and also the speed of internet need to be improved.

19. What kind of trainings have citizens been given on how to use E-Government System?

As far as we are concerned citizens have not been given any kind of E-Government usage trainings. We also do not believe that if there was any sort of training most of the citizens would not attend that. We are kind of persons that before something serious happens to us we do not take any measurement to prevent it.

20. What kinds of activities are being done to emerge a society that is not foreign to technology?

As far as we know nothing is being done. Even if we want to do any activities like training and educating citizens not many people would attend those activities. Our citizens do not seem to be very concerned about it.

21. What kinds of activities have been done in your organization to inspire innovation and to develop Research & Development?

No idea.

22. How long does it take you to answer a request or a complaint coming through your website? Is there any written standard for it? Do you ask a hard copy of that request afterwards? Why?

We do not usually receive requests from citizens. Communication Center of Prime Minister (BIMER) forward us İstanbul Governorship related requests and we answer those accordingly. Answering a request has been regulated through information gaining law and petition application law. So, duration for a request to be answered is 15 days for information gaining requests and 30 days for petition applications.

As E-internal affair system is not used by all affiliated institutions such as city police departments and rural police departments when citizens need certain services from those institutions they need to submit written documents.

23. How many percent of the services your institution provides have been transferred to your website?

We do not provide any direct services to citizens.

24. Do you have any standard to follow creating your website?

We create our own website differ from other city governorships. But we do not follow any standard for it. Whilst Ministry of Internal affairs' recommendations are available on how to create a website.

25. How often does your organization update current information on E-Government System?

When there is something new our website is immediately updated by software specialist and web editor of our institution. We have employees traveling with the governor and when there is something new happened they connect to the system for distance and inform citizens accordingly.

26. Do all services of your institution on website work constantly? How often do you check it?

We check it at all times.

27. Does password of E-Government gateway work for your organization's website? Or do citizens get another password?

They need to get a separate user name and pass word.

28. What kinds of activities have been done in your organization to achieve interoperability of E-Government System with other institutions?

Name of our project is E-internal affairs and even some affiliate institutions such as city police departments and rural police departments still do not use the system. So it is hard and kind of early to talk about interoperability.

It is the case between some public institutions that they have written agreement signed between some institutions and their authorized officials are able to see other institutions information or visa versa.

29. Is it IT department that responsible from E-Government project in your organization? Which institution they work with in order to maintain interoperability of E-Government System?

Yes it is IT department.

30. How do you provide security to E-Government System, data and users?

There is no standard for security of the system. Ministry of Internal Affairs have published a circulation that every affiliated institution need to take basic security measures such as firewall and antivirus programs established on their websites.

31. Do you keep back up of the information which is in your system? Is there any standard for it?

Yes we do keep the back up of the system on daily weekly and monthly bases. We keep back up tapes in a stainless still safe.

32. Do you find legal infrastructure adequate for using E-Government System safely?

It is not enough. It needs to be improved.

33. Does your organization do anything to participate citizens in decision-making process of establishing E-Government System?

No idea.

34. Is it one of your priorities that E-Government System is user-centric? What do you do to provide it?

Before E-Government System most of the citizens did not know where to apply or submit their petitions, but now it is much easier. When they send their requests through application space of E-Government System at the back stage those applications are sorted out and diverted to related institutions. For instance an İstanbul related application come to us and we divert it to pertinent unit in certain district. This part of the operation brings us a lot of burden.

35. What has been done in terms of standardization of all information and services on E-Government System among public institutions?

We do not do anything.

36. What sort of cooperation does your organization have with private sector in terms of providing standardization on information and services on E-Government System.

We do not have any cooperation with public sector in terms of E-Government.

37. What do you do to provide all time accessibility to E-Government System?

We provide accessibility to our system at all times apart from the internet related problems caused by infrastructure of Turk Telecom. When our system is down not many citizens realize or effected by that as we do not provide many direct services to citizens, but when Ministry of Internal Affairs' system is down many citizens realize and effected concurrently together with subordinate institutions.

38. What kind of promotion activities do you do for E-Government System?

We do not do any kind of promotion activities regarding E-Government System.

39. Do you do any activities to induce more users to E-Government System? If you do, please explain.

We do not do anything.

40. Is there any system adopted in E-Government System to renovate it? If yes, what it is and does it work properly? Has any renovation been done accordingly?

There is no system on the website for it as we do not directly serve to citizens.

41. How do you measure satisfaction level of citizens on E-Government System?

We do not measure it for the time being. But we believe that Ministry of internal affairs may.

42. What is the current situation of E-Government System in terms of usage? Who are the frequent users? How often they use it? What is the user profile (age groups)?

We have almost nine hundred thousands of users through different IPs per year.

43. What is the proportion of visitors to gain information and users to gain services of E-Government System? Do you notice increase in user figures?

We do not have that sort of statistics.

44. How is yield and cost effectiveness of E-Government System measured in your organization? How do you evaluate it?

Deficiency of qualified personal in public institutions need to be diminished before we start measuring the outcomes of the system. Therefore we believe that it is kind of early to measure the outcomes of the system. We think that the project is on its crawling process.

45. Do you think that what you have done is enough for an ideal E-Government System? What else can be done?

Qualified personal can be employed for an effective operation.

46. What is the key success criterion/s in achieving a successful E-Government System?

We are talking about establishing E-Government System but there is not enough IT experts and technical staff to work for establishment of the system and its infrastructure. We would maintain experienced human resources first.

47. If you were the chair person of E-Government project in your organization and/or in Turkey what would you do differently? Why?

We would establish a Ministry of Technology to handle with technological matters including technological infrastructure of the country. They can also establish organization chart of IT.

48. What does E-Government mean to you? Do you believe that it is going to be useful for citizens?

It is an easy way of doing things. Yes it will be useful for citizens.

49. Has your organization's website have a link to other websites of your organization and/or E-Government gateway of Turkey?

Yes we have a link

50. Do you think that E-Government services increase government's transparency and accountability?

Yes we believe so. When a citizen send us a request, as it became registered we can not say that we did not receive it. When we receive a request through the system it is quickly move towards the final user as to be answered. Everybody between sender and final user wants to transfer the application to a next point without lingering. Thus citizens gain time for their application to be answered.

51. What has been done to provide accessibility for disabled citizens to E-Government System?

We thought an audio system especially for blind citizens but because of management restrictions we could not realize it. E-Government project for us is managed by Ministry of Internal Affairs so we are not able to do or act in a way that we can establish a new application on our website.

A.4. State Planning Organization / November 5th. 2010

Murat İnce - Expert

1. What is your organization's aim and strategies establishing the E-Government System? Is there any shared strategy among public agencies?

SPO is a strategic institution itself in the process of establishing E-Government System in Turkey as we have been given the role of secretary of executive committee. In that sense we have been rendering our mission of E-Government implementation in Turkey via our strategies, in which we have been endeavoring to lead the strategies of all public institutions. We constitute superior politics for E-Government implementation and we also do have strategies for other public institutions participated in implementation. Turkey's strategies have been coordinated, outsourced, implemented by SPO. We outsourced the preparations of E-Government implementation to Peppers & Rogers Group in 2005. They have organized and run some work shops and large surveys in order to submit us a few alternatives of E-Government implementation in Turkey.

Regarding the implementation we are in the process of finalizing the usage of electronic signature and electronic correspondence.

TÜRKSAT is responsible from managing of E-Government gateway. We are in cooperation with TÜRKSAT at all times.

We do not serve directly to the citizens. What we do in establishing process is to choose public projects in investment program, to allocate fund for them accordingly,

We have a four years action plan from the year 2006 to 2010. We audit and observe all actions in that plan and report improvements or problems to executive committee.

Executive committee is a coordination and decision-making organization of E-Government implementation in Turkey. They do not do anything related to execution.

2. Does your organization's E-Government System have an operation team? If yes, have those strategies been supported by that team?

Yes sure. All the time.

3. Do you believe that those strategies for E-Government have been achieved? Please elaborate.

We have been doing what is necessary to achieve our strategies towards implementation of E-Government System.

4. Ever since E-Government project started has any hardware or software been renewed in your organization?

We keep renewing the systems we use when it is needed. We also renew all ministries' and units' hardware and software needs through investment project expenses. Either we may purchase some goods or they may ask us for purchasing depending on the needs.

5. Has the number of staff working for your institution changed ever since E-Government project started?

No. May be we need more staff now. It was kind of an urban legend that when machines are started to be used in business, need for man power would decrease. In contrary more machines are used more we human are needed. New fields are emerged with the advent of machines and computers.

6. Do you need any hardware or software specialist for your institution?

We have all kind of specialists working for our institution.

7. Do you need any computer for your institution? Do the ones you have enough in terms of their capacity?

When we need we put the necessary purchasing need on to our investment budget.

8. Ever since E-Government project started was your team been given any computer related training? If yes, what is it?

Yes. When there is a need we get training.

9. How do you communicate with E-Government executive committee? Do you attend regular meetings regarding E-Government implementation? How often?

We have an executive committee on the top of the organizational chart of implementation. There are consultancy committee and change leaders committee, which are affiliated to executive committee. Consultancy committee is comprised by private sector, non governmental organizations, Turkey Industrialist and Businessman Association and similar associations. Change leaders committee encompasses public authorities, strategy chairmen and IT managers of public institutions. We used to attend and manage consultancy committee's meeting but then they have asked for their autonomy and ever since they meet whenever they feel like without our existence. Those committees organize meetings among them and when there is something to be solved by executive committee, those committees' representatives, who are already members of the executive committee, bring the matter to the meetings of executive committee. The committee makes its decision about it and then it is put into action. By the way it has been almost two years that executive committee has not had a meeting. They are supposed to meet once in every three months. We have problems about it. They used to get together regularly during former ministers. At that time they had at least twenty meetings. We have no right to push them for meetings. We can not say that there is a direct correlation between Turkey's decrease in ranking and executive committees' meetings.

10. Do you believe that everything is going according to road map and time schedule for E-Government implementation?

There is not a major problem.

11. What kind of hurdles, problems and deficiencies you came across establishing E-Government System in your organization?

Turkey's facts have to be considered evaluating the implementation process. It is not something you can succeed in a short period of time. It depends on the resources of the country, where you want to establish it.

Establishing E-Government System in a country there are four main crucial elements: First is citizen identification information system (IIS), which has been established and been used for about 7-8 year now. IIS would not work without Identification Sharing System (ISS), through which Ministry of Internal Affairs shares the citizens' information with private and public institutions. Right now almost three thousand institutions are sharing that information. That is why we can say that IIS is based on ISS. Second is organizations' identification system. A pilot project for that is being carried out in Mersin City. In the near future it will be spread to other cities of Turkey. The thirds one is address information system, which comprises citizens' and organizations' addresses in Turkey. It has not been used officially yet, but it is ready to be included in E-Government System. The fourth and the final one is land registry and cadastre system. It has been taking long time to finalize it as Turkey is an old piece of land and many people lived on it. It is sometimes hard to figure out which land belongs to whom. There are still land registers coming from Ottoman Empire.

Those four elements should be communicated with each other at all times. We can say that three out of four aforementioned elements are in use of E-Government System. Appeared face of the system is called E-Government gateway.

Another obstacle which lays in front of E-Government implementation is the law of individual information protection, which has not been completed and constituted yet. It had been prepared since 2004 and then been brought to the parliament in 2007. I have personally been in preparations. Apparently the most important thing which prevent it that some institutions do not want to share the information they have or they do not want to have any problem accessing information. As you know even eavesdropping has been happening in Turkey. We do not know who is behind it, but people do not want to lose those privileges. I believe that it is that easy to explain why it has been so long to complete the preparations of that law.

It is so important for the system's usage.

12. Do you believe that implementing process of E-Government is an activity of Change Management? If yes, what has been done in your organization accordingly?

Yes we believe so.

13. Have you or your colleagues been trained on Change Management?

No.

14. How do your employees feel about E-Government project?

They are all focused on doing their best for implementation.

15. Has cultural structure of Turkey been considered establishing E-Government System? Do you believe that it is necessary?

That is why preparation process of implementation has been outsourced. All facts of Turkey have been considered before implementation start.

16. What sorts of activities have been done or are being done to facilitate internet access for citizens?

For instance some libraries have been provided with computers and internet accesses for citizens to reach free internet access. Internet access it is not a problem especially for the dwellers of big cities. Families with a low income are able to effort a computer. They can pay its installment easily.

17. Do you believe that decreasing internet prices would positively effect E-Government System usage of citizens?

Ever since we started implementation process we could not solve this problem and could not make it any cheaper. It is an action, from which Ministry of Finance is responsible to

solve. One of the main reasons of high price is high taxes, from which Ministry of Finance does not want to waive. Decreasing of internet access price was on the first action plan and even on the second, but we could not be able to overcome that obstacle. Making communication easy and cheap for citizens is the most important action for economic growth. For instance, after 1970s it was one of US government's priorities to develop communication in order to make their citizens connect with each other easily and to provide them with mobility. It is a matter of a scientific research that if decreasing the price of internet increases economic transactions and Gross Domestic Product of Turkey accordingly. Having done that Ministry of Finance might be convinced to decrease the communication taxes.

From my point of view cheaper the internet access more citizens use the internet and E-Government services accordingly.

18. What sorts of activities have been done to spread broadband internet in Turkey?

Competition in telecommunication sector has been being inspired.

19. What kinds of trainings have citizens been given on how to use E-Government System?

Nothing has been done about it.

20. What kinds of activities are being done to emerge a society that is not foreign to technology?

Rather than focusing on all citizens we especially focus on certain groups, who have abilities towards IT, in society such as students, unemployed citizens and employed citizens. Students have been provided with IT classrooms, classrooms with computers and internet accesses at almost each school in Turkey. It could be a matter of discussion that how many students for per computer and how often the computers are used by students. Citizens, who are realizing their military service, are trained on IT issues. We also have 1850 public internet access centers opened in various places of Turkey. Ministry of education is responsible from the project. 358 of those centers have been located in

military areas for the citizens realizing their military service. 918 courses were run in military areas and almost 60.000 soldiers were trained at those centers between June 2008 and December 2009.

21. What kinds of activities have been done in your organization to inspire innovation and to develop Research & Development?

Related activities according to the strategies have been being put into practice.

22. How long does it take you to answer a request or a complaint coming through your website? Is there any written standard for it? Do you ask a hard copy of that request afterwards? Why?

It has been regulated through laws. It can not be later than those laws state.

23. How many percent of the services your institution provides have been transferred to your website?

We do not have direct services for citizens.

24. Do you have any standard to follow creating your website?

We have written standards for designing websites, but it is not compulsory to use it. It is kind of a guideline for those, who look for a reference. A work group has prepared those standards, which are based on internationally accepted web page standards. We have organized that work and recently published that, which is so called public website preparation guide. We wish that it would be compulsory to use, but it is not.

25. How often does your organization update current information on E-Government System?

We update it whenever a new issue comes about.

26. Do all services of your institution on website work constantly? How often do you check it?

All services work constantly. We check it at all times.

27. Does password of E-Government gateway work for your organization's website? Or do citizens get another password?

There are four alternatives to enter E-Government gateway. Each of them enables citizens to gain certain amount of services and information. Electronic Citizenship Card is one of those ways that citizens can enter the system, but it is not in use yet. It will make it so easy for citizens to gain whatever provided services they want without any restriction like you have when you enter the system using other ways of entrance. It has upmost security level. Pilot project of the card has been done in Bolu City. Nevertheless citizens should make sure that they connect the internet safely using necessary firewalls and antivirus programs.

According to the results of the surveys done on citizens about why they do not use E-Government System mostly they say that they do not use because of security related reasons. From my point of view they are right. Security of E-Government System is not enough for the time being, but when Electronic Citizenship Cards are started to be used system will be much secure.

28. What kinds of activities have been done in your organization to achieve interoperability of E-Government System with other institutions?

We provide certain guides to achieve this. There is certain resistance among public institutions against interoperability. They hesitate sharing information with each other and transferring services to E-Government gateway. They do not want to waive the power they have.

29. Is it IT department that responsible from E-Government project in your organization? Which institution they work with in order to maintain interoperability of E-Government System?

Our organization provides coordination to the project.

30. How do you provide security to E-Government System, data and users?

We use certain protection methods.

31. Do you keep back up of the information which is in your system? Is there any standard for it?

Unfortunately back up of E-Government gateway is not taken. Institutions take their own back ups of their systems. Overall back up system is still being prepared.

32. Do you find legal infrastructure adequate for using E-Government System safely?

There are certain laws need to be completed and put into action in order to use the system safely.

33. Does your organization do anything to participate citizens in decision-making process of establishing E-Government System?

We have two ways to communicate citizens. There is an icon on E-Government gateway and surveys done by Turkey Statistic Institution.

34. Is it one of your priorities that E-Government System is user-centric? What do you do to provide it?

Yes, sure. We will use the information come from communication channels. Turkey Statistic Institution has started to run surveys among citizens owing to ask their opinions about the system. We will use that information on those issues.

35. What has been done in terms of standardization of all information and services on E-Government System among public institutions?

We have prepared a guide for standardization of the forms transferred to E-Government System. All institutions follow that.

36. What sort of cooperation does your organization have with private sector in terms of providing standardization on information and services on E-Government System.

Their representatives attend consultancy committee's meeting and we exchange needs and information on related issues.

37. What do you do to provide all time accessibility to E-Government System?

Unless most of the users try to use the system in concurrently there should not be any problem on reaching the system at all times.

38. What kind of promotion activities do you do for E-Government System?

It is one of the subjects that we are weak on establishing E-Government System. Before we started the project during preparations of information society strategy we asked Peppers & Rogers Group to prepare a communication strategy and they did it, but it has not been put into action. It was about how we are supposed to make public aware of E-Government project and attract them to use it. We simply have not promoted the system to the public.

39. Do you do any activities to induce more users to E-Government System? If you do, please explain.

It is one of the weakest points of our establishing operation of E-Government System. Unfortunately, we have not done anything to induce more users to E-Government System. Whilst there is an activity plan prepared for publicity, but it has not been put into practice.

40. Is there any system adopted in E-Government System to renovate it? If yes, what it is and does it work properly? Has any renovation been done accordingly?

The ways for communication with citizens such as comment icon on E-Government gateway, Turkey Statistic Institutions surveys and even Prime Minister Communication

Center can be used to realize it, but I do not whether the information, which has come through those ways, is used for that reason or not.

41. How do you measure satisfaction level of citizens on E-Government System?

There are two ways to realize it. First, there is a comment icon on E-Government gateway and second, there is a survey in the system to measure citizens' satisfaction. We can get certain statistic regarding users such as how many people have used the system, how many services are used the most by those users and so on. Besides, Turkey Statistic Institution runs periodic survey on citizens' satisfaction about E-Government System. The latest report says that 95% of the people are satisfied with the system in 2009. It was 63% in 2008. It is a good improvement for us.

42. What is the current situation of E-Government System in terms of usage? Who are the frequent users? How often they use it? What is the user profile (age groups)?

We periodically receive reports and keep track on it.

43. What is the proportion of visitors to gain information and users to gain services of E-Government System? Do you notice increase in user figures?

We notice that there is incremental usage of the system.

44. How is yield and cost effectiveness of E-Government System measured in your organization? How do you evaluate it?

From my point of view It is not easy to measure the effectiveness of the system. I do not believe that other countries can do it. Even if they are able to do it they do not promulgate the findings. Some applications are done in Turkey such as per capita tax collection cost came down to 35 cents from 2 USD ever since submission of tax statement started over internet. We have asked affiliated institutions to find out if they are able to figure out economic effectiveness of the system during a meeting. They are supposed to search and come back to us about it, but they have not been contacted us yet. We have been still working on it.

45. Do you think that what you have done is enough for an ideal E-Government System? What else can be done?

We have started to be very determined but as the time passes we became not as focused. For instance executive committee has not had a meeting for about two years.

46. What is the key success criterion/s in achieving a successful E-Government System?

Making participants both at the back stages and the users believe that the system is useful and make their life easy. Another one is to have a powerful legal and technologic infrastructure.

47. If you were the chair person of E-Government project in your organization and/or in Turkey what would you do differently? Why?

First of all, I'd enrich E-Government gateway in terms of services provided. Secondly I'd try to overcome the resistance and wrong perspectives of public institutions towards interoperability and E-Government gateway accordingly. Simply it is because most of those institutions do not want to share their information and services with E-Government gateway. They feel like their services do not belong to them when they share their services and information with E-Government gateway. Thirdly, I'd do my best to motive citizens and business organizations for E-Government System's usage finding out and eliminating the reasons why the system is not used by all citizens and business organizations. Many citizens and business do not know what E-Government System is and what kind of services and information they may get from it. Finally, I'd do necessary legislations to have a powerful legal infrastructure and I'd reinforce those regulations to be put in practice.

48. What does E-Government mean to you? Do you believe that it is going to be useful for citizens?

It is a useful system for citizens.

49. Has your organization's website have a link to other websites of your organization and/or E-Government gateway of Turkey?

Yes.

50. Do you think that E-Government services increase government's transparency and accountability?

I certainly believe that E-Government System increases transparency of the Government. For accountability, legal infrastructure should be powerful and related laws should be prepared and put into practice. Turkey can not become a party to many of the agreements as a result of not having a law, which protects personal information. For instance last year millions and millions of peoples' social security numbers together with their names and surnames published in Turkish newspapers during the repayments of house attainment help. As an institution we have stopped second publishing of the same information with the same content soliciting not to be published.

51. What has been done to provide accessibility for disabled citizens to E-Government System?

We have a few activities on the action plan, but we have not done much about it unfortunately. Actions have done are not enough and we could not make much progress. The main reason is that some other issues have priorities than the issues related to disabled citizens.

A.5. Ministry of Internal Affairs / November 5th. 2010

İlhanUran – IT Department President

Mesut Kesen – IT Department Vice President

1. What is your organization's aim and strategies establishing the E-Government System? Is there any shared strategy among public agencies?

Process of establishing the system started with State Planning Institution's plan in 2005 and continues with action plan done in 2006.

2. Does your organization's E-Government System have an operation team? If yes, have those strategies been supported by that team?

IT department runs the project in the ministry. We support the strategies.

3. Do you believe that those strategies for E-Government have been achieved? Please elaborate.

There are 111 actions. None of them have completed in time.

4. Ever since E-Government project started has any hardware or software been renewed in your organization?

We have been purchasing software and hardware needs of affiliated units as much as we can. We still need some equipment for infrastructure, but we have planed and renew them according to our budget. We can say that we have bought 95% of our needs. Every 5 year we completely renew the hardware that use.

5. Has the number of staff working for your institution changed ever since E-Government project started?

Number of the employee working for us has not been changed ever since the project started.

6. Do you need any hardware or software specialist for your institution?

We do not need any specialist here in the premises.

7. Do you need any computer for your institution? Do the ones you have enough in terms of their capacity?

Although we have provided affiliated units with some computers we need some more computers for them.

8. Ever since E-Government project started was your team been given any computer related training? If yes, what is it?

When there is a need we provide our employees with necessary trainings.

9. How do you communicate with E-Government executive committee? Do you attend regular meetings regarding E-Government implementation? How often?

We have not had any issue to share with them. We only have contacted with IT coordination committee regarding electronic signature application.

10. Do you believe that everything is going according to road map and time schedule for E-Government implementation?

None of the 111 actions have been completed in time. We do not think that people and institutions involved in the project are not focused and motivated enough to run the project effectively. Any promotion activity has not been done to introduce the system to employees and to citizens. That is why parties are not aware of benefits of E-Government System.

11. What kind of hurdles, problems and deficiencies you came across establishing E-Government System in your organization?

There are certain habits and conventional ways of doing things, which can not be left aside straightaway. People, employees and institutions involved in the project need to be forced to use the system in order to be successful in establishing E-Government System.

12. Do you believe that implementing process of E-Government is an activity of Change Management? If yes, what has been done in your organization accordingly?

Yes we believe so. No training has been given.

13. Have you or your colleagues been trained on Change Management?

No.

14. How do your employees feel about E-Government project?

We as high-ranking officials believe that it will be useful, but many people do not much about E-Government System.

15. Has cultural structure of Turkey been considered establishing E-Government System? Do you believe that it is necessary?

No idea.

16. What sort of activities have been done or are being done to facilitate internet access for citizens?

No idea.

17. Do you believe that decreasing internet prices would positively effects E-Government System usage of citizens?

We believe that it will.

18. What sort of activities have been done to spread broadband internet in Turkey?

No idea.

19. What kind of trainings have citizens been given on how to use E-Government System?

We started to train employees in 2007. We have trained the officials of affiliated units starting from the highest ranked ones to the Managers on documentation issues of E-Government System. 7500 employees have been trained in total.

We have also given train the trainer trainings in cities.

20. What kinds of activities are being done to emerge a society that is not foreign to technology?

.education ministry takes care of it.

21. What kinds of activities have been done in your organization to inspire innovation and to develop Research & Development?

We have not done anything.

22. How long does it take you to answer a request or a complaint coming through your website? Is there any written standard for it? Do you ask a hard copy of that request afterwards? Why?

It has been regulated with laws and we follow the procedures.

23. How many percent of the services your institution provides have been transferred to your website?

Thirty one cities have started to use electronic documents the rest of them will be moved to electronic documentation by the end of the year.

24. Do you have any standard to follow creating your website?

We use international page management for our web page. There are written procedures of prime ministry and court of accounts for it, but they are not compulsory to use it. It is a kind of guide for affiliated units. 60% of affiliated constitutions have been using those procedures. Whoever knows how to use word documents can use those applications for their web pages..

25. How often does your organization update current information on E-Government System?

As soon as the new information comes we up date our page.

26. Do all services of your institution on website work constantly? How often do you check it?

We check it constantly.

27. Does password of E-Government gateway work for your organization's website? Or do citizens get another password?

Citizens do not need to use our web services.

28. What kinds of activities have been done in your organization to achieve interoperability of E-Government System with other institutions?

Nine affiliated institutions are about to be connected to each other and the rest will be connected by the end of this year.

29. Is it IT department that responsible from E-Government project in your organization? Which institution they work with in order to maintain interoperability of E-Government System?

Yes it is IT department.

30. How do you provide security to E-Government System, data and users?

We have certain programs for security.

31. Do you keep back up of the information which is in your system? Is there any standard for it?

Daily, monthly and yearly back ups of the system are taken and disaster recovery system will be put into practice in about 3 to 4 months from now.

32. Do you find legal infrastructure adequate for using E-Government System safely?

It is not enough. Some laws need to be legislated.

33. Does your organization do anything to participate citizens in decision-making process of establishing E-Government System?

We do not do anything about it.

34. Is it one of your priorities that E-Government System is user-centric? What do you do to provide it?

There is a circulation of 'service in one step' application. It is for our citizens' satisfaction and comfort.

35. What has been done in terms of standardization of all information and services on E-Government System among public institutions?

State Planning Organization has been taking care of it. We have been working on E-internal affairs.

36. What sort of cooperation does your organization have with private sector in terms of providing standardization on information and services on E-Government System.

We do not do anything.

37. What do you do to provide all time accessibility to E-Government System?

There is no problem for all time accessibility.

38. What kind of promotion activities do you do for E-Government System?

We have not done anything.

39. Do you do any activities to induce more users to E-Government System? If you do, please explain.

We do not do anything.

40. Is there any system adopted in E-Government System to renovate it? If yes, what it is and does it work properly? Has any renovation been done accordingly?

Comment icon of the web page helps on it.

41. How do you measure satisfaction level of citizens on E-Government System?

We have information flow of satisfaction through comment icon of the web page but we do not reveal it.

42. What is the current situation of E-Government System in terms of usage? Who are the frequent users? How often they use it? What is the user profile (age groups)?

We keep a track on it.

43. What is the proportion of visitors to gain information and users to gain services of E-Government System? Do you notice increase in user figures?

We have statistics of usage.

44. How is yield and cost effectiveness of E-Government System measured in your organization? How do you evaluate it?

We are ready to measure the effectiveness of the system but we think that it is a bit early to realize it.

45. Do you think that what you have done is enough for an ideal E-Government System? What else can be done?

Parties involved in E-Government implementation including citizens should be motivated and made believe of E-Government System's benefits.

46. What is the key success criterion/s in achieving a successful E-Government System?

A unit should be established for E-Government implementation.

47. If you were the chair person of E-Government project in your organization and/or in Turkey what would you do differently? Why?

There should be a responsible unit for E-Government implementation like information society and E-Government ministry.

48. What does E-Government mean to you? Do you believe that it is going to be useful for citizens?

We believe that it is going to be useful for citizens.

49. Has your organization's website have a link to other websites of your organization and/or E-Government gateway of Turkey?

Yes.

50. Do you think that E-Government services increase government's transparency and accountability?

We believe so.

51. What has been done to provide accessibility for disabled citizens to E-Government System?

There are some plans, but none of them have been put into practice yet.

A.6. Ministry of Health / November 5th. 2010

Ünal Hülür - Finance and Administration Unit President

1. What is your organization's aim and strategies establishing the E-Government System? Is there any shared strategy among public agencies?

E-Government project has its own strategy established and we follow that strategy in our ministry. Besides we have been planning to establish all citizens' electronic health records until the year 2015. We have added three applications under E-Government gateway: First one is green card information system inquiry. Second service is family physician application. Third one is organ information system. Almost all our services which we provide have been turned into electronic services.

2. Does your organization's E-Government System have an operation team? If yes, have those strategies been supported by that team?

Yes we have an operation team and those strategies are supported by them.

3. Do you believe that those strategies for E-Government have been achieved? Please elaborate.

We have been doing our best to realize it. We can say 80% of what are supposed to realize have been achieved.

4. Ever since E-Government project started has any hardware or software been renewed in your organization?

Sure. When we need we renew them regardless of E-Government project.

5. Has the number of staff working for your institution changed ever since E-Government project started?

No.

6. Do you need any hardware or software specialist for your institution?

We have sufficient employees working for us.

7. Do you need any computer for your institution? Do the ones you have enough in terms of their capacity?

We keep renewing our hardware and software according to our needs.

8. Ever since E-Government project started was your team been given any computer related training? If yes, what is it?

No. Ever since I started working here any training has not been given to our employees.

9. How do you communicate with E-Government executive committee? Do you attend regular meetings regarding E-Government implementation? How often?

When we have problem we let them know.

10. Do you believe that everything is going according to road map and time schedule for E-Government implementation?

Almost all missions have been accomplished in time. We have been asked to move appointment call center application to E-Government System, but we do not want to realize it for the time being. We think that it is early to do it. In that respect we are behind the schedule. We have explained the reasons to the committee saying that it is a bit early for our citizens to use that service over the internet. We think that citizens do not have enough computer and internet usage background to benefit from this over the internet. When citizens call the call center they are guided by operator. Therefore it is much easier for them to use call center.

11. What kind of hurdles, problems and deficiencies you came across establishing E-Government System in your organization?

It is difficult for citizens to use the system as they do not have required technologic and computer related abilities.

12. Do you believe that implementing process of E-Government is an activity of Change Management? If yes, what has been done in your organization accordingly?

Yes it is a Change Management activity because of its content. The way of doing things have been changing. Many bureaucratic processes have been minimized through E-Government System applications.

13. Have you or your colleagues been trained on Change Management?

No.

14. How do your employees feel about E-Government project?

They think that it will be useful, but necessary laws need to be legislated.

15. Has cultural structure of Turkey been considered establishing E-Government System? Do you believe that it is necessary?

No idea.

16. What sorts of activities have been done or are being done to facilitate internet access for citizens?

It is not our responsibility.

17. Do you believe that decreasing internet prices would positively effects E-Government System usage of citizens?

I believe that.

18. What sorts of activities have been done to spread broadband internet in Turkey?

No idea.

19. What kind of trainings have citizens been given on how to use E-Government System?

It is an important issue. They should be given those trainings. I do not know much about it.

20. What kinds of activities are being done to emerge a society that is not foreign to technology?

It is not our responsibility but it is important for citizens as it is not easy for them to use the system. Citizens do not have enough technological backgrounds to use computers.

When a citizen wants to use E-Government gateway the simplest way is to go to a post office to get a password, which I think is an important hurdle for widespread usage. There should be easier ways to use the system such as getting a password over the system. Even it was hard for me to reach the password and use the system. I share my view of the password with high-ranking officials.

21. What kinds of activities have been done in your organization to inspire innovation and to develop Research & Development?

We have been doing our best to serve the best services to our citizens. Therefore keep developing new services.

22. How long does it take you to answer a request or a complaint coming through your website? Is there any written standard for it? Do you ask a hard copy of that request afterwards? Why?

It has been regulated through laws. We answer the requests accordingly.

23. How many percent of the services your institution provides have been transferred to your website?

Almost all services have been transferred to our website apart from hospital appointment system. As told you earlier on we think it is early as our citizens do not have enough computer skills.

24. Do you have any standard to follow creating your website?

There is a guide for it to be used by units. We refer to it as well.

25. How often does your organization update current information on E-Government System?

We and our affiliated units constantly update the system constantly. In general it is updated on monthly bases.

26. Do all services of your institution on website work constantly? How often do you check it?

We check it constantly to make sure system works at all times.

27. Does password of E-Government gateway work for your organization's website? Or do citizens get another password?

No. They can enter the system with E-Government gateway passwords.

28. What kinds of activities have been done in your organization to achieve interoperability of E-Government System with other institutions?

We have transferred three services to E-Government gateway. The rest of the services will also be transferred soon.

29. Is it IT department that responsible from E-Government project in your organization? Which institution they work with in order to maintain interoperability of E-Government System?

Yes. IT department is responsible for it.

30. How do you provide security to E-Government System, data and users?

We have a security system established in our system consists of 3 layers. I think that our system is secure enough.

31. Do you keep back up of the information which is in your system? Is there any standard for it?

We keep the back up of the system constantly.

32. Do you find legal infrastructure adequate for using E-Government System safely?

There are some legal loopholes for electronic documents, which need to be filled with necessary laws. Those electronic documents' validity need to be approved by the laws. That is the reason why backstage users of the system can not trust those documents and ask for the written ones.

33. Does your organization do anything to participate citizens in decision-making process of establishing E-Government System?

We have recommendation icon to be used for that reason.

34. Is it one of your priorities that E-Government System is user-centric? What do you do to provide it?

We have been trying to serve best service available for our citizens. The services much easier on the website then they were before. Our target audiences do not have to come to our building to get a thing done.

35. What has been done in terms of standardization of all information and services on E-Government System among public institutions?

There are certain regulations that we have prepared as health ministry for standardization of forms, services and so on. It has nothing to do with E-Government gateway.

36. What sort of cooperation does your organization have with private sector in terms of providing standardization on information and services on E-Government System.

We do not have any cooperation with them for that reason.

37. What do you do to provide all time accessibility to E-Government System?

It is not problem for our website.

38. What kind of promotion activities do you do for E-Government System?

We have promoted how citizens can communicate with us such as call center and communication icon placed on the website.

39. Do you do any activities to induce more users to E-Government System? If you do, please explain.

We try to develop the easiest systems for our citizens.

40. Is there any system adopted in E-Government System to renovate it? If yes, what it is and does it work properly? Has any renovation been done accordingly?

There is an e-mail icon on our website where our citizens can contact us. Information coming from there can be used to realize it.

41. How do you measure satisfaction level of citizens on E-Government System?

We have user statistics to be used for it.

42. What is the current situation of E-Government System in terms of usage? Who are the frequent users? How often they use it? What is the user profile (age groups)?

Yes we keep track on it.

43. What is the proportion of visitors to gain information and users to gain services of E-Government System? Do you notice increase in user figures?

There is an increase in usage of the system.

44. How is yield and cost effectiveness of E-Government System measured in your organization? How do you evaluate it?

We do not evaluate the effectiveness of the system at all.

45. Do you think that what you have done is enough for an ideal E-Government System? What else can be done?

I can not say that what we have done is enough, but we have been trying to do our best with the sources we have.

46. What is the key success criterion/s in achieving a successful E-Government System?

To have a seamless system you should have powerful infrastructures.

47. If you were the chair person of E-Government project in your organization and/or in Turkey what would you do differently? Why?

There are certain things to be realized in order to have a flawless E-Government System. I'd increase the internet accesses of citizens. I'd provide it for free to induce more citizens

to benefit from E-Government services. From my point of view the most important obstacle is the cost of using of E-Government System for citizens.

48. What does E-Government mean to you? Do you believe that it is going to be useful for citizens?

When we have adequate infrastructures it will be a useful and secure system to be used.

49. Has your organization's website have a link to other websites of your organization and/or E-Government gateway of Turkey?

Our website has links to affiliated units' website, but not to E-Government gateway.

50. Do you think that E-Government services increase government's transparency and accountability?

Yes I believe that.

51. What has been done to provide accessibility for disabled citizens to E-Government System?

We have plans to realize regarding disabled citizens.

A.7. Ministry of Finance / November 5th. 2010

Emrah Aladağ - Finance Specialist – Management Information Systems Dep.

Abdullah Çakır - Finance Specialist - Management Information Systems Dep.

1. What is your organization's aim and strategies establishing the E-Government System? Is there any shared strategy among public agencies?

We do not have another strategy rather than general strategy of E-Government executive committee.

2. Does your organization's E-Government System have an operation team? If yes, have those strategies been supported by that team?

Yes we have. Those strategies are supported by that team.

3. Do you believe that those strategies for E-Government have been achieved? Please elaborate.

We have four actions, which we are responsible from, out of 111 actions of the action plan. We have completed three of them. Although action number 81 seems to be on our responsibility we have given a petition saying that we should not be held responsible from it. We have been waiting for the answer.

4. Ever since E-Government project started has any hardware or software been renewed in your organization?

We renew our systems constantly, but I can not say that it perfectly matches with E-Government strategies.

5. Has the number of staff working for your institution changed ever since E-Government project started?

There would not be any change in employee numbers.

6. Do you need any hardware or software specialist for your institution?

We have enough specialists working for us.

7. Do you need any computer for your institution? Do the ones you have enough in terms of their capacity?

Each affiliated unit uses different software, which software serves our citizens. Therefore each unit asks for a different password in order to be able to benefit from services we provide. We have not been able to connect them under a single gateway. It effects and causes problem both for our employees and for our citizens. We see an operation problem there. So, that we think needs to be corrected. 2009 We have started to standardize the software infrastructure since year 2009.

8. Ever since E-Government project started was your team been given any computer related training? If yes, what is it?

We have been given necessary trainings.

9. How do you communicate with E-Government executive committee? Do you attend regular meetings regarding E-Government implementation? How often?

Our counselor attends executive committee meetings. Strategy development department is responsible from the secretarial activities of our ministry.

10. Do you believe that everything is going according to road map and time schedule for E-Government implementation?

The action plan is our road map that we follow. Three actions have been completed regarding E-Government gateway. There are broader actions in E-Government strategies, but we do some other actions to support those actions.

11. What kind of hurdles, problems and deficiencies you came across establishing E-Government System in your organization?

We have completed the actions from which we were responsible. We did not have any serious problem.

12. Do you believe that implementing process of E-Government is an activity of Change Management? If yes, what has been done in your organization accordingly?

Yes it is a Change Management for citizens and for employees. Ways of doing things have been changed.

13. Have you or your colleagues been trained on Change Management?

No.

14. How do your employees feel about E-Government project?

Everybody believes that it is a useful system.

15. Has cultural structure of Turkey been considered establishing E-Government System? Do you believe that it is necessary?

We have no idea.

16. What sorts of activities have been done or are being done to facilitate internet access for citizens?

It is not our responsibility.

17. Do you believe that decreasing internet prices would positively effects E-Government System usage of citizens?

Yes it may increase the usage.

18. What sorts of activities have been done to spread broadband internet in Turkey?

We have no idea.

19. What kind of trainings have citizens been given on how to use E-Government System?

As far as we know, citizens have not been given any training about it.

20. What kinds of activities are being done to emerge a society that is not foreign to technology?

Nothing has been done. It is important for citizens to know how to use computer to benefit from those services.

21. What kinds of activities have been done in your organization to inspire innovation and to develop Research & Development?

Nothing special has been done.

22. How long does it take you to answer a request or a complaint coming through your website? Is there any written standard for it? Do you ask a hard copy of that request afterwards? Why?

There are certain laws which regulate it. We answer those requests accordingly.

23. How many percent of the services your institution provides have been transferred to your website?

Almost all actions that we are responsible from have been done.

24. Do you have any standard to follow creating your website?

We have been preparing a manual for it. It is about to be completed. There is also a another manual prepared by State Planning Organization. We think that there should be a standardization to for how to create a web page. It is going to take some more time for the standardization of all web pages of E-Government System.

25. How often does your organization update current information on E-Government System?

Some finance ministry websites are not updated regularly. Some other websites are updated constantly such as national property website of finance ministry.

26. Do all services of your institution on website work constantly? How often do you check it?

Apart from a system failure it works perfectly. We check it periodically.

27. Does password of E-Government gateway work for your organization's website? Or do citizens get another password?

Password of E-Government gateway is does not work for our websites. So, citizens need to get different password to benefit from our services. Apparently there are connections from E-Government gateway to certain ministries' services but when you reach that ministry from E-Government gateway you need to use that ministry's password to enter the system.

28. What kinds of activities have been done in your organization to achieve interoperability of E-Government System with other institutions?

We share required information with related institutions to realize interoperability of E-Government gateway.

29. Is it IT department that responsible from E-Government project in your organization? Which institution they work with in order to maintain interoperability of E-Government System?

IT and management information system department are both responsible from E-Government implementation in our ministry. From our point of view institutions do not want to share information they have, which effects interoperability of E-Government gateway. They do not want to waive the power of the information they think they have. Another reason is information security, which I think that it is an excuse. Some institutions say that we only give PDF of the information to the citizens how we can let all other institutions reach all the information we have. Institutions think about their own systems development more than interoperability of E-Government gateway. I think that institutions are not mature enough in terms of ICT to realize interoperability. Repetitive actions such as document module are still the case between institutions, which need to be prevented from happening. If there was a regulation to use same applications in all institutions it'd be easier to realize interoperability. Each institution involved in E-Government gateway wants to show off putting itself a bit further than other institutions during implementation process.

There should be an implementation institution that chooses best practices among institutions to be used at other institutions instead of investing on a similar application or program.

There is a new tender system which is so called public tender system. You enter the system when you need a payment you have to logout and enter a new system of finance ministry where you can see your allowance for that particular purchase. Interoperability can not be realized and it is a problem even for employees of ministries. Users of the system feel fed up with those procedures and they proffer not to use the system.

There are three mains systems of finance ministry. System users have to have three different passwords to use those systems. They do not work together among them. Employees keep complaining about it.

30. How do you provide security to E-Government System, data and users?

Our ministry's stem is secure enough for citizens to use the system securely.

31. Do you keep back up of the information which is in your system? Is there any standard for it?

We keep back up of the system. There is no standard for it.

32. Do you find legal infrastructure adequate for using E-Government System safely?

Legal infrastructure is powerful enough for taxation.

33. Does your organization do anything to participate citizens in decision-making process of establishing E-Government System?

No.

34. Is it one of your priorities that E-Government System is user-centric? What do you do to provide it?

It is important for us. Communication channels can be used to realize it.

35. What has been done in terms of standardization of all information and services on E-Government System among public institutions?

We have been working to integrate the systems within our ministry since the year 2009.

36. What sort of cooperation does your organization have with private sector in terms of providing standardization on information and services on E-Government System.

We have no idea.

37. What do you do to provide all time accessibility to E-Government System?

We do not do anything special. We constantly check the system.

38. What kind of promotion activities do you do for E-Government System?

We have not done anything.

39. Do you do any activities to induce more users to E-Government System? If you do, please explain.

Nothing has been done in our ministry, but in general providing interoperability to E-Government gateway and facilitating password gaining of citizens more users can be induced to use the system.

40. Is there any system adopted in E-Government System to renovate it? If yes, what it is and does it work properly? Has any renovation been done accordingly?

We do not any special application, but communication channels can be used for it.

41. How do you measure satisfaction level of citizens on E-Government System?

We have communication channels to realize it such as communication icon on the web page.

42. What is the current situation of E-Government System in terms of usage? Who are the frequent users? How often they use it? What is the user profile (age groups)?

We keep track on it. User figures constantly rise.

43. What is the proportion of visitors to gain information and users to gain services of E-Government System? Do you notice increase in user figures?

We have that information. There is an increase among users.

44. How is yield and cost effectiveness of E-Government System measured in your organization? How do you evaluate it?

Although almost all ministries invest on ICT, nothing has been done to measure the effectiveness.

45. Do you think that what you have done is enough for an ideal E-Government System? What else can be done?

Each ministry invests on ICT to realize E-Government project. As there is no coordination between ministries and their investments, each unit follows the rules of its own. Coordination of actions needs to be provided. There is some guidance to be followed but no system to follow whether the guidance put into practice or not. There should also be kind of reinforcement to realize standardization.

Institutions also do not want to share the information they have with other institutions.

46. What is the key success criterion/s in achieving a successful E-Government System?

An institution who owns E-Government implementation should be established to coordinate E-Government implementation activities within and between ministries.

47. If you were the chair person of E-Government project in your organization and/or in Turkey what would you do differently? Why?

It is not definite that who is an authorized institution for E-Government implementation. It is being planed to establish an E-Government agency within prime ministry. Necessary regulations should be constituted in order to establish the E-Government System. Then manual services should be stopped.

I'd convince institutions and its employees for the benefits of the system's interoperability. Having done that, institutions would agree on sharing their institutions' information with other institutions.

I'd also provide the project with a coordination system which works constantly between the institutions. In addition to that I'd put some regulations into practice to force citizens to use the system.

Finally I'd establish a center IT department where all IT departments of the institutions connect to in order to provide coordination, effective usage of resources and prevent repetition of the activities of establishment process.

48. What does E-Government mean to you? Do you believe that it is going to be useful for citizens?

Yes it will be useful for our citizens.

49. Has your organization's website have a link to other websites of your organization and/or E-Government gateway of Turkey?

Our website has links to affiliated units of our ministry.

50. Do you think that E-Government services increase government's transparency and accountability?

Yes we believe that.

51. What has been done to provide accessibility for disabled citizens to E-Government System?

Nothing has been done in our ministry.

APPENDIX B: FREQUENCY TABLES

B.1 Age

Age

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 17-30	170	42,4	42,4	42,4
30-40	78	19,5	19,5	61,8
40-50	71	17,7	17,7	79,6
50-60	51	12,7	12,7	92,3
60-70	30	7,5	7,5	99,8
70-...	1	,2	,2	100,0
Total	401	100,0	100,0	

B.2 Gender

Gender

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Woman	179	44,6	44,6	44,6
Man	222	55,4	55,4	100,0
Total	401	100,0	100,0	

B.3 Occupation

Occupation

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Employee	72	18,0	18,0	18,0
Self-employed	71	17,7	17,7	35,7
Unemployed	6	1,5	1,5	37,2
Student	149	37,2	37,2	74,3
Other	103	25,7	25,7	100,0
Total	401	100,0	100,0	

B.4 City Lived in

City lived in

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Adana	1	,2	,2	,2
Ağrı	1	,2	,2	,5
Ankara	19	4,7	4,7	5,2
Antalya	5	1,2	1,2	6,5
Bolu	2	,5	,5	7,0
Bursa	3	,7	,7	7,7
Çanakkale	1	,2	,2	8,0
Denizli	1	,2	,2	8,2
Edirne	1	,2	,2	8,5
Eskişehir	17	4,2	4,2	12,7
İstanbul	331	82,5	82,5	95,3
İzmir	8	2,0	2,0	97,3
Kocaeli	3	,7	,7	98,0
Mardin	1	,2	,2	98,3
Muğla	3	,7	,7	99,0
Nevşehir	1	,2	,2	99,3
Ordu	1	,2	,2	99,5
Sakarya	1	,2	,2	99,8
Samsun	1	,2	,2	100,0
Total	401	100,0	100,0	

B.5 Education

Education

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Primary	1	,2	,2	,2
High school	52	13,0	13,0	13,2
University	260	64,8	64,8	78,1
Master	42	10,5	10,5	88,5
PhD	46	11,5	11,5	100,0
Total	401	100,0	100,0	

B.6 Internet Connection Types of the Participants

Mobile phone

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	63	15,7	100,0	100,0
Missing	System	338	84,3		
Total		401	100,0		

ADSL

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	350	87,3	100,0	100,0
Missing	System	51	12,7		
Total		401	100,0		

B.7 Internet Connection Durations

Internet connection durations

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Non	1	,2	,2	,2
	1	28	7,0	7,0	7,2
	1-3	103	25,7	25,7	32,9
	3-5	78	19,5	19,5	52,4
	5-8	85	21,2	21,2	73,6
	8-12	65	16,2	16,2	89,8
	12-24	41	10,2	10,2	100,0
Total		401	100,0	100,0	

B.8 Do Citizens Find the Internet Connection Fees Expensive?

Internet access fees are expensive in Turkey

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	10	2,5	2,5	2,5
	Disagree	32	8,0	8,0	10,5
	Indecisive	59	14,7	14,7	25,2
	Agree	162	40,4	40,4	65,6
	Strongly agree	138	34,4	34,4	100,0
Total		401	100,0	100,0	

B.9 Does Turkey need a social transformation of “Information Society”?

Turkey needs a social transformation of “Information Society”

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	9	2,2	2,2	2,2
	Disagree	10	2,5	2,5	4,7
	Indecisive	34	8,5	8,5	13,2
	Agree	203	50,6	50,6	63,8
	Strongly agree	145	36,2	36,2	100,0
	Total	401	100,0	100,0	

B.10 Do Citizens Know What Kind of Services They May Get From E-Government System?

I know exactly what kind of services I may get from E-Government System

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	13	3,2	3,2	3,2
	Disagree	62	15,5	15,5	18,7
	Indecisive	119	29,7	29,7	48,4
	Agree	172	42,9	42,9	91,3
	Strongly agree	35	8,7	8,7	100,0
	Total	401	100,0	100,0	

B.11 Do People Think that E-Government System is Necessary for Turkey?

E-Government System is necessary for Turkey

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	10	2,5	2,5	2,5
	Disagree	18	4,5	4,5	7,0
	Indecisive	68	17,0	17,0	23,9
	Agree	163	40,6	40,6	64,6
	Strongly agree	142	35,4	35,4	100,0
	Total	401	100,0	100,0	

B.12 How Often Do Citizens use E-Government Services for Their Individual Needs?

I'm using E-Government services for my personal needs

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never use it	179	44,6	44,6	44,6
	Once a year	78	19,5	19,5	64,1
	Once in every three months	61	15,2	15,2	79,3
	Once a month	52	13,0	13,0	92,3
	Once a week	21	5,2	5,2	97,5
	Every day	10	2,5	2,5	100,0
	Total	401	100,0	100,0	

B.13 How Often Do Citizens Use E-Government Services for Their Business Needs?

I'm using E-Government services for my business needs

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never use it	210	52,4	52,4	52,4
	Once a year	63	15,7	15,7	68,1
	Once in every three months	47	11,7	11,7	79,8
	Once a month	49	12,2	12,2	92,0
	Once a week	22	5,5	5,5	97,5
	Every day	10	2,5	2,5	100,0
	Total	401	100,0	100,0	

B.14 Would the Citizens Benefit from E-Government Services if They were Given Free Computer Training for How to Use E-Government System?

I'd benefit from E-Government services if I was given free computer training for how to use E-Government System

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Yes	81	20,2	54,7	54,7
No	67	16,7	45,3	100,0
Total	148	36,9	100,0	
Missing System	253	63,1		
Total	401	100,0		

B.15 Would the Citizens have the Chance to have Internet Access at Anywhere and at All Times They Benefited from E-Government Services More?

If I had the chance to have internet access at anywhere and at all times I'd benefit from E-Government services more

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Yes	284	70,8	70,8	70,8
No	117	29,2	29,2	100,0
Total	401	100,0	100,0	

B.16 Have the Citizens' Opinion Been Asked Constituting E-Government Services?

I've been asked for my opinion constituting E-Government services

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Yes	29	7,2	7,2	7,2
No	372	92,8	92,8	100,0
Total	401	100,0	100,0	

B.17 Have citizens' Organizations or the Organizations', where They Work, Opinion Been Asked Constituting E-Government services?

Opinion of my organization or the organization where I work has been asked constituting E-Government services

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Yes	21	5,2	5,2	5,2
No	242	60,3	60,3	65,6
Indecisive	138	34,4	34,4	100,0
Total	401	100,0	100,0	

B.18 Would Citizens Like Themselves and the Organizations to Participate in Constituting the Services in E-Government System with Their Ideas?

I'd like citizens and organizations to participate in constituting the services in E-Government System with their ideas

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly disagree	13	3,2	3,2	3,2
Disagree	19	4,7	4,7	8,0
Indecisive	54	13,5	13,5	21,4
Agree	207	51,6	51,6	73,1
Strongly agree	108	26,9	26,9	100,0
Total	401	100,0	100,0	

B.19 Would the Citizens Like to Discuss E-Government Services with Other Citizens on an Internet Environment?

I'd like to discuss E-Government services with other citizens on an internet environment

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly disagree	9	2,2	2,2	2,2
Disagree	55	13,7	13,7	16,0
Indecisive	65	16,2	16,2	32,2
Agree	214	53,4	53,4	85,5
Strongly agree	58	14,5	14,5	100,0
Total	401	100,0	100,0	

B.20 Is it Secure to Send Personal Information to Government over the Internet?

It is secure to send personal information to government over the internet

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly disagree	81	20,2	20,2	20,2
Disagree	122	30,4	30,4	50,6
Indecisive	119	29,7	29,7	80,3
Agree	70	17,5	17,5	97,8
Strongly agree	9	2,2	2,2	100,0
Total	401	100,0	100,0	

B.21 Do E-Government Services Need Improvement?

E-Government services need improvement

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	8	2,0	2,0	2,0
	Disagree	13	3,2	3,2	5,2
	Indecisive	114	28,4	28,4	33,7
	Agree	151	37,7	37,7	71,3
	Strongly agree	115	28,7	28,7	100,0
	Total	401	100,0	100,0	

B.22 Do E-Government Services Increase Government's Transparency and Accountability?

E-Government services increase government's transparency and accountability

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	27	6,7	6,7	6,7
	Disagree	64	16,0	16,0	22,7
	Indecisive	105	26,2	26,2	48,9
	Agree	155	38,7	38,7	87,5
	Strongly agree	50	12,5	12,5	100,0
	Total	401	100,0	100,0	

APPENDIX C: CORRELATION TABLES

C.1 “User-centricity of E-Government System” vs. “Benefits of E-Government System”

	Benefits of E-Government System
User-centricity of E-Government System	Correlation Coefficient Sig. (2-tailed) N
	.230** .000 401

C.2 “User-centricity of E-Government System” vs. “User experiences of E-Government System”

	User experiences of E-Government System
User-centricity of E-Government System	Correlation Coefficient Sig. (2-tailed) N
	.278** .000 401

C.3 “User-centricity of E-Government System” vs. “Communicating with the Government Through E-Government System”

	Communicating with the Government through E-Government System
User-centricity of E-Government System	Correlation Coefficient Sig. (2-tailed) N
	.396** .000 401

C.4 “User-centricity of E-Government System” vs. “Security of E-Government System”

	Security of E-Government System
User-centricity of E-Government System	Correlation Coefficient Sig. (2-tailed) N
	.370** .000 401

C.5 “User-centricity of E-Government System” vs. “Infrastructure of E-Government System’s Implementation Process”

		Infrastructure of E-Government System's implementation process
User-centricity of E-Government System	Correlation Coefficient	,456**
	Sig. (2-tailed)	.000
	N	401

C.6 “User-centricity of E-Government System” vs. “Technology Competencies of the Users”

		Technology competencies of the users
User-centricity of E-Government System	Correlation Coefficient	,204**
	Sig. (2-tailed)	.000
	N	401

C.7 “User-centricity of E-Government System” vs. “Publicity Activities of E-Government System”

		Publicity activities of E-Government System
User-centricity of E-Government System	Correlation Coefficient	,201**
	Sig. (2-tailed)	.000
	N	401

C.8 “Benefits of E-Government System” vs. “User experiences of E-Government System”

		User experiences of E-Government System
Benefits of E-Government System	Correlation Coefficient	,322**
	Sig. (2-tailed)	.000
	N	401

C.9 “Benefits of E-Government System” vs. “Communicating with the Government Through E-Government System”

	Communicating with the Government through E-Government System
Benefits of E-Government System	Correlation Coefficient
	Sig. (2-tailed)
	N

C.10 “Benefits of E-Government System” vs. “Creating Need for E-Government System”

	Creating need for E-Government System
Benefits of E-Government System	Correlation Coefficient
	Sig. (2-tailed)
	N

C.11 “Benefits of E-Government System” vs. “Security of E-Government System”

	Security of E-Government System
Benefits of E-Government System	Correlation Coefficient
	Sig. (2-tailed)
	N

C.12 “Benefits of E-Government System” vs. “Developing R&D & ICT in Turkey”

	Developing R&D & ICT in Turkey
Benefits of E-Government System	Correlation Coefficient
	Sig. (2-tailed)
	N

C.13 “Benefits of E-Government System” vs. “Infrastructure of E-Government System’s Implementation Process”

		Infrastructure of E-Government System's implementation process
Benefits of E-Government System	Correlation Coefficient	,216**
	Sig. (2-tailed)	.000
	N	401

C.14 “Benefits of E-Government System” vs. “Technology Competencies of the Users”

		Technology competencies of the users
Benefits of E-Government System	Correlation Coefficient	,301**
	Sig. (2-tailed)	.000
	N	401

C.15 “Benefits of E-Government System” vs. “Publicity Activities of E-Government System”

		Publicity activities of E-Government System
Benefits of E-Government System	Correlation Coefficient	,121
	Sig. (2-tailed)	.015
	N	401

C.16 “User experiences of E-Government System” vs. “Communicating with the Government Through E-Government System”

		Communicating with the Government through E-Government System
User experiences of E-Government System	Correlation Coefficient	,340**
	Sig. (2-tailed)	.000
	N	401

C.17 “User experiences of E-Government System” vs. “Creating Need for E-Government System”

		Creating need for E-Government System
User experiences of E-Government System	Correlation Coefficient	,170**
	Sig. (2-tailed)	.001
	N	401

C.18 “User experiences of E-Government System” vs. “Security of E-Government System”

		Security of E-Government System
User experiences of E-Government System	Correlation Coefficient	,229**
	Sig. (2-tailed)	.000
	N	401

C.19 “User experiences of E-Government System” vs. “Infrastructure of E-Government System’s Implementation Process”

		Infrastructure of E-Government System's implementation process
User experiences of E-Government System	Correlation Coefficient	,278**
	Sig. (2-tailed)	.000
	N	401

C.20 “User experiences of E-Government System” vs. “Technology Competencies of the Users”

		Technology competencies of the users
User experiences of E-Government System	Correlation Coefficient	,219**
	Sig. (2-tailed)	.000
	N	401

C.21 “User Experiences of E-Government System” vs. “Publicity Activities of E-Government System”

		Publicity activities of E-Government System
User experiences of E-Government System	Correlation Coefficient	,335**
	Sig. (2-tailed)	.000
	N	401

C.22 “Communicating with the Government Through E-Government System” vs. “Security of E-Government System”

		Security of E-Government System
Communicating with the Government through E-Government System	Correlation Coefficient	,358**
	Sig. (2-tailed)	.000
	N	401

C.23 “Communicating with the Government Through E-Government System” vs. “Infrastructure of E-Government System’s Implementation Process”

		Infrastructure of E-Government System's implementation process
Communicating with the Government through E-Government System	Correlation Coefficient	,351**
	Sig. (2-tailed)	.000
	N	401

C.24 “Communicating with the Government Through E-Government System” vs. “Technology Competencies of the Users”

		Technology competencies of the users
Communicating with the Government through E-Government System	Correlation Coefficient	,145**
	Sig. (2-tailed)	.004
	N	401

C.25 “Communicating with the Government Through E-Government System” vs. “Publicity activities of E-Government System”

		Publicity activities of E-Government System
Communicating with the Government through E-Government System	Correlation Coefficient	,302**
	Sig. (2-tailed)	.000
	N	401

C.26 “Creating Need for E-Government System” vs. “Developing R&D & ICT in Turkey”

		Developing R&D & ICT in Turkey
Creating need for E-Government System	Correlation Coefficient	,233**
	Sig. (2-tailed)	.000
	N	401

C.27 “Creating Need for E-Government System” vs. “Technology Competencies of the Users”

		Technology competencies of the users
Creating need for E-Government System	Correlation Coefficient	,278**
	Sig. (2-tailed)	.000
	N	401

C.28 “Security of E-Government System” vs. “Infrastructure of E-Government System’s Implementation Process”

		Infrastructure of E-Government System's implementation process
Security of E-Government System	Correlation Coefficient	,281**
	Sig. (2-tailed)	.000
	N	401

C.29 “Security of E-Government System” vs. “Publicity activities of E-Government System”

	Publicity activities of E-Government System
Security of E-Government System	Correlation Coefficient
	Sig. (2-tailed)
	N
	,275**
	.000
	401

C.30 “Developing R&D & ICT in Turkey” vs. “Technology Competencies of the Users”

	Technology competencies of the users
Developing R&D & ICT in Turkey	Correlation Coefficient
	Sig. (2-tailed)
	N
	,198**
	.000
	401

C.31 “Infrastructure of E-Government System’s Implementation Process” vs. “Technology Competencies of the Users”

	Technology competencies of the users
Infrastructure of E-Government System's implementation process	Correlation Coefficient
	Sig. (2-tailed)
	N
	,144**
	.004
	401

C.32 “Infrastructure of E-Government System’s Implementation Process” vs. “Publicity Activities of E-Government System”

	Publicity activities of E-Government System
Infrastructure of E-Government System's implementation process	Correlation Coefficient
	Sig. (2-tailed)
	N
	,184**
	.000
	401

APPENDIX D: TABLES OF SIGNIFICANT DIFFERENCES BETWEEN TWO GROUPS CONSIST OF TWO ELEMENTS

D.1 “Gender” vs. “Benefits of E-Government System”

	Benefits of E-Government System			
Mann-Whitney U	17108.000			
Wilcoxon W	33218.000			
Z	-2.492			
Asymp. Sig. (2-tailed)	.013			
Gender		N	Mean Rank	Sum of Ranks
Benefits of E-Government System	Woman	179	185.58	33218.00
	Man	222	213.44	47383.00
	Total	401		

D.2 “Gender” vs. “Technology Competencies of the Users”

	Technology competencies of the users			
Mann-Whitney U	15951.000			
Wilcoxon W	32061.000			
Z	-3.483			
Asymp. Sig. (2-tailed)	.000			
Gender		N	Mean Rank	Sum of Ranks
Technology competencies of the users	Woman	179	179.11	32061.00
	Man	222	218.65	48540.00
	Total	401		

D.3 “I Have Been Trained on E-Government System” vs. “User-centricity of E-Government System”

	User-centricity of E-Government System			
Mann-Whitney U	4917.000			
Wilcoxon W	71712.000			
Z	-2.767			
Asymp. Sig. (2-tailed)	.006			
I have been trained on E-Government System		N	Mean Rank	Sum of Ranks
User-centricity of E-Government System	Yes	36	246.92	8889.00
	No	365	196.47	71712.00
	Total	401		

D.4 “I Have Been Trained on E-Government System” vs. “User Experiences of E-Government System”

		User experiences of E-Government System		
Mann-Whitney U		5074.000		
Wilcoxon W		71869.000		
Z		-2.411		
Asymp. Sig. (2-tailed)		.016		

I have been trained on E-Government System		N	Mean Rank	Sum of Ranks
User experiences of E-Government System	Yes	36	242.56	8732.00
	No	365	196.90	71869.00
	Total	401		

D.5 “I Have Been Trained on E-Government System” vs. “Communicating with the Government Through E-Government System”

		Communicating with the Government through E-Government System		
Mann-Whitney U		5155.000		
Wilcoxon W		71950.000		
Z		-2.188		
Asymp. Sig. (2-tailed)		.029		

I have been trained on E-Government System		N	Mean Rank	Sum of Ranks
Communicating with the Government through E-Government System	Yes	36	240.31	8651.00
	No	365	197.12	71950.00
	Total	401		

D.6 “I Know What E-Government Gateway is” vs. “Benefits of E-Government System”

		Benefits of E-Government System		
Mann-Whitney U		15779.500		
Wilcoxon W		40310.500		
Z		-3.708		
Asymp. Sig. (2-tailed)		.000		

I know what “E-Government gateway” is		N	Mean Rank	Sum of Ranks
Benefits of E-Government System	Yes	180	223.84	40290.50
	No	221	182.40	40310.50
	Total	401		

D.7 “I Know What E-Government Gateway is” vs. “User Experiences of E-Government System”

	User experiences of E-Government System			
Mann-Whitney U	12126.000			
Wilcoxon W	36657.000			
Z	-7.193			
Asymp. Sig. (2-tailed)	.000			

I know what “E-Government gateway” is		N	Mean Rank	Sum of Ranks
User experiences of E-Government System	Yes	180	244.13	43944.00
	No	221	165.87	36657.00
	Total	401		

D.8 “I Know What E-Government Gateway is” vs. “Creating Need for E-Government System”

	Creating need for E-Government System			
Mann-Whitney U	16562.000			
Wilcoxon W	41093.000			
Z	-3.099			
Asymp. Sig. (2-tailed)	.002			

I know what “E-Government gateway” is		N	Mean Rank	Sum of Ranks
Creating need for E-Government System	Yes	180	219.49	39508.00
	No	221	185.94	41093.00
	Total	401		

D.9 “Know What E-Government Gateway is” vs. “Technology Competencies of the Users”

		Technology competencies of the users		
Mann-Whitney U		16160.000		
Wilcoxon W		40691.000		
Z		-3.314		
Asymp. Sig. (2-tailed)		.001		

		I know what “E-Government gateway” is	N	Mean Rank	Sum of Ranks
Technology competencies of the users	Yes		180	221.72	39910.00
	No		221	184.12	40691.00
	Total		401		

D.10 “I Know What E-Government gateway is” vs. “Publicity Activities of E-Government System”

		Publicity activities of E-Government System		
Mann-Whitney U		15467.000		
Wilcoxon W		39998.000		
Z		-3.911		
Asymp. Sig. (2-tailed)		.000		

		I know what “E-Government gateway” is	N	Mean Rank	Sum of Ranks
Publicity activities of E-Government System	Yes		180	225.57	40603.00
	No		221	180.99	39998.00
	Total		401		

D.11 “If I Had the Chance to Have Internet Access at Anywhere and at All Times I’d Benefit From E-Government System More” vs. “User-centricity of E-Government System”

		User-centricity of E-Government System		
Mann-Whitney U		13447.500		
Wilcoxon W		20350.500		
Z		-3.333		
Asymp. Sig. (2-tailed)		.001		

If I had the chance to have internet access at anywhere and at all times I'd benefit from E-Government System more		N	Mean Rank	Sum of Ranks
User-centricity of E-Government System	Yes	284	212.15	60250.50
	No	117	173.94	20350.50
	Total	401		

D.12 “If I Had the Chance to Have Internet Access at Anywhere and at All Times I’d Benefit From E-Government System More” vs. “Benefits of E-Government System”

		Benefits of E-Government System		
Mann-Whitney U		14285.500		
Wilcoxon W		21188.500		
Z		-2.299		
Asymp. Sig. (2-tailed)		.022		

If I had the chance to have internet access at anywhere and at all times I'd benefit from E-Government System more		N	Mean Rank	Sum of Ranks
Benefits of E-Government System	Yes	284	209.20	59412.50
	No	117	181.10	21188.50
	Total	401		

D.13 “If I Had the Chance to Have Internet Access at Anywhere and at All Times I’d Benefit From E-Government System More” vs. “User Experiences of E-Government System”

		User experiences of E-Government System		
Mann-Whitney U		13931.500		
Wilcoxon W		20834.500		
Z		-2.719		
Asymp. Sig. (2-tailed)		.007		

If I had the chance to have internet access at anywhere and at all times I’d benefit from E-Government System more		N	Mean Rank	Sum of Ranks
User experiences of E-Government System	Yes	284	210.45	59766.50
	No	117	178.07	20834.50
	Total	401		

D.14 “If I Had the Chance to Have Internet Access at Anywhere and at All Times I’d Benefit From E-Government System More” vs. “Communicating with the Government Through E-Government System”

		Communicating with the Government through E-Government System		
Mann-Whitney U		11874.000		
Wilcoxon W		18777.000		
Z		-4.608		
Asymp. Sig. (2-tailed)		.000		

If I had the chance to have internet access at anywhere and at all times I’d benefit from E-Government System more		N	Mean Rank	Sum of Ranks
Communicatiing with the Government through E-Government System	Yes	284	217.69	61824.00
	No	117	160.49	18777.00
	Total	401		

D.15 “If I Had the Chance to Have Internet Access at Anywhere and at All Times I’d Benefit From E-Government System More” vs. “Creating Need for E-Government System”

		Creating need for E-Government System		
Mann-Whitney U		12632.500		
Wilcoxon W		19535.500		
Z		-4.056		
Asymp. Sig. (2-tailed)		.000		
If I had the chance to have internet access at anywhere and at all times I'd benefit from E-Government System more		N	Mean Rank	Sum of Ranks
Creating need for E-Government System	Yes	284	215.02	61065.50
	No	117	166.97	19535.50
	Total	401		

D.16 “If I Had the Chance to Have Internet Access at Anywhere and at All Times I’d Benefit From E-Government System More” vs. “Security of E-Government System”

		Security of E-Government System		
Mann-Whitney U		14357.500		
Wilcoxon W		21260.500		
Z		-2.245		
Asymp. Sig. (2-tailed)		.025		
If I had the chance to have internet access at anywhere and at all times I'd benefit from E-Government System more		N	Mean Rank	Sum of Ranks
Security of E-Government System	Yes	284	208.95	59340.50
	No	117	181.71	21260.50
	Total	401		

D.17 “If I Had the Chance to Have Internet Access at Anywhere and at All Times I’d Benefit From E-Government System More” vs. “Infrastructure of E-Government System’s Implementation Process”

		Infrastructure of E-Government System's implementation process		
Mann-Whitney U		14591.000		
Wilcoxon W		21494.000		
Z		-2.110		
Asymp. Sig. (2-tailed)		.035		

If I had the chance to have internet access at anywhere and at all times I'd benefit from E-Government System more		N	Mean Rank	Sum of Ranks
Infrastructure of E-Government System's implementation process	Yes	284	208.12	59107.00
	No	117	183.71	21494.00
	Total	401		

D.18 “If I Had the Chance to Have Internet Access at Anywhere and at All Times I’d Benefit From E-Government System More” vs. “Publicity Activities of E-Government System”

		Publicity activities of E-Government System		
Mann-Whitney U		13530.500		
Wilcoxon W		20433.500		
Z		-2.983		
Asymp. Sig. (2-tailed)		.003		

If I had the chance to have internet access at anywhere and at all times I'd benefit from E-Government System more		N	Mean Rank	Sum of Ranks
Publicity activities of E-Government System	Yes	284	211.86	60167.50
	No	117	174.65	20433.50
	Total	401		

**D.19 “I’ve Been Asked for My Opinion Constituting E-Government Services” vs.
“User-centricity of E-Government System”**

		User-centricity of E-Government System		
	Mann-Whitney U	3807.500		
	Wilcoxon W	73185.500		
	Z	-2.931		
	Asymp. Sig. (2-tailed)	.003		
I've been asked for my opinion constituting E-Government services		N	Mean Rank	Sum of Ranks
User-centricity of E-Government System	Yes	29	255.71	7415.50
	No	372	196.74	73185.50
	Total	401		

**D.20 “I’ve Been Asked for My Opinion Constituting E-Government Services” vs.
“User Experiences of E-Government System”**

		User experiences of E-Government System		
	Mann-Whitney U	4131.500		
	Wilcoxon W	73509.500		
	Z	-2.246		
	Asymp. Sig. (2-tailed)	.025		
I've been asked for my opinion constituting E-Government services		N	Mean Rank	Sum of Ranks
User experiences of E-Government System	Yes	29	244.53	7091.50
	No	372	197.61	73509.50
	Total	401		

**D.21 “I’ve Been Asked for My Opinion Constituting E-Government Services” vs.
“Communicating with the Government Through E-Government System”**

		Communicating with the Government through E-Government System		
	Mann-Whitney U	3787.000		
	Wilcoxon W	73165.000		
	Z	-2.742		
	Asymp. Sig. (2-tailed)	.006		
I've been asked for my opinion constituting E-Government services		N	Mean Rank	Sum of Ranks
Communicating with the Government through E-Government System	Yes	29	256.41	7436.00
	No	372	196.68	73165.00
	Total	401		

**D.22 “I’ve Been Asked for My Opinion Constituting E-Government Services” vs.
“Creating Need for E-Government System”**

	Creating need for E-Government System			
Mann-Whitney U	4220.500			
Wilcoxon W	4655.500			
Z	-2.098			
Asymp. Sig. (2-tailed)	.036			

I've been asked for my opinion constituting E-Government services	N	Mean Rank	Sum of Ranks
Creating need for E-Government System Yes	29	160.53	4655.50
No	372	204.15	75945.50
Total	401		

**D.23 “I’ve Been Asked for My Opinion Constituting E-Government Services” vs.
“Security of E-Government System”**

	Security of E-Government System			
Mann-Whitney U	3914.000			
Wilcoxon W	73292.000			
Z	-2.584			
Asymp. Sig. (2-tailed)	.010			

I've been asked for my opinion constituting E-Government services	N	Mean Rank	Sum of Ranks
Security of E-Government System Yes	29	252.03	7309.00
No	372	197.02	73292.00
Total	401		

D.24 “I’ve Been Asked for My Opinion Constituting E-Government Services” vs. “Publicity Activities of E-Government System”

		Publicity activities of E-Government System		
Mann-Whitney U		3165.000		
Wilcoxon W		72543.000		
Z		-3.785		
Asymp. Sig. (2-tailed)		.000		
I've been asked for my opinion constituting E-Government services		N	Mean Rank	Sum of Ranks
Publicity activities of E-Government System	Yes	29	277.86	8058.00
	No	372	195.01	72543.00
	Total	401		

D.25 “I’d Also Prefer to Reach E-Government Services Through Social Media tools like “Facebook” and “Twitter” vs. “User-centricity of E-Government System”

		User-centricity of E-Government System		
Mann-Whitney U		16748.000		
Wilcoxon W		46394.000		
Z		-2.398		
Asymp. Sig. (2-tailed)		.016		
I'd also prefer to reach E-Government services through social media tools like “Facebook” and “Twitter”		N	Mean Rank	Sum of Ranks
User-centricity of E-Government System	Yes	158	216.50	34207.00
	No	243	190.92	46394.00
	Total	401		

D26. “I’d Also Prefer to Reach E-Government Services Through Social Media tools like “Facebook” and “Twitter” vs. “Communicating with the Government through E-Government System”

		Communicating with the Government through E-Government System		
Mann-Whitney U		15724.000		
Wilcoxon W		45370.000		
Z		-3.141		
Asymp. Sig. (2-tailed)		.002		

	I'd also prefer to reach E-Government services through social media tools like “Facebook” and “Twitter”	N	Mean Rank	Sum of Ranks
Communicating with the Government through E-Government System	Yes	158	222.98	35231.00
	No	243	186.71	45370.00
	Total	401		

D.27 “I’d Also Prefer to Reach E-Government Services Through Social Media tools like “Facebook” and “Twitter” vs. “Security of E-Government System”

		Security of E-Government System		
Mann-Whitney U		16289.000		
Wilcoxon W		45935.000		
Z		-2.691		
Asymp. Sig. (2-tailed)		.007		

	I'd also prefer to reach E-Government services through social media tools like "Facebook" and "Twitter"	N	Mean Rank	Sum of Ranks
Security of E-Government System	Yes	158	219.41	34666.00
	No	243	189.03	45935.00
	Total	401		

D.28 “I’d Also Prefer to Reach E-Government Services Through Social Media tools like “Facebook” and “Twitter” vs. “Infrastructure of E-Government System’s Implementation Process”

		Infrastructure of E-Government System's implementation process		
	Mann-Whitney U	16418.000		
	Wilcoxon W	46064.000		
	Z	-2.697		
	Asymp. Sig. (2-tailed)	.007		
	I'd also prefer to reach E-Government services through social media tools like “Facebook” and “Twitter”	N	Mean Rank	Sum of Ranks
Infrastructure of E-Government System's implementation process	Yes	158	218.59	34537.00
	No	243	189.56	46064.00
	Total	401		

D.29 “I’d Also Prefer to Have All E-Government Services Through Mobile Devices” vs. “User-centricity of E-Government System”

		User-centricity of E-Government System		
	Mann-Whitney U	11984.000		
	Wilcoxon W	16737.000		
	Z	-3.084		
	Asymp. Sig. (2-tailed)	.002		
	I'd also prefer to have all E-Government services through mobile devices	N	Mean Rank	Sum of Ranks
User-centricity of E-Government System	Yes	304	210.08	63864.00
	No	97	172.55	16737.00
	Total	401		

D.30 “I’d Also Prefer to Have All E-Government Services Through Mobile Devices” vs. “Benefits of E-Government System”

		Benefits of E-Government System		
Mann-Whitney U		10940.000		
Wilcoxon W		15693.000		
Z		-3.986		
Asymp. Sig. (2-tailed)		.000		
I'd also prefer to have all E-Government services through mobile devices		N	Mean Rank	Sum of Ranks
Benefits of E-Government System	Yes	304	213.51	64908.00
	No	97	161.78	15693.00
	Total	401		

D.31 “I’d also prefer to have all E-Government services through mobile devices” vs. “User experiences of E-Government System”

		User experiences of E-Government System		
Mann-Whitney U		11560.000		
Wilcoxon W		16313.000		
Z		-3.426		
Asymp. Sig. (2-tailed)		.001		
I'd also prefer to have all E-Government services through mobile devices		N	Mean Rank	Sum of Ranks
User experiences of E-Government System	Yes	304	211.47	64288.00
	No	97	168.18	16313.00
	Total	401		

D.32 “I’d Also Prefer to Have All E-Government Services Through Mobile Devices” vs. “Communicating with the Government Through E-Government System”

		Communicating with the Government through E-Government System		
Mann-Whitney U		10971.000		
Wilcoxon W		15724.000		
Z		-3.894		
Asymp. Sig. (2-tailed)		.000		
I'd also prefer to have all E-Government services through mobile devices		N	Mean Rank	Sum of Ranks
Communicating with the Government through E-Government System	Yes	304	213.41	64877.00
	No	97	162.10	15724.00
	Total	401		

**D.33 “I’d Also Prefer to Have All E-Government Services Through Mobile Devices”
vs. “Creating Need for E-Government System”**

	Creating need for E-Government System			
Mann-Whitney U	12162.500			
Wilcoxon W	16915.500			
Z	-2.792			
Asymp. Sig. (2-tailed)	.005			
I'd also prefer to have all E-Government services through mobile devices		N	Mean Rank	Sum of Ranks
Creating need for E-Government System	Yes	304	209.49	63685.50
	No	97	174.39	16915.50
	Total	401		

**D.34 “I’d Also Prefer to Have All E-Government Services Through Mobile Devices”
vs. “Security of E-Government System”**

	Security of E-Government System			
Mann-Whitney U	9785.000			
Wilcoxon W	14538.000			
Z	-5.236			
Asymp. Sig. (2-tailed)	.000			
I'd also prefer to have all E-Government services through mobile devices		N	Mean Rank	Sum of Ranks
Security of E-Government System	Yes	304	217.31	66063.00
	No	97	149.88	14538.00
	Total	401		

**D.35 “I’d Also Prefer to Have All E-Government Services Through Mobile Devices”
vs. “Infrastructure of E-Government System’s Implementation Process”**

		Infrastructure of E-Government System's implementation process		
	Mann-Whitney U	12393.500		
	Wilcoxon W	17146.500		
	Z	-2.603		
	Asymp. Sig. (2-tailed)	.009		
I'd also prefer to have all E-Government services through mobile devices		N	Mean Rank	Sum of Ranks
Infrastructure of E-Government System's implementation process	Yes	304	208.73	63454.50
	No	97	176.77	17146.50
	Total	401		

**D.36 “I’d Also Prefer to Have All E-Government Services Through Mobile Devices”
vs. “Technology Competencies of the Users”**

		Technology competencies of the users		
	Mann-Whitney U	10724.000		
	Wilcoxon W	15477.000		
	Z	-4.149		
	Asymp. Sig. (2-tailed)	.000		
I'd also prefer to have all E-Government services through mobile devices		N	Mean Rank	Sum of Ranks
Technology competencies of the users	Yes	304	214.22	65124.00
	No	97	159.56	15477.00
	Total	401		

APPENDIX E: TABLES OF SIGNIFICANT DIFFERENCES BETWEEN TWO GROUPS CONSIST OF MORE THAN TWO ELEMENTS

E.1 “Age” vs. “User experiences of E-Government System”

		User experiences of E-Government System	
Chi-square		11.503	
Df		5	
Asymp. Sig.		.042	

	Age	N	Mean Rank
User experiences of E-Government System	17-30	170	181.60
	30-40	78	214.96
	40-50	71	206.95
	50-60	51	218.92
	60-70	30	225.48
	70-...	1	339.00
	Total	401	

E.2 “Age” vs. “Creating Need for E-Government System”

		Creating need for E-Government System	
Chi-square		17.521	
Df		5	
Asymp. Sig.		.004	

	Age	N	Mean Rank
Creating need for E-Government System	17-30	170	174.93
	30-40	78	219.06
	40-50	71	219.25
	50-60	51	218.58
	60-70	30	228.87
	70-...	1	196.50
	Total	401	

E.3 “Age” vs. “Technology Competencies of the Users”

	Technology competencies of the users		
Chi-square	23.131		
df	5		
Asymp. Sig.	.000		

	Age	N	Mean Rank
Technology competencies of the users	17-30	170	207.81
	30-40	78	224.97
	40-50	71	217.55
	50-60	51	145.67
	60-70	30	158.92
	70-...	1	83.00
	Total	401	

E.4 “Age” vs. “Publicity Activities of E-Government System”

	Publicity activities of E-Government System		
Chi-square	14.037		
df	5		
Asymp. Sig.	.015		

	Age	N	Mean Rank
Publicity activities of E-Government System	17-30	170	205.08
	30-40	78	173.98
	40-50	71	182.49
	50-60	51	238.17
	60-70	30	225.77
	70-...	1	290.50
	Total	401	

E.5 “Occupation” vs. “Benefits of E-Government System”

		Benefits of E-Government System	
Chi-square		13.883	
df		4	
Asymp. Sig.		.008	

Occupation		N	Mean Rank
Benefits of E-Government System	Employee	72	233.39
	Self-employed	71	219.45
	Unemployed	6	167.08
	Student	149	180.25
	Other	103	197.64
	Total	401	

E.6 “Occupation” vs. “Creating Need for E-Government System”

		Creating need for E-Government System	
Chi-square		26,535	
df		4	
Asymp. Sig.		,000	

Occupation		N	Mean Rank
Creating need for E-Government System	Employee	72	219,29
	Self-employed	71	240,49
	Unemployed	6	225,83
	Student	149	167,68
	Other	103	207,74
	Total	401	

E.7 “Occupation” vs. “Developing R&D & ICT in Turkey”

		Developing R&D & ICT in Turkey	
Chi-square		20,373	
df		4	
Asymp. Sig.		,000	

Occupation		N	Mean Rank
Developing R&D & ICT in Turkey	Employee	72	208,31
	Self-employed	71	232,52
	Unemployed	6	152,33
	Student	149	176,17
	Other	103	212,92
	Total	401	

E.8 “Education” vs. “Benefits of E-Government System”

		Benefits of E-Government System	
Chi-square		14,106	
df		4	
Asymp. Sig.		,007	

Education		N	Mean Rank
Benefits of E-Government System	Primary school	1	46,00
	High school	52	172,44
	University	260	196,35
	Master degree	42	244,79
	PhD	46	222,93
	Total	401	

E.9 “Education” vs. “User Experiences of E-Government System”

		User experiences of E-Government System	
Chi-square		10,282	
df		4	
Asymp. Sig.		,036	

Education		N	Mean Rank
User experiences of E-Government System	Primary school	1	192,50
	High school	52	175,66
	University	260	196,98
	Master degree	42	243,39
	PhD	46	213,87
	Total	401	

E.10 “Education” vs. “Technology Competencies of the Users”

	Technology competencies of the users		
Chi-square	14,397		
df	4		
Asymp. Sig.	,006		
	Education	N	Mean Rank
Technology competencies of the users	Primary school	1	33,50
	High school	52	175,63
	University	260	199,97
	Master degree	42	253,86
	PhD	46	190,90
	Total	401	

E.11 “I know What E-Government System is” vs. “Benefits of E-Government System”

	Benefits of E-Government System		
Chi-square	21,250		
df	2		
Asymp. Sig.	,000		
	I know what E-Government System is	N	Mean Rank
Benefits of E-Government System	Yes	289	216,95
	No	18	159,83
	Only I heard	94	159,85
	Total	401	

E.12 “I know What E-Government System is” vs. “User Experiences of E-Government System”

	User experiences of E-Government System		
Chi-square	24,557		
df	2		
Asymp. Sig.	,000		
	I know what E-Government System is	N	Mean Rank
User experiences of E-Government System	Yes	289	217,04
	No	18	127,42
	Only I heard	94	165,78
	Total	401	

E.13 “I know What E-Government System is” vs. “Creating need for E-Government System”

Creating need for E-Government System	
Chi-square	26,170
Df	2
Asymp. Sig.	,000

I know what E-Government System is	N	Mean Rank
Creating need for E-Government System Yes	289	217,68
No	18	130,19
Only I heard	94	163,29
Total	401	

E.14 “I Know What E-Government System is” vs. “Technology Competencies of the Users”

Technology competencies of the users	
Chi-square	23,345
df	2
Asymp. Sig.	,000

I know what E-Government System is	N	Mean Rank
Technology competencies of the users Yes	289	217,38
No	18	127,78
Only I heard	94	164,67
Total	401	

E.15 “I Know What E-Government System is” vs. “Publicity Activities of E-Government System”

Publicity activities of E-Government System	
Chi-square	7,712
df	2
Asymp. Sig.	,021

I know what E-Government System is	N	Mean Rank
Publicity activities of E-Government System Yes	289	208,07
No	18	135,58
Only I heard	94	191,80
Total	401	

E.16 “My Organization’s or the Organization’s, Where I work, Opinion Constituting E-Government Services Has Been Asked” vs. “User-centricity of E-Government System”

		User-centricity of E-Government System	
Chi-square		8,003	
df		2	
Asymp. Sig.		,018	
My organization's or the organization's, where I work, opinion constituting E-Government services has been asked		N	Mean Rank
User-centricity of Government System	Yes	21	262,50
	No	242	195,36
	Indecisive	138	201,53
	Total	401	

E.17 “My Organization’s or the Organization’s, where I work, Opinion Constituting E-Government Services Has Been Asked” vs. “User Experiences of E-Government System”

		User experiences of E-Government System	
Chi-square		16,353	
df		2	
Asymp. Sig.		,000	
My organization's or the organization's, where I work, opinion constituting E-Government services has been asked		N	Mean Rank
User experiences of E-Government System	Yes	21	266,69
	No	242	185,34
	Indecisive	138	218,47
	Total	401	

E.18 “My Organization’s or the Organization’s, Where I work, Opinion Constituting E-Government Services Has Been Asked” vs. “Communicating with the Government Through E-Government System”

	Communicating with the Government through E-Government System		
Chi-square	22,275		
df	2		
Asymp. Sig.	,000		
	My organization's or the organization's, where I work, opinion constituting E-Government services has been asked	N	Mean Rank
Communicating with the Government through E-Government System	Yes	21	280,26
	No	242	181,86
	Indecisive	138	222,50
	Total	401	

E.19 “My Organization’s or the Organization’s, Where I work, Opinion Constituting E-Government Services Has Been Asked” vs. “Security of E-Government System”

	Security of E-Government system		
Chi-square	17,335		
df	2		
Asymp. Sig.	,000		
	My organization's or the organization's, where I work, opinion constituting E-Government services has been asked	N	Mean Rank
Security of E-Government System	Yes	21	266,67
	No	242	184,18
	Indecisive	138	220,50
	Total	401	

E.20 “My Organization’s or the Organization’s, Where I work, Opinion Constituting E-Government Services Has Been Asked” vs. “Infrastructure of E-Government System’s Implementation Process”

	Infrastructure of E-Government System's implementation process		
Chi-square	10,202		
df	2		
Asymp. Sig.	,006		
My organization's or the organization's, where I work, opinion constituting E-Government services has been asked		N	Mean Rank
Infrastructure of E-Government System's implementation process	Yes	21	255,45
	No	242	189,55
	Indecisive	138	212,79
	Total	401	

E.21 “My Organization’s or the Organization’s, where I work, Opinion Constituting E-Government Services Has Been Asked” vs. “Publicity Activities of E-Government System”

	Publicity activities of E-Government System		
Chi-square	23,613		
df	2		
Asymp. Sig.	,000		
My organization's or the organization's, where I work, opinion constituting E-Government services has been asked		N	Mean Rank
Publicity activities of E-Government System	Yes	21	294,26
	No	242	182,90
	Indecisive	138	218,54
	Total	401	

E.22 “I reach All My Private Updated Information from All Different Web Pages of E-Government System” vs. “User-centricity of E-Government System”

	User-centricity of E-Government System		
Chi-square	20,263		
df	2		
Asymp. Sig.	,000		
		I reach all my private updated information from all different web pages of E-Government System	Mean Rank
		N	
User-centricity of E-Government System	Yes	79	242,60
	No	71	167,27
	Indecisive	251	197,45
	Total	401	

E.23 “I reach All My Private Updated Information from All Different Web Pages of E-Government System” vs. “Benefits of E-Government System”

	Benefits of E-Government System		
Chi-square	29,814		
df	2		
Asymp. Sig.	,000		
		I reach all my private updated information from all different web pages of E-Government System	Mean Rank
		N	
Benefits of E-Government System	Yes	79	251,78
	No	71	152,92
	Indecisive	251	198,62
	Total	401	

E.24 “I reach All My Private Updated Information from All Different Web Pages of E-Government System” vs. “User experiences of E-Government System”

	User experiences of E-Government System		
Chi-square	14,884		
df	2		
Asymp. Sig.	,001		
		I reach all my private updated information from all different web pages of E-Government System	Mean Rank
		N	
User experiences of E-Government System	Yes	79	235,11
	No	71	166,89
	Indecisive	251	199,91
	Total	401	

E.25 “I reach All My Private Updated Information from All Different Web Pages of E-Government System” vs. “Communicating with the Government Through E-Government System”

		Communicating with the Government through E-Government System		
	Chi-square	24,941		
	df	2		
	Asymp. Sig.	,000		
		I reach all my private updated information from all different web pages of E-Government System	N	Mean Rank
Communicating with the Government through E-Government System	Yes		79	250,37
	No		71	159,51
	Indecisive		251	197,20
	Total		401	

E.26 “I reach All My Private Updated Information from All Different Web Pages of E-Government System” vs. “Security of E-Government System”

		Security of E-Government system		
	Chi-square	15,230		
	df	2		
	Asymp. Sig.	,000		
I reach all my private updated information from all different web pages of E-Government System			N	Mean Rank
Security of E-Government System	Yes		79	239,49
	No		71	170,59
	Indecisive		251	197,49
	Total		401	

E.27 “I reach All My Private Updated Information from All Different Web Pages of E-Government System” vs. “Infrastructure of E-Government System’s implementation process”

	Infrastructure of E-Government System's implementation process		
Chi-square	34,073		
df	2		
Asymp. Sig.	,000		
		I reach all my private updated information from all different web pages of E-Government System	
		N	Mean Rank
Infrastructure of E-Government System's implementation process	Yes	79	247,63
	No	71	147,12
	Indecisive	251	201,57
	Total	401	

E.28 “I reach All My Private Updated Information from All Different Web Pages of E-Government System” vs. “Technology Competencies of the Users”

	Technology competencies of the users		
Chi-square	7,264		
df	2		
Asymp. Sig.	,026		
		I reach all my private updated information from all different web pages of E-Government System	
		N	Mean Rank
Technology competencies of the users	Yes	79	229,97
	No	71	183,32
	Indecisive	251	196,88
	Total	401	

E.29 “When I put any personal information on a web page of E-Government System I can do different transactions with it on any other web page of the system” vs. “User-centricity of E-Government System”

		User-centricity of E-Government System	
Chi-square		32,858	
df		2	
Asymp. Sig.		,000	
When I put any personal information on a web page of E-Government System I can do different transactions with it on any other web page of the system		N	Mean Rank
User-centricity of E-Government System	Yes	71	264,24
	No	65	174,81
	Indecisive	265	190,48
	Total	401	

E.30 “When I put Any Personal Information on a Web Page of E-Government System I Can Do Different Transactions with it on Any Other Web Page of the System” vs. “Benefits of E-Government System”

		Benefits of E-Government System	
Chi-square		14,319	
df		2	
Asymp. Sig.		,001	
When I put any personal information on a web page of E-Government System I can do different transactions with it on any other web page of the system		N	Mean Rank
Benefits of E-Government System	Yes	71	241,01
	No	65	170,38
	Indecisive	265	197,79
	Total	401	

E.31 “When I put Any Personal Information on a Web Page of E-Government System I Can Do Different Transactions with it on Any Other Web Page of the System” vs. “User Experiences of E-Government System”

		User experiences of E-Government System	
Chi-square		27,840	
df		2	
Asymp. Sig.		,000	
When I put any personal information on a web page of E-Government System I can do different transactions with it on any other web page of the system		N	Mean Rank
User experiences of E-Government System	Yes	71	258,29
	No	65	165,40
	Indecisive	265	194,38
	Total	401	

E.32 “When I put Any Personal Information on a Web Page of E-Government System I Can Do Different Transactions with it on Any Other Web Page of the System” vs. “Communicating with the Government Through E-Government System”

		Communicating with the Government through E-Government System	
Chi-square		15,314	
df		2	
Asymp. Sig.		,000	
When I put any personal information on a web page of E-Government System I can do different transactions with it on any other web page of the system		N	Mean Rank
Communicating with the Government through E-Government System	Yes	71	245,77
	No	65	174,67
	Indecisive	265	195,46
	Total	401	

E.33 “When I put Any Personal Information on a Web Page of E-Government System I Can Do Different Transactions with it on Any Other Web Page of the System” vs. “Security of E-Government System”

		Security of E-Government system	
Chi-square		7,079	
Df		2	
Asymp. Sig.		,029	
		When I put any personal information on a web page of E-Government System I can do different transactions with it on any other web page of the system	Mean Rank
Security of E-Government System	Yes	71	231,61
	No	65	186,15
	Indecisive	265	196,44
	Total	401	

E.34 “When I put Any Personal Information on a Web Page of E-Government System I Can Do Different Transactions with it on Any Other Web Page of the System” vs. “Infrastructure of E-Government System’s Implementation Process”

		Infrastructure of E-Government System's implementation process	
Chi-square		24,298	
df		2	
Asymp. Sig.		,000	
		When I put any personal information on a web page of E-Government System I can do different transactions with it on any other web page of the system	Mean Rank
Infrastructure of E-Government System's implementation process	Yes	71	247,52
	No	65	159,01
	Indecisive	265	198,84
	Total	401	

E.35 “When I put Any Personal Information on a Web Page of E-Government System I Can Do Different Transactions with it on Any Other Web Page of the System” vs. “Publicity Activities of E-Government System”

		Publicity activities of E-Government System	
Chi-square		9,068	
df		2	
Asymp. Sig.		,011	
When I put any personal information on a web page of E-Government System I can do different transactions with it on any other web page of the system		N	Mean Rank
Publicity activities of E-Government System	Yes	71	232,11
	No	65	174,00
	Indecisive	265	199,29
	Total	401	

E.36 “All Information and Forms on E-Government System Are Always Up To Date” vs. “User-centricity of E-Government System”

		User-centricity of E-Government System	
Chi-square		46,530	
df		2	
Asymp. Sig.		,000	
All information and forms on E-Government System are always up to date		N	Mean Rank
User-centricity of E-Government System	Yes	74	265,81
	No	89	154,29
	Indecisive	238	198,32
	Total	401	

**E.37 “All Information and Forms on E-Government System Are Always Up To Date”
vs. “User Experiences of E-Government System”**

	User experiences of E-Government System		
Chi-square	11,472		
Df	2		
Asymp. Sig.	,003		
		All information and forms on E-Government System are always up to date	Mean Rank
User experiences of E-Government System	Yes	74	224,72
	No	89	169,47
	Indecisive	238	205,41
	Total	401	

**E.38 “All Information and Forms on E-Government System Are Always Up To Date”
vs. “Communicating with the Government Through E-Government System”**

	Communicating with the Government through E-Government System		
Chi-square	9,774		
df	2		
Asymp. Sig.	,008		
		All information and forms on E-Government System are always up to date	Mean Rank
Communicating with the Government through E-Government System	Yes	74	236,97
	No	89	185,10
	Indecisive	238	195,76
	Total	401	

**E.39 “All Information and Forms on E-Government System Are Always Up To Date”
vs. “Security of E-Government System”**

	Security of E-Government system		
Chi-square	13,463		
df	2		
Asymp. Sig.	,001		
		All information and forms on E-Government System are always up to date	Mean Rank
Security of E-Government System	Yes	74	218,09
	No	89	163,57
	Indecisive	238	209,68
	Total	401	

**E.40 “All Information and Forms on E-Government System Are Always Up To Date”
vs. “Infrastructure of E-Government System’s Implementation Process”**

	Infrastructure of E-Government System's implementation process		
Chi-square	58,210		
df	2		
Asymp. Sig.	,000		
All information and forms on E-Government System are always up to date		N	Mean Rank
Infrastructure of E-Government System's implementation process	Yes	74	267,53
	No	89	141,27
	Indecisive	238	202,65
	Total	401	

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- Assisting to department chair during his lectures as well as on his operational duties
- Teaching at European Master Interactive Media Online Master Program about the courses on Visual Communication Design, New Media Environments and Introductions to IT Crimes and Ethics (It is an online master degree program operated by some partner European Universities: <http://www.valnet-emim.eu/>)
- Lecturing graduate students on communication models, media theories and new media and sociology when it is required along a semester as well as during lecturers' absence
- Assisting to department chair on preparing department's curricular
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12/2007 - 08/2008

Customer Relations

JDV Hotels / San Francisco / US

- Ensuring customer satisfaction at all times through dealing with guest requests and complaints
- Evaluating customer surveys and taking necessary actions accordingly.

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Senior Consultant

Prometheus Consultancy Organization / İstanbul / Turkey

- Observing operations as a secret customer and report the results to headquarters of the companies
- Carrying out projects as to maximize employee satisfaction of various companies

- Preparing projects related to management strategies for companies in various sectors.
- Providing executive teams of the companies operating in various sectors with operation management, finance management, customer relationship management, developing sales and marketing strategies, preparing sales and marketing plans support and establishing customer satisfaction systems for those companies

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Hotel Manager

AKKA Hotels Group / Claros Park Hotel / Antalya / Turkey

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10/2001 - 03/2003

Assistant General Manager

Rixos Hotels Group / Antalya / Turkey

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