T.C.
YEDİTEPE UNIVERSITY
GRADUATE INSTITUDE OF SOCIAL SCIENCES

ELECTRONIC GOVERNMENT SERVICES
AND
A PUBLIC SURVEY IN ISTANBUL

by

Ayşegül (Dursun) KURU

Submited to the Graduate Institude of Social Sciences
In partial fulfillment of therequirements for the degree of
Master of
Business Administration

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ABSTRACT

The purpose of this thesis is to present a research for electronic government (e-government) services demand and applications in Turkey. For the purposes of this research, e-government is defined as "electronic government services, that is, any interaction one might have with any government body or agency, using the Internet or World Wide Web."

This paper outlines the public sector features, government in the information sector, e-government revolution, e-government perspectives, e-government features and success factors, e-government relationships, the global e-government study, e-government services in Turkey, and public survey for Istanbul Portal and finally conclusions.

In addition to the critical findings from the public survey, this thesis distinguishes itself in asking users – citizens, businesses – what services they wish to access online from Istanbul Portal. This thesis is the first to focus on actual citizen and business wants and needs with the objective of helping governments target their Internet investments and maximize e-government citizen and business satisfaction. By better understanding the demand equation and the drivers behind e-government adoption, governments can create greater value for citizens and businesses.

ÖZET

Bu çalışmanın amacı Türkiye'deki elektronik devlet (e-devlet) hizmetlerine yönelik bir uygulama ve talebi sunmaktır. Bu çalışmanın amacı doğrultusunda e-devlet tanımı "devlete ait herhangi bir kurum ya da kuruluşla internet üzerinden yada web yolu ile etkileşim"dir.

Bu çalışma kamu sektörü, kamuda bilişim, e-devlet devrimi, vizyonu, nitelikleri ve başarı etkenleri, e-devlette ilişkiler, global açıdan e-devlet incelemesi, Türkiye'de e-devlet, İstanbul Portalı için kamu oyu araştırması ve sonuçtan oluşmaktadır.

Kamu oyu araştırmasından elde edilen kritik bilgilere ek olarak, bu çalışmayla vatandaş ve iş dünyasının İstanbul Portalından hangi hizmetlere online erişmek istediği ortaya çıkarılmaktadır. Bu çalışma vatandaşın ve iş dünyasının e-devlet ihtiyaç ve isteklerini karşılamak ve tatmin etmek üzere devlet tarafından yapılacak çalışmalara ve internet yatırımlarına yardım etmeye odaklanmıştır. Elektronik devlete geçişte talebin ve diğer etkenlerin anlaşılması devletin vatandaş ve iş dünyası için daha büyük faydalar üretmesini sağlayacaktır.

1. INTRODUCTION

Government is one of the company's top markets, with more than one thousand sales and service professionals dedicated to public sector customers throughout the world. These include sales and consulting specialists with expertise in such areas as education, central, regional and local government, defense, taxation, postal, health and human services among others.

To meet constituent demands for better, broader access and faster response, government agencies worldwide are evolving into e-governments. In this continuous state of change, governments need an adaptable foundation on which to build their IT infrastructure and the software tools with which to develop and extend their online services.

Technology can help governments shift delivery of information resources on-line; enable more efficient interactions between agencies and constituents, as well as intra-government; and transform public servants into empowered knowledge workers.

Information infrastructure is directly related with the developments in science and technology. Today's global world forces the countries to use science and technology for social and economic utilization and benefits. Information and communication technologies (computers, networks and other communication channels) seem to be the best tools to achieve this utilization. Information Age using the technologies in question affects both private and public sector, but central planning, coordination of different efforts and having related policies in the area emphasized by governments gain importance in this process.

2. THE PUBLIC SECTOR FEATURES

We have all experienced frustration at one time or another doing business with the government: waiting on the phone to get information or to talk with a government official, standing in a long line to pay a traffic ticket or renew a driver's license, or waiting weeks or months for a permit to be granted. Meanwhile, government agencies experience frustrations of their own, processing and storing massive quantities of paperwork and repeating tasks that could be made more efficient and convenient for individual citizens and businesses alike.

While governments around the world have taken steps to improve operations and provide better services, there are still significant opportunities to become more efficient and connect more directly with constituents by utilizing today's Internet technologies. The private sector has embraced the World Wide Web as a means of reaching out to and communicating with customers, yet many government Web sites still offer little more than a list of telephone numbers and addresses. One reason for this is that the government information required offering electronic filings, permit applications and other services is often locked up in many different and incompatible databases.

Many businesses have embraced information technology as the key to improving efficiency, by using low-cost technologies to connect the isolated "islands" of data throughout their companies and offer customers richer, more personalized service. A combination of widely available Internet access, advanced software, a growing range of PC-based computing devices, and technology standards such as XML has already led to significant productivity gains in the business world. Those same technologies can just as easily be applied to revolutionize how governments do business.

The Internet has the potential to transform the way we interact with government. Traditionally, people and businesses have dealt with government face to face, over the phone

or with paper based systems, during limited hours of the day. E-government allows more convenient and efficient interaction with government, 24 hours a day, 7 days a week, whether it is from an office desk or a kitchen table. Government already publishes a wide range of information on web sites. E-government enables public sector agencies to interact and conduct transactions with citizens and businesses over the Internet.

The public sector is starting to adopt e-government. It already offers certain transactions (passport applications, petitions) over the Internet. This is just the start. Soon, new bundles of electronic services and interactions will emerge which are tailored to the specific needs of citizens and business. E-government will transform the ability of public servants to serve their communities with innovation and efficiency.

Defense departments, criminal justice, public health, postal authorities, and many other government entities have already used information technologies to create practical cost-effective solutions. The solutions provide a flexible foundation for achieving e-government and crossing the digital divide to:

- Integrate disparate infrastructure and applications – to provide seamless service
- Empower public employees – to provide more responsive service
- Connect with constituents – to improve transactions and authorized information flow between government agencies, between government and business, and between government and citizens

By providing an Internet-based technology platform that ensures flexibility, scalability, and the interoperability of systems, health and human services agencies, for example, can face the challenges of extending information collaboration while facilitating and protecting electronic data transactions. Innovative postal authorities can partner with e-businesses to provide trusted financial services and logistics support, as well as develop portals to deliver improved public services – doing more, with less waiting in line.

3. GOVERNMENT IN THE INFORMATION AGE

In the industrial age, the innovation of railways and airlines completely changed society and business by opening up distant markets in a previously inconceivable way, allowing companies to reach new customers and suppliers. With governments providing regulations and stability to the new infrastructure, the carriage of freight by rail and plane boosted economic efficiency, added to national growth and benefited everyone.

Just as railways were the new public utility of industrial age, the Internet is the backbone infrastructure for the emerging information age. The impact of the Web is today being felt throughout the new and old economies, helping manufacturing and service industries drive down costs across their supply chains, redefine business relationships, enter new markets and create additional revenue streams. Government must also adapt to keep pace with the transformation from the industrial age to information age. Rather than rely on centralized mass-produced public services delivered through vertical 'stovepipe' channels that were characteristic of the industrial society, citizens and businesses today expect governments to improve public services, improve efficiency and make cost savings, boost competitiveness and create wealth in the new economy.

Like in the industrial age, in many instances it will be up to government to lead the transformation to the new information age. Public sector organizations will have to adjust their relationships with citizens, businesses, employees and other public agencies. Indeed, government is in a unique position to be a catalyst for change. To this end, the information society is prompting many organizations to adopt e-government initiatives, seeking the opportunity to:

- Deliver electronic and integrated public services. More than just offering services online instead of in-line, organizations can provide value-added and integrated services. Rather than visiting several different offices, or several different Web sites, to obtain a government permit, citizens and businesses can complete all transactions

from a single point of access, available 24 hours a day, 7 days a week.

- Bridge the digital divide. Governments can help to access to new technology available to the less fortunate in society as well as provide computer literacy education. This can be achieved and accomplished, in different ways through a variety of programs.

- Achieve lifelong learning. The idea that education doesn't end when a person finishes school can today be realized through widespread e-learning. An ensuing society of knowledge workers will continue to access sophisticated and personalized education tools online.

- Rebuild their customer relationship. Rather than providing services in a uniform way to all citizens, governments can use new technology to treat citizens as individuals and provide personalized services. Citizens become more in charge of their relationship with government and re-gain their trust and confidence in the public sector.

- Foster economic development. Governments can help businesses to move online and assist them to use online tools. This may, at times, require consulting or financial incentives. By being online, businesses can leverage the advantages of being local, such as being close to customers, while they grow and expand their markets worldwide. It also helps to develop local skills and increase employment prospects.

- Establish sensible policies and regulations. The information society creates many new issues which policy makers must address, including citizen identification and authentication, privacy, data protection, jurisdiction over cyberspace, e-commerce taxation, cyber-crime and cyber-terrorism. Governments need to sensitively engage in new legislation to develop trust in e-transactions of all kinds, and to balance the need for economic development with the protection of data privacy.

- Create a more participative form of government. Ultimately, e-government can lead to direct democracy. Already, at the local level, municipalities are supporting online debates, discussion forums and Internet voting to support their decision-making processes.

4. THE E-GOVERNMENT REVOLUTION

The Internet has changed the way business is transacted the world over, and is now changing the way government interacts with citizens and businesses. While businesses were the first to adopt and use information technologies, from personal computers to complicated electronic data interchanges, consumers have followed quickly – especially in the adoption and use of the Internet. With the dramatic increase in the use of the Internet as a business tool and the incredible growth of eCommerce, the Internet has changed everything.

We now speak in terms of the Internet Economy and are striving towards the Digital State. When we talk about the economy in this way, we are implying significant changes in the way all companies, organizations, people and governments are conducting business and establishing relationships. The fascinating aspect of the Internet Economy is that each day we become aware of some new transformation of the 'old' economy. It has also changed the way businesses conduct transactions and perform services, with eCommerce, eServices, and web advertising revenue expected to increase exponentially by 2002.

The next e-transformation promises to redefine the way we govern. By leveraging the Internet economy, government is transforming citizen and business relationships by providing universal, anytime-anywhere access to local, state and federal government information and services. Electronic government, or e-government, is the birth of a new market and the advent of a new form of government – a form of government that is a powerful force in the Internet economy, bringing together citizens and businesses in a network of information, knowledge and commerce. E-government promises to close the gap between citizen and business expectations of government and eCommerce. Today, citizens and businesses expect service delivery in Internet time. E-government solutions are Internet-based or electronic transactions between citizens and government (C2G), businesses and government (B2G) and government and government (G2G). There are three core components to comprehensive e-government solutions. These include; government services and applications, enterprise portal management, and back-office infrastructure integration

With the expansion of opportunity to perform transactions online, citizens are eager to take care of a variety of tasks on the Internet, including interactions with different levels of government. Federal, state, and local governments are beginning to respond. Across the globe, governments are the latest participants in the promise of the Internet, and the way in which governments interact with businesses and citizens is in early stages of transformation.

While most governments have yet to embrace Internet technology at the same level as businesses and consumers, it is clear that government service models are beginning to adapt to the changing technology environment. E-government is growing, and it holds the potential to transform the way peoples experience interactions with government in the same way that the Internet has transformed other aspects of our lives. While the transition toward automated and electronic delivery of some government services has begun, it will be a long and difficult process to achieve true e-government. Governments must invest significant financial and human resources into a technology infrastructure to support e-government transactions. These investments will be expected to yield both increased quality in government services and their delivery as well as create tax dollar savings. Citizens and Congress will have very high expectations for significant return-on-investment for e-government initiatives.

E-government is not e-business. It is much more. Ultimately, e-government is about our relationships with our civic institutions and the foundation of our next-generation communities. It is about extending the social contract to provide better services to all citizens and businesses. It is a technology platform for hope and promise – the promise of an entrepreneurial and more personal government for our children and their own. To that end, benchmarking the return on government's Internet investment requires a new paradigm that addresses policy issues and political realities and their impact on citizen and business satisfaction.

5. E-GOVERNMENT PERSPECTIVES

5.1. CITIZEN PERSPECTIVE

Citizens increasingly expect governments to perform more like commercial entities. If they can buy plane or theater tickets over the Internet, they will want to renew their vehicle registration or pay taxes the same way. They want convenient, instant access to public services 24 hours a day, 7 days a week. They want the ability to access services from home, work or any other geographic location. And they don't want any limitation on how they can access services – PC, WebTV, mobile phone or wireless device.

Citizens also are not interested in which layer of bureaucracy or which public official is responsible for a specific government program or public service. To provide citizens with personalized services, governments must make all information and services available from a single integrated source. Through portals and one-stops shops, the Web can be used to create a single face to the public, hiding the internal complexity of government.

Also through a single access point, citizens can better articulate their expectations and needs from government. It reinforces their participation in local community life and the democratic process since they can interact with government and access public information, official documents and administrative proceedings. For those who don't have time to go to city hall or committee hearings to participate in public debates, they can instead send an email or contribute to an online discussion forum.

5.2. BUSINESS PERSPECTIVE

When governments create new efficiencies, they also create a healthy business climate and provide advantages to local firms over those in other jurisdictions. Companies everywhere are conducting business-to-business e-commerce in order to lower their costs

and improve inventory control. Further helping business to become more competitive, conducting online transactions with government provides the opportunity for companies to simplify regulatory processes, reduce red tape, keep legal compliance and start operations quicker and easier through electronic filing and various compliance services like online taxation, statistical reporting. Rather than drive to a government office to fill in paper forms, a contractor, for example, will find it easier to apply for building permits and schedule inspections over the Internet.

Governments can further create a healthy business environment by ensuring the right infrastructure is in place to make it easy for companies to go online. Companies operating in jurisdictions with high-speed bandwidth Internet connection at a reasonable price will have advantage over others that don't. And with the right level of consulting and financial support, local companies can conduct online transactions, leveraging their high-speed connections to create new business opportunities.

The delivery of integrated, single-source public services creates opportunities for business and government to partner together. The accounting industry and tax office, for example, could build on their existing relationship and work together to provide added value services for citizens and businesses filing online tax returns. Partnering with private sector can also help government establish a Web presence sooner and cheaper. The most important e-government projects are funded by Public Private Partnerships where there is a shared approach to the provision of services, and to the risks and rewards involved.

5.3. GOVERNMENT PERSPECTIVE

Governments are able to change citizens' perceptions of poor quality of public service and regain public trust and confidence by putting the citizen at the center of any service improvement initiative. Rebuilding the customer relationship requires the provision

of services in an altogether different way, without long waits and cumbersome procedures. Customer-centric organizations achieve greater success both within the government and in serving the public. They are able to provide easier public access to services, increase service volume and reduce employee time spent on non-customer activities.

Recognizing that a single person rarely performs an entire public service process, citizen-focused organizations combine customer relationship management (CRM), workflow and Internet technologies to empower government employees as knowledge workers. Employees must be able to use case management tools, understand any given situation and the governing laws and regulations, and then they must be able to deal with the case and take decisions. This involves having concurrent access to files on their 'electronic desks', ensuring a uniform processing of cases, shorter response times and less burdensome administrative duties.

Knowledge workers must be able to work as team and move smoothly between different documents and databases on a variety of back-end systems. Disparate legacy networks are characteristic of the traditional stovepipe approach to government, resulting in single services and single systems. The difficulties of integrating service delivery across agencies can be overcome through the exploitation of open technologies, developing new integrated service processes on the Internet to virtually mirror agencies and, finally, through proper business process re-engineering of government organizations.

6. E-GOVERNMENT FEATURES AND SUCCESS FACTORS

Electronic Government delivers public services in a way that citizens and businesses want them, using the Internet and other technologies as enablers. In the fullest sense, e-government is the infrastructure that governments today are building to transform they way they complete their missions. Previously, public sector IT infrastructures were built to be used internally within individual departments and agencies. Now governments can extend

their infrastructures out to the wider community so that the key values of digital age – "faster, better, cheaper, more accessible" – can also be applied to government services.

The transformation to e-government begins with different agencies embracing the Web. Initially, organizations developed Web sites to promote their services and provide general administrative information such as business hours, contact people and phone numbers. Often the information was scanned reproductions of already printed materials, so-called "brochure-ware".

More recently, organizations have been providing comprehensive and dynamic material with database searches and e-mail reply services. Increasingly, agencies are looking to deploy a greater variety of interactive services, enabling citizens and businesses to log on to a government Web site and submit forms, book appointments, look for jobs, and so on. The next step is to provide financial and legal transactional services, so citizens and businesses can purchase licenses and permits, file tax returns, pay parking fines and apply for social benefits. This requires enhancements to the E-Government infrastructure's security, typically obtained through greater adoption of technologies like digital signatures and certificates as well as smartcards. It's also important to develop appropriate partnerships with private organizations for its deployment and management at the business level, for example to guarantee physical identification can be associated to the issuance of a certificate, so to obtain strong physical authentication.

Agencies will then want to collaborate to deploy portals to allow citizens to jump between services without having to authenticate themselves again. Through collaboration, government databases can become interactive and interface with each other. Information and services can be aggregated and presented to citizens as life events or specific subject areas. At this point, the volume of online transactions reaches a critical mass and, rather than Web sites mirroring the bureaucracy, organizational structures will reflect government's citizen-centric online presence.

This transformation will lead to a fundamental rethinking of government's structure and role. The citizen will now be in charge, with public services and information provided when, where and how people want them. Citizens will be able to personalize their access to government portals, and they will be able to mix government services with those from their favorite commercial Web sites and public portals. By easily interacting with government and accessing public information, official documents and administrative proceedings, citizens will be better informed and more willing to participate in the government process, leading to digital communities and more participative models of governance, where citizen will be more involved in related decisional process.

The following features characterize organizations that are successfully implementing e-government projects:

- **Open and pervasive.** Government is open because online services are based on Internet standards, and because they are available to everyone, anywhere, on any device. Because the knowledge society must be all-inclusive, governments take steps to prevent a situation where online services are available only to some people or some businesses, or only to specific areas or communities.

- **Customer-oriented.** Governments that embrace Internet technologies are better able to put the citizen at the center of their thinking. Using Citizen Relationship Management systems, organizations can track citizen information and analyze it to provide quality, personalized services. With added value services and two-way information flows, more citizens will be attracted to use online services.

- **Services are integrated**. Government's business processes are not restricted to a specific office but they cut across all agencies and jurisdictions so government appears online as a completely integrated system. The stovepipe approach is overcome and citizens do not see the intricacies of a government's departmental organization; they just see the service that's being delivered. So by browsing a government Internet portal, citizens can easily renew their driver's license without having to deal with the complex organizational

structure of the department of motor vehicles, or they can buy a permit to build a swimming pool in their backyard without even knowing they are actually interacting with the public works department.

- **Public Private Partnership.** Many government organizations lack the in-house expertise and project management skills to undertake major e-government initiatives. As they come under pressure to meet service expectations of citizens, governments are increasingly partnering with the private sector to quickly and efficiently implement solutions such as government portals. Governments may want to explore new procurement models, like partially self-funding models in which contractors are given revenue opportunities through service subscriptions or a share of cost reductions. Added value services provided by private companies whose services are also integrated with the government portal. People have high expectations of government, and so the speed of execution of e-government projects is important. Surveys everywhere show that people think e-government should be given a high priority, and the response from citizens and businesses any time a public service is put online is almost always overwhelmingly positive.

E-Government is comprised of three enabling sets of new technology tools: infrastructure, vertical solutions and the exploitation of various access points such as public portals. An e-government infrastructure is built from the bottom up, benefiting everybody by enabling the implementation of specific applications to address specific problems and issues. So while the widespread adoption of the infrastructure is important, real value comes when solutions are built to sit on top the infrastructure. So when providing Internet access and email accounts, the most positive impact will come from the applications and services that can be accessed with these communication tools, like telemedicine, participation in virtual communities, prompt information to enforce government and citizen readiness to unpredictable events, etc… Likelihood of success does increase when government can partner with private companies that have a consolidate Internet presence to reach citizens and business on the net, building various forms and instances of sophisticated networks of integrated private/public services. Successful e-government projects not only attract those

citizens who are already connected to the Internet, but they must also be able to move people online who are not already there. To achieve this, the ability to provide value added services to citizens and businesses, hosted on the e-government infrastructure, is key.

Today, government services are provided through a variety of channels, including retailers, banks and the post office. Public agencies have agreements with service companies so, for example, citizens and businesses can pay their bills and taxes at their local bank. Or, if somebody needs a fishing license, they are more likely to buy one at the store where they buy their fishing tackle than at a government office. The government service network that has been developed to reach the citizen in the physical world is also the best way to reach the citizen in the virtual world. Somebody who banks over the Internet should be able to pay their bills and taxes through their online financial institution. Somebody who buys their fishing gear from an e-commerce site should be able to buy their fishing license from the same Web merchant, which will eventually interact with proper government organization in electronic manner.

Online public service provider channels can be a government Web site, an e-commerce site, or public portals such as Yahoo, AOL and Microsoft's MSN. It is in government's interest to reach their citizens through as many service provider channels as possible, and public portals can reach as many citizens in one day as a government Web site can in one month or more. For example, through MSN, Microsoft supports citizens' communications with government by enabling them to register to vote when they change their residence.

A typical e-government system has one or more public sector organizations participating to support a particular service. These agencies may conduct online transactions with the public themselves through a government Web site, but more likely they will work in partnership with a service provider that acts as a distribution channel for the service. The service provider, in turn, will work with different Web merchants and public portals to reach

a maximum number of citizens. The development of a successful online government service network requires technical integration between the public portal at the front end, and the service provider and the government agency at the back end. So when a citizen logs on to MSN home adviser to register to vote, for example, there is an interface with a service provider, which in turn is integrated with the back-end systems of the government agency responsible for voter registration. The public does not have to see or deal with these behind-the-scenes relationships; they simply log on to their usual home page and register to vote.

The various players within a government service network do not strike agreements with each other on an exclusive basis. In the same way that a government agency would not give a certain chain of sports stores the exclusive right to sell fishing licenses online, all service providers and public portals which want to provide a public service should be allowed to. Public portals need to be affiliated with as many service providers as possible in order to connect to a variety of government agencies. Service providers require affiliations with various public portals and Web merchants in order to reach as many citizens as possible. To have the integration that's required to ensure relationships are non-exclusive, each player relies on open and standardized technical requirements and published business rules for providing a service, and ensuring end-to-end customer support.

While the business model for conducting online transactions cannot be exclusive, governments will want to ensure that the public service being delivered will be of high quality. So when a government organization makes an agreement with a service provider, and a service provider signs a contract with a public portal, there are usually terms and conditions guaranteeing a certain quality of service. For example, each party will ensure the service is up and running 7 days week, 24 hours per day. Or the government agency will want to ensure compliance with citizen privacy and data protection regulations.

Finally, once there is an online service network where government, service provider and public portals are all working together to deliver high-quality services to the public, customer relationship management becomes all-important. The relationship with the customer must

be managed end-to-end. A government employee might have some questions and will need to contact a citizen who has filed their tax declaration through a public portal. But because that citizen is not a direct customer of tax office, the government has to be prepared to use the relationship with service providers and public portals to send queries and reply back to the citizen. And, the service providers and public portals must provide the ability for government to reply back and ensure that when an email is sent, for example, that it is actually delivered. In order to manage the customer relationship end-to-end, government, service provider and public portals must all use common or interoperable tools.

The understanding of the social and technological revolution in place and various constituencies' perspectives, the valuable experience acquired participating in many innovative and strategic E-government projects, and the opportunity to work together with many government representatives all over the world shaped Microsoft's vision for the E-Government and helped to create its unique value proposition.

While "portal" means different things to different people, the Government Portal initiative is about building a component of an e-government architecture that goes far beyond a simple information Web site to encompass the whole Government Service Network. Through the Government Portal, the public sector is seen as an integrated, seamless whole rather than a raft of offices and departments. From a single point of access, citizens are provided easy-to-use and personalized services, transactions, information, opinion polls and even e-voting. The portal is used to deliver new opportunities for online education and lifelong learning, and it fosters new business opportunities in the community. It allows citizens to interact with government 24 hours a day, 7 days a week, and empowers them to influence political discussions and processes within their city, region and country.

Governments can build a solid e-government foundation and a complete service network, but citizens still will not use online services if they don't know how to access them or are unaware of their existence. Marketing e-government is important but a new business

model also needs to be deployed to attract people to use the services. First and foremost, governments must provide Internet accessibility across all social groups. Secondly, quality content is needed to convince people to get connected and use the online services available. It is especially important at the local level to use new technological tools to mobilize and enable specific communities to participate in the knowledge society. The Digital Communities initiative taps the power of the Internet to increase the adoption of e-government at the local level, including provide support to the transition of local businesses to electronic commerce. Faced with increasing global competition in the e-commerce marketplace, local businesses must achieve competitive advantage first at home and then be given the opportunity to compete with the outside world. Digital communities assist them with Web hosting, online promotion, access to integrated government services, local advice, access to hosted applications like personal productivity and financial tools.

Digital Communities link government, citizens, businesses, schools, cultural associations and the community at large. Education is pushed out to the wider community, enabling online and lifelong learning, greater collaboration in learning, curriculum management, and online networks of teachers, parents and students. Citizens also have a greater say in issues of governance since they can easily interact with government online and access public information, and they benefit through the improved quality of life that comes with living in an information society.

7. E-GOVERNMENT RELATIONSHIPS

Governments everywhere are setting out their visions for e-government and integrated service delivery, considering the best ways to use the Internet and other technologies to enable quality, cost-effective and cross-cutting public services. The transformation to e-government affects all government relationships: Government to Citizens, Government to Business, and Government to Government.

7.1. GOVERNMENT TO CITIZENS

Citizens want to receive personalized services, 24 hours a day, 7 days a week, and they are not interested in which layer of bureaucracy or which public official is responsible for delivering a specific program or service.

The **Government to People** relationship drives the need for integrated services and information available from a single source, such as a portal or one-stop shop, accessible from home, work or any other location through PCs, WebTV, mobile phone or wireless device.

Citizen demand for true seamless healthcare creates the need for **Government to Patient** solutions. Healthcare providers require integrated healthcare systems, electronic patient records, telemedicine services, continuity of care and intelligent systems that allow citizens to assume greater participation and responsibility for their own health.

Through the **Government to Community** relationship, towns and cities are forging links and relationships like never before. Central and local government, businesses, schools, libraries, associations, citizen groups and the community as a whole are enabled to work together to improve the economic, social and cultural fabric of their communities.

7.2. GOVERNMENT TO BUSINESS

E-Government promotes closer collaboration and relationships between the public and private sectors, in both in the provision of more efficient government services to businesses, and throughout the public procurement supply chain.

Because even the smallest firms are today connected to the Internet and use computers in their professional activities, the **Government to Enterprise** relationship will deliver the earliest e-government successes. Companies are already adjusting their strategic thinking to conduct B2B e-commerce, and they also want to use the Web to simplify their transactions with government.

Government to Supplier solutions such as online catalogues and reverse auctions create new opportunities to control public spending. By automating the management information required to be smart purchasers, e-procurement can dramatically reduce processing costs, shorten procurement cycles, reduce inventory and eliminate the paper purchase order.

The **Government to Partner** relationship removes the old dividing lines between the public and private sectors, leading to a shared approach to the provision of public services, and to the risks and rewards involved. The greatest innovations will come through new partnership models, and the most important public sector projects - including e-government - will be funded by Public Private Partnerships.

7.3. GOVERNMENT TO GOVERNMENT

The challenge for many public sector organizations is to capture the knowledge of an employees and public officials and share it with the rest of the workforce, thereby empowering government to make best use of the information.

Government to Employee solutions allow public sector staff to work as team and move smoothly between different documents and databases on a variety of back-end systems. Recognizing that a single person rarely performs an entire public service process, organizations can combine customer relationship management (CRM), Business Intelligence, workflow, case management tools and Internet technologies to empower government employees as knowledge workers. This also covers the interactions between Government and Employee regarding employment, training and social matters, such as payroll, pensions and career planning.

The information society creates new political challenges and issues, and the **Government to Politician** relationship is important to help policy makers reach out to constituents, obtain public feedback and, ultimately, make the right decisions for society.

Government to Agency solutions ensure co-operation within and between departments, and between different levels of government, ensuring all organizations work together.

8. THE GLOBAL E-GOVERNMENT STUDY

This report presents the global e-government, i.e., the delivery of public sector information and online services through the Internet. Many governmental units across the world have embraced the digital revolution and placed a wide range of materials on the web from publications to databases. The study of global "e-government" Study is undertaken by researchers (and conducted by Darrell M. West, professor of political science) at Brown

University on September 30, 2002 shows that Taiwan, South Korea and Canada have overtaken the United States in e-government performance.

This study reviewed 1,197 national government Web sites in 198 countries during June and July 2002. Among the sites analyzed were those of executive offices, legislative offices, judicial offices, cabinet offices and major agencies serving crucial functions of government such as health, human services, taxation, education, interior, economic development, administration, natural resources, foreign affairs, foreign investment, transportation, military, tourism and business regulation. Each country's online presence measured by using a 100-point scale based on more than two dozen criteria, including the availability of contact information, publications, databases, portals, privacy, security, disability access and the number of online services.

In the websites analysis, it was looked for material that would aid an average citizen logging onto a governmental site. This included contact information that would enable a citizen to find out who to call or write at an agency to resolve a problem, material on information, services, and databases, features that would facilitate e-government access by special populations such as the disabled and non-native language speakers, interactive features that would facilitate outreach to the public, and visible statements that would reassure citizens worried about privacy and security over the Internet.

Among the sites analyzed were those of executive offices (such as a president, prime minister, ruler, party leader, or royalty), legislative offices (such as Congress, Parliament, or People's Assemblies), judicial offices (such as major national courts), Cabinet offices, and major agencies serving crucial functions of government, such as health, human services, taxation, education, interior, economic development, administration, natural resources, foreign affairs, foreign investment, transportation, military, tourism, and business regulation. Websites for subnational units, obscure boards and commissions, local government, regional units, and municipal offices were not included in this study.

Regardless of the type of system or cultural background of a country, websites were evaluated for the presence of various features dealing with information availability, service delivery, and public access. Features assessed included the name of the nation, region of the world, and having the following features: office phone number, office address, online publications, online database, external links to non-governmental sites, audio clips, video clips, non-native languages or foreign language translation, commercial advertising, premium fees, restricted areas, user payments, disability access, privacy policy, security features, presence of online services, number of different services, links to a government services portal, digital signatures, credit card payments, email address, search capability, comment form or chat-room, broadcast of events, automatic email updates, website personalization, and an English version of the website. For e-government service delivery, it is looked at the number and type of online services offered. Features were defined as services only if the entire transaction could occur online. If a citizen had to print out a form and then mail it back to the agency to obtain the service, it was not count that as a service that could be fully executed online. Searchable databases counted as services only if they involved accessing information that resulted in a specific government service response.

The analysis can be found from www.InsidePolitics.org/world.html. and it was undertaken during June and July, 2002 at Brown University. In looking at specific features of government websites online material, are given below.

8.1. ONLINE INFORMATION

- *Phone Contact Info.*
- *Address Info*
- *Links to Other Sites*
- *Publications*
- *Databases*
- *Audio Clips*
- *Video Clips*

8.2. ONLINE SERVICES

- Order Publications
- Travel reservation
- Search and Apply for Jobs
- Apply for Passports
- Renewal of vehicle license

- File complaints/police reports
- Order birth/death certificates
- File taxes
- Apply for patents
- Check exam results

8.3. SERVICES BY TOP NATIONS

Of the 198 nations analyzed, there is wide variance in the percentage of government sites with online services. The Bahamas, Vanuatu, Chile, and South Korea are first, with 100 percent of their websites providing some type of service, followed by Taiwan (74 percent), China (53 percent), North Korea (50 percent), Germany (47 percent), Hong Kong (44 percent), the United States (44 percent), and Australia (43 percent). It is important to keep in mind that our definition of services included only those services that were fully executable online. If a citizen had to print out a form and mail or take it to a government agency to execute the service, it was not count that as an online service.

8.4. PRIVACY AND SECURITY

Public opinion surveys in various countries place concerns over privacy and security at the top of the list of citizen worries about e-government. Having visible statements outlining what the site is doing on privacy and security are valuable assets for reassuring a fearful population and encouraging citizens to make use of e-government services and information.

8.5. DISABILITY ACCESS

There has been considerable progress on disability access.

8.6. FOREIGN LANGUAGE ACCESS

About half (43 percent) of national government websites have foreign language features that allow access to non-native speaking individuals. By foreign language feature, it means any accommodation to the non-native speakers in a particular country, such as text translation into a different language.

8.7. ADS, USER FEES, AND PREMIUM FEES

Many nations are struggling with the issue of how to pay for electronic governance. Countries that had the largest percentage of websites with commercial advertising were Afghanistan, Mexico, Moldova, Bahama, Bahrain, Peru, Qatar, Turkmenistan, Uruguay, Vanuatu, Bhutan, Central Africa Republican, Chile, Cuba, Antigua, and South Korea. Each of these nations had ads on all their sites. This was followed by Argentina (69 percent), Kuwait (67 percent), China (53 percent), Nigeria (50 percent), Niue (50 percent), Bolivia (50 percent), and Kazakhstan (50 percent).

8.8. RESTRICTED AREAS

Some countries have started to develop restricted areas on their websites that require a username and password for accessibility. Sometimes, this is for security reasons, while other times, it occurs through an interest in personalizing service delivery. Examples of website restrictions included access to bulletin boards, forums, and newsgroups (Algeria, Chad, Taiwan, Malaysia, and Mexico), transportation and accommodation reservations in Taiwan, Ireland, and the Dominican Republic, the Resource Center on the Malaysia Trade and Industry page, and Intranets on the pages of Venezuela, Canada, Guatemala, and Indonesia.

8.9. PUBLIC OUTREACH

E-government offers the potential to bring citizens closer to their governments. Regardless of the type of political system that a country has, the public benefits from interactive features that facilitate communication between citizens and government. There are various features that would help citizens contact government officials and make use of information on websites. These are given below:

- *Email*
- *Search*
- *Comments*
- *Email Updates*
- *Broadcast*
- *Website Personalization*

Email is an interactive feature that allows ordinary citizens to pose questions of government officials or request information or services. While email is certainly the easiest method of contact, there are other methods that government websites can employ to facilitate public feedback. These include areas to post comments (other than through email), the use of message boards, and chat rooms.

8.10. EMAIL RESPONSIVENESS

It is useful to have email contact information on government websites, but this material is not helpful unless there is someone who actually answers the email. In order to test how responsive various governments were to citizen inquiries, email messages were sent to each of the 1,197 government websites. The message was a simple question: "I would like to know what hours your agency is open during the week. Thanks for your help." It was tracked whether agencies responded, and if so, how many business days it took them to respond.

8.11. TOP E-GOVERNMENT COUNTRIES

In order to see how the 198 nations ranked overall, it was created a 0 to 100 point e-government index and applied it to each nation's websites based on the availability of contact information, publications, databases, portals, and number of online services. Four points were awarded to each website for the presence of each of the following features: phone contact information, addresses, publications, databases, links to other sites, audio clips, video clips, foreign language access, not having ads, not having premium fees, not having restricted areas, not having user fees, disability access, having privacy policies, security policies, having a portal connection, allowing digital signatures on transactions, an option to pay via credit cards, email contact information, search capabilities, areas to post comments, broadcasts of events, option for email updates, and option for website personalization. These features provided a maximum of 96 points for particular websites.

Each site then qualified for a bonus of four points based on the number of online services executable on that site (1 point for one service, two points for two services, three points for three services, and four points for four or more services). Only 3 percent of government websites had four or more services. The e-government index therefore ran along a scale from 0 (having none of these features and no online services) to 100 (having all features plus at least four online services). Totals for each website within a country were averaged across all of that nation's websites to produce a 0 to 100 overall rating for that nation.

- *Phone, Address, Publication, Email,*
- *Database, Links*
- *Audio Clip,Video Clip*
- *Foreign Lang,*
- *Ads Prem Fee, User Fee*
- *Restrict, Privacy, Security, Disability*
- *Services, Link to Portal, Credit Cards,Digital Sign*
- *Search,Comment ,Broadcast,Updates,Personal*

The following table shows how each of the world's 198 countries ranked on e-government performance in 2002.

Table 8.1: E-government Performance in 2002.

1.	Taiwan	72.5	65.	Haiti	44.0	133.	Portugal	36.4
2.	South Korea	64.0	65.	Iran	44.0	134.	Antigua	36.0
3.	Canada	61.1	65.	Kenya	44.0	134.	Chad	36.0
4.	United States	60.1	65.	Mozambique	44.0	134.	Eritrea	36.0
5.	Chile	60.0	65.	Nepal	44.0	134.	Honduras	36.0
6.	Australia	58.3	65.	Netherlands	44.0	134.	Kazakhstan	36.0
7.	China	56.3	65.	Sudan	44.0	134.	Kiribati	36.0
8.	Switzerland	55.4	65.	Thailand	44.0	134.	Lesotho	36.0
9.	Great Britain	54.8	65.	Tunisia	44.0	134.	Madagascar	36.0
10.	Singapore	53.5	76.	Croatia	43.4	134.	North Korea	36.0
11.	Germany	52.6	77.	Armenia	43.3	134.	Oman	36.0
12.	Bahrain	52.0	78.	Bosnia	42.7	134.	Palau	36.0
12.	Fiji	52.0	78.	Guyana	42.7	134.	Peru	36.0
12.	Japan	52.0	80.	Philippines	42.4	134.	Rwanda	36.0
12.	Mexico	52.0	81.	Hungary	42.3	134.	St. Kitts	36.0
12.	Qatar	52.0	81.	New Zealand	42.3	134.	St. Vincent	36.0
12.	Togo	52.0	83.	Cape Verde	42.0	134.	Samoa	36.0
12.	Vanuatu	52.0	83.	Romania	42.0	134.	San Marino	36.0
12.	Vatican	52.0	83.	South Africa	42.0	134.	Somaliland	36.0
12.	Zambia	52.0	86.	Argentina	41.8	134.	Sao Tome	36.0
21.	Malaysia	51.5	86.	Brazil	41.8	134.	Zimbabwe	36.0
22.	Hong Kong	51.3	88.	Slovenia	41.7	154.	Brunei	35.5
23.	France	50.9	89.	Greece	41.5	155.	Algeria	35.2
23.	Israel	50.9	90.	Azerbaijan	41.3	156.	Myanmar	34.9

25.	Yemen	50.0	91.	Bulgaria	41.1	156.	Cameroon	34.9
26.	Iceland	49.8	92.	Egypt	41.0	158.	Albania	34.0
27.	Sweden	49.1	93.	Morocco	40.9	158.	Comoros	34.0
28.	Finland	48.8	94.	Cambodia	40.8	158.	Mali	34.0
29.	Lithuania	48.4	94.	Indonesia	40.8	161.	Tanzania	33.8
30.	Italy	48.3	96.	Costa Rica	40.7	162.	Iraq	33.6
31.	Belize	48.0	97.	Mauritius	40.6	163.	Belarus	33.2
31.	Botswana	48.0	98.	Slovakia	40.5	164.	Afghanistan	32.0
31.	Colombia	48.0	99.	Bahamas	40.0	164.	Bolivia	32.0
31.	Cuba	48.0	99.	Cyprus (Turkish)	40.0	164.	Cen. African Rep	32.0
31.	Estonia	48.0	99.	Djibouti	40.0	164.	Equatorial Guinea	32.0
31.	Ireland	48.0	99.	Dominican Rep.	40.0	164.	Gabon	32.0
31.	Liechtenstein	48.0	99.	Ethiopia	40.0	164.	Gambia	32.0
31.	Maldives	48.0	99.	Jamaica	40.0	164.	Ghana	32.0
31.	Marshall Isl.	48.0	99.	Laos	40.0	164.	Kuwait	32.0
31.	Venezuela	48.0	99.	Liberia	40.0	164.	Libya	32.0
41.	Norway	47.7	99.	Micronesia	40.0	164.	Monaco	32.0
42.	Austria	47.4	99.	Moldova	40.0	164.	Nicaragua	32.0
43.	St. Lucia	47.3	99.	Paraguay	40.0	164.	Niger	32.0
44.	Malta	47.2	99.	Syria	40.0	164.	Nigeria	32.0
44.	Uganda	47.2	99.	Tajikistan	40.0	164.	Sierra Leone	32.0
46.	Denmark	47.0	99.	Tonga	40.0	164.	Somalia	32.0
46.	Ecuador	47.0	99.	Tuvalu	40.0	164.	Suriname	32.0
46.	El Salvador	47.0	99.	Yugoslavia	40.0	164.	Ukraine	32.0
46.	Senegal	47.0	115.	Panama	39.5	164.	Uruguay	32.0
50.	Latvia	46.9	116.	Seychelles	39.0	182.	Solomon Islands	30.4
51.	Trinidad	46.4	117.	Andorra	39.0	183.	Niue	30.0
52.	Jordan	46.3	118.	Cook Islands	38.7	184.	Bangladesh	29.3
53.	Swaziland	46.2	118.	Georgia	38.7	185.	Bhutan	28.0

54.	Turkey	46.0	118.	Guatemala	38.7	185.	Congo Dem Rep	28.0
55.	Belgium	45.3	118.	Sri Lanka	38.7	185.	Ivory Coast	28.0
55.	Malawi	45.3	122.	Burkina Faso	38.4	185.	Namibia	28.0
55.	Kyrgyzstan	45.3	123.	Arab Emirates	38.0	185.	Turkmenistan	28.0
58.	India	45.1	123.	Barbados	38.0	190.	Uzbekistan	27.3
58.	Macedonia	45.1	123.	Cyprus-Republic	38.0	191.	Benin	26.0
58.	Poland	45.1	123.	Saudi Arabia	38.0	192.	Papua N. Guinea	25.3
61.	Lebanon	45.0	123.	Vietnam	38.0	193.	Burundi	24.0
62.	Spain	44.9	128.	Guinea	37.3	193.	Congo (Rep)	24.0
63.	Czech Rep.	44.6	128.	Mauritania	37.3	193.	East Timor	24.0
63.	Luxembourg	44.6	130.	Pakistan	37.3	193.	Nauru	24.0
65.	Angola	44.0	131.	Mongolia	37.1	197.	Guinea-Bissau	20.0
65.	Grenada	44.0	132.	Russia	36.8	198.	Dominica	16.0

In the conclusion of the report, the research team presents a number of suggestions to improve navigation and provide access to information. One of the weaknesses of many national Web sites has been their inconsistency in terms of design features. Government agencies guard their autonomy very carefully, and it has taken a while for agencies to learn how to work together in order to make the government's Web sites easier for citizens to use.

Governments should promote features that allow citizens to post comments or otherwise provide feedback about a government agency, the researchers said. They also should consider market research, public opinion surveys or focus groups that would provide them with information on how citizens feel about e-government Web sites and what features would attract them to use these sites.

One of the major challenges of e-government is the up-front costs of developing a Web site and putting information and services online. To deal with this issue, smaller and poorer countries should undertake regional e-government alliances that would allow them to pool resources and gain greater efficiency at building their infrastructure.

8.12 BEST PRACTICES OF TOP GOVERNMENT SITES

1) Taiwan: The Executive Yuan of the Republic of China

(http://www.ey.gov.tw/web/index-ey2000.htm)

Taiwan, the number-one ranked E-government country, has an extensive system of information delivery via Internet. The site for the Executive Yuan of the Republic of China contains information varying from national statistics, history of Taiwanese art and culture, policy papers and timely news updates. It also provides all the information in English for an international audience. To promote interaction with the public, the contact information of the head office is presented clearly on the opening page. It features multimedia clips such as videos of notable speeches. All agencies' site, although not uniform, show the same amount of information.

2) Korea (Republic) : Ministry of Commerce, Industry, and Energy

(http://www.mocie.go.kr/)

The Korean (Republic of Korea) are mostly bilingual, interactive, informative and well organized. As shown in the snapshot above, the navigation bar at the top displays all categories of provided information. It also provides some statistical data on the side such as the stock prices and exchange rate. The search feature, link to the sitemap and contact information can be located very easily from the opening page. In addition, the colorful link bars to sites of affiliated groups and governmental agencies facilitate access to a variety of information.

3) Canada: Portal Site

(http://www.gc.ca/main_e.html)

The third ranked nation on the survey is Canada. The front page of the portal site contains various features in an organized fashion, in both French and English. Their interactive features include a customizing tool and a scroll-down navigation bar. They provide privacy and security related announcements under "Important Notices". Moreover, the site is designed to navigate users according to the users' personal interests and

citizenship as seen in the three links in the center of the page. Finally, the site contains all e-mail, telephone numbers, and street address of major governmental agencies and services, facilitating interaction between the government and the population.

4) United States Portal

(http://www.firstgov.gov/)

This gateway is the ideal in organization. Very easy to look for services and most used features while keeping a very professional ad-free site. The United States' pages had the most privacy and security features than anyone else in the international category. Some sites have multimedia features while others did not. The US kept their spot in the top 5 because of their large amount of services, but could have been the top country if they used more multimedia features and kept their webpage information organization uniform.

5) Chile: Portal Site

(http://www.gobiernodechile.cl/)

This site was ranked as one of the highest because of its convenience and use of multimedia features. Chile has a video chat system. Although this page does not have an english translation feature, it out ranked other countries that did with their broadcasting and streaming audio and video features. This site also has a road congestion and access link showing locations and status of major road construction and delays on major roads are.

9. E-GOVERNMENT SERVICES IN TURKEY

9.1. INTRODUCTION

Since there is a growing need to access to the information in today's world, It is obvious that achieving government services with classical (bureaucratic) methods is more difficult than the past. Globalization, intensity of the information and the networks are the main factors which enforce every institution to change their way of working to more productive, more accurate and faster methods. Most people believe that this requirement can be only met by using information technologies and tomorrow's world will be shaped on the internet and almost every institution has begun to make investment on this area. E-commerce is one of the significant utilization of the Internet.

As a result, people making almost everything over Internet now have an expectation to interact with the government over Internet too. This is one of the most important factors for building e-government applications. The other factor is the increase in current costs of public services. This increase is mostly originated from the time consuming paper based manual operations and their negative effects on unit operation (process, transaction) durations. Using information technologies seems to be the best way to increase the efficiency of the public services and decrease total costs.

Joseph Lieberman's e-government definition expresses the concept very well: "E-government is use of Internet-based technology to improve government services, to reduce operational costs, and to enhance citizen participation rethinking government processes".

"eEurope Initiative" which is one of the important agenda items of the Government and IT people of our country defines the e-government applications by a citizen centric approach as follows:

"E-Government brings administrations closer to citizens and businesses through the use of the Internet. Electronic public administration can make a major contribution to accelerating the transition to the knowledge-based economy in the Candidate Countries by stimulating access to and use of basic on-line government services. Furthermore, by contributing to a transformation of the organization of the public sector, e-Government can improve public services, making them faster, as well as more accessible and responsive".

Actually, the action items in the "eEurope Initiative" are not very different when compared with demands of Turkish citizens as determined in [TUENA, 1999, p.9]. According to the report, "household population of Turkey wants to use the National Information Infrastructure extensively and the first five services demanded by them in the order are:

- Finding out and paying telephone, tax, water, etc. bills due and payable (% 82.6),
- Submitting petitions and receiving answers (% 75.5),
- Booking and receiving tickets (% 73.5),
- Cinema, music and other cultural events / Exchanging Information (% 73.2),
- Participating in debates and votes (%69.6)"

This survey shows that most demanded applications by average Turkish citizens are mostly "citizen centric e-government" type demands. If the actions in the "eEurope Initiative" can be executed in their due dates as declared in the National Program, it will be an important progress to meet these social expectations.

9.2. E-GOVERNMENT PROJECTS

In our country, High Board of Science and Technology (BTYK) is the upper body, which makes decisions and constructs policies in the area. One of the most important decisions of the board, made in August 1997 was to watch, support and orient the master plan development studies for Turkish National Information Infrastructure (TUENA), which is expected to carry the country and the people to the future world's information society. The aim of the initiative was "to develop an information sector policy—including the Internet—for improving information technologies and for enabling Turkey's transition to a knowledge society with keeping in mind the following points: public security, public interest, socio-economic aspects, legal and institutional aspects". The importance of the TUENA Master plan was that it is the first official work "including the studies to carry the public services to electronic environment (which can be called as e-government) and technical solutions for this aim" [İNCE, 2001, p.74].

Ministry of Transportation was delegated the coordination duty to prepare the master plan and Turkey's Scientific and Technical Research Council (TÜBİTAK) acted as the secretariat unit and an office was set up to prepare the master plan. The initiative was ended with a final approval of the Transportation Ministry in June 1999. The plan made clear the size of the National Information Infrastructure, available information technologies and probable cost of the infrastructure. Moreover, suggestions for regulations in state structure and industry tools in order to establish this infrastructure have been revealed.

Another parallel study supported by BTYK was the KAMU-NET project. The aim of the project was to connect the networks of different government organizations and plan them centrally in order to be cost effective. A conference was held in 1998 to gather the IT managers of government organizations, to monitor the activities of the participant organizations in the area and to find solutions for a common network, which will combine all the government organizations. One of the decisions taken in the conference is to make a recommendation to the Prime Minister to establish a new board, which will carry out the KAMU-NET initiative.

Higher Board of KAMU-NET was established in 1998 with a Prime Minister Circular [PMC, 1988]. According to the circular, the main tasks of the board were,

- Determining the policies for the informatics personnel working for the government,
- Manpower and maidservant education planning,
- Establishing the National Network for the Government,
- Establishing transparent tools which will ease the communication between the citizens and the Government,
- Establishing tools using information technologies to increase the efficiency of public management and,
- Coordination and monitoring of informatics projects of the government organizations.

While these developments are in progress in our country, another development has begun in Europe, "eEurope+ Initiative" since December 1999. The main goals in the initiative are,

- Cheaper, faster and more reliable (secure) Internet in order to make the applications presented on the Internet, be available for everybody,
- Investment in human resources to enable the citizens to use Internet technologies,
- Supporting the widespread use of the Internet.

As understood, these goals suggest the intensive use of Internet with the intention of making the Internet "a basis" for both national information infrastructures and EU-wide Information Infrastructure. When the goals are achieved, it will be possible to make most of the services offered by the governments and private sector, be on-line and accessible for citizens.

European Commission declared this intention with [EU1, 1999] and put detailed programs, measurement criterions and due dates for member states in order to achieve the purposes stated above. Commission also wanted to encourage the candidate states to prepare similar action plans. So, candidate states prepared a similar program and this program was announced as "eEurope+ 2003 Action Plan" [EUCS, 2001]. All the major aims in both [EU1, 1999] and [EUCS, 2001] are similar to each other but the only differences are due dates of the objects.

Turkey declared her intention and contribution to this initiative within her National Program presented to EU in year 2001. The goals in the National Program are similar to the ones with [EUCS, 2001]. "e-Europe Initiative" contains 12 main topics in order to achieve these goals. It also contains action items to be carried out, evaluation criterions and due dates for each goal. Despite the plan has 12 main topics, two of them are directly related with our thesis: "e-government" and "use of security tools". These two topics are expressed as; "e-government: electronic access to government services" under the main topic "supporting the widespread use of the internet" and, "secure networks and smart cards" under the main topic "cheaper, faster and more reliable internet".

9.3. E-GOVERNMENT APPLICATIONS

Government web sites are the easy way to make their services on-line for public use. It is also possible to access to government on-line services via computers, which can be available to the public in places such as libraries, hospitals or schools. By the last few years, almost every ministry or directorate owned a web-site on the Internet in order to introduce their activities and to communicate with citizens. Investigation of those web sites and determining the applications presented on the portals will be an appropriate method to clarify the current situation of our country on the way to be an electronic government.

E-government applications have already been developed by most of the government organizations or they are in their development phases. [İNCE, 2001, p. 76, 77] lists a total of 61 different Government Information System Projects which are collected from TUENA and KAMU-NET reports. Examples to these projects can be listed as;

- MERNİS (Merkezi Nüfus İdaresi Sistemi- Central Census Management System).
- TAKBİS (Tapu Kadastro Bilgi Sistemi, Cadastral Information System).
- VEDOP (Vergi Dairesi Tam Otomasyon Projesi- Automation Project for Turkish Tax Offices. Citizen centric interface of the project is "Internet Tax Office of the General Directorate of Public Accounts).
- SAY 2000i (Saymanlık Otomasyon Projesi-Automation Project for Accountancies).
- UYAP (Ulusal Yargı Ağı Projesi-National Judgement Network Project).
- TSK KKBS (Türk Silahlı Kuvvetleri Komuta Kontrol Bilgi Sistemi-TAF Command Control and Information System Project).
- BAĞKUR Information System Project.
- SSK Information System Project.

Upon completion of above government projects, we can assume that electronic government for internal constitutions will be realized and there will be a great increase in the efficiency of internal works of the government.

E-Government brings administrations closer to citizens and businesses through the use of the Internet. Electronic public administration can make a major contribution to accelerating the transition to the knowledge-based economy in the Candidate Countries by stimulating access to and use of basic on-line government services. Furthermore, by contributing to a transformation of the organization of the public sector, e-Government can improve public services, making them faster, as well as more accessible and responsive.

There are some applications offered by some government organizations, which can be considered as typical e-government applications. (Table 9.1)

Table 9.1: E-Government Applications

Health and social security and similar services	
Ministry of health services	http://www.saglik.gov.tr/
Government officers can take an advantage from this web site	http://www.emekli.gov.tr
Insured laborers can take an advantage from this web site.	http://www.ssk.gov.tr/wps/portal
Private enterprising, workers can take an advantage from this web site.	http://www.bagkur.gov.tr/
Population and citizenship duties and social services	
You can find your identitiy card number from this web site.	http://tckimlik.nvi.gov.tr/
Investigation about family	http://www.aile.gov.tr/
Social services and children protection association	http://www.shcek.gov.tr/
Social assistance and solidarity association	http://sydtf.basbakanlik.gov.tr/
Religion services directorate	http://www.diyanet.gov.tr/
Water, gas, electricity and other energy services	
The municipality gives services about water receipts, depths complaints, informing illegal users and similar services. The businesses and also citizens can use this web site.	http://www.iski.gov.tr/,
State water works services	http://www.dsi.gov.tr/
The municipality gives services about gas receipts, depts., complaints, informing illegal users and similar services. The businesses and also citizens can use this web site	http://www.igdas.com.tr/

The municipality gives services about electricity receipts, depths, complaints, informing illegal users and similar services. The businesses and also citizens can use this web site. Turkish electricity distribution services	http://www.tedas.gov.tr/
Turkish electricity transmission services	http://www.teas.gov.tr/
Turkish electricity production services	http://www.euas.gov.tr/
Turkish electricity commerce services	http://www.tetas.gov.tr/
Municipality of energy services	http://www.enerji.gov.tr/
Petroleum works services	http://www.pigm.gov.tr/, http://www.tpao.gov.tr/
Municipality of electricity services	http://www.eie.gov.tr/
Mine study and research services	http://www.mta.gov.tr/
Atomic energy services	http://www.taek.gov.tr/
Turkish coal services	http://www.tki.gov.tr/
Turkish pipe lines services	http://www.botas.gov.tr/
Turkish stone coal services	http://www.taskomuru.gov.tr/
Turkish electro mechanic services	http://www.temsan.gov.tr/
Postal, telegraph, telephone, television, radio, lottery services	
Telephone registration, receipts, depths and similar services, citizens can use this web site.	http://212.175.30.30/nsk/163.html
Looking for telephone numbers.	http://ttrehber.gov.tr/index.asp
Looking for mail code number.	https://interaktif.ptt.gov.tr/postakod2/index_deneme1.php3
Looking for nearest post office.	https://interaktif.ptt.gov.tr/postaadres/index.html
For other postal, telegraph and telephone services	https://ptt.gov.tr
Turkish television.	http://www.trt.net.tr/
Anatolia news agency.	http://www.anadoluajansi.gov.tr/
Radio and television inspection committee.	http://www.rtuk.org.tr/
Turkish press, publication information services.	http://www.byegm.gov.tr/
Turkish telecom e-market	www.ttmarket.gov.tr/default.asp/
Turkish telecom invoice information/ defect registration service	http://fatura.telekom.gov.tr/)
Lottery services	http://www.millipiyango.gov.tr/
Transportation services	
State of transportation ministry.	http://www.ubak.gov.tr/
Train hours and other services.	http://www.tcdd.gov.tr/
Online airport incomes and departures hours and other services (price, flight days and hours, plane features, ways etc)	http://www.dhmiata.gov.tr
Internet sale office of Turkish Airlines	http://www.turkishairlines.com
Maritime lines-city Lines services (prices, hours, features etc.)	http://www.ibb.gov.tr/istanbultr/315/31502/2003/index_2003.htm

Car Ferry services (prices, hours, features etc.)	http://www.ibb.gov.tr/istanbultr/315/31502/2003/index_03.htm
Maritime Fast Bus services (prices, hours, features etc.)	http://www.ido.com.tr/tarife.html
To find out driver punishment point age	http://www.egm.gov.tr/sur/surucuceza.asp
Highway general directorate	http://www.kgm.gov.tr/
Motorway and bridge services (prices, descriptions etc)	http://www.kgm.gov.tr/fr5.asp?tt=0303
Distances between countries in Turkey	http://www.kgm.gov.tr/il1.asp
Distances between districts	http://www.kgm.gov.tr/ilce1.asp
Security, safety, justice services	
Judicial register and statistics, punishments, law, rules, and other judicial services. Ministry of justice.	http://www.adalet.gov.tr/
Civil defense services.	http://www.ssgm.gov.tr/
The police services.	http://www.egm.gov.tr/
Gendarme services.	http://www.jandarma.tsk.mil.tr/
Coast guard services.	http://www.sgk.tsk.mil.tr/
Ministry of defense.	http://www.msb.gov.tr/
Secret information services.	http://www.mit.gov.tr/
Online safety and security services.	http://www.iem.gov.tr/
Education, Examination and similar services	
Student examination (University, language and other student selection) results can be find out from this web site	http://www.osym.gov.tr/
Driving license examination results can be find out from this web site	http://meb.gov.tr
Other educational services	http://www.meb.gov.tr/
Turkish scientific and technical research committee	http://www.tubitak.gov.tr/
Turkish scientific academy	http://www.tuba.gov.tr/
Libraries and Museums	
Government Library	http://www.mkutup.gov.tr/
Turkish Press Library	http://www.byegm.gov.tr/TURKBASINI/turkbasini.htm
Foreign Affairs Library	http://www.mfa.gov.tr/turkce/gruph/default.htm
State Planning Organization Library	http://ekutup.dpt.gov.tr/
Boğaziçi University Library	http://www.library.boun.edu.tr/Main-tr.html
Bilkent University Library	http://library.bilkent.edu.tr/indexTR.htm
Çukurova University Library	http://library.cu.edu.tr/
İstanbul Technical University Library	http://www.library.itu.edu.tr/

Bahçeşehir University Library	http://library.bahcesehir.edu.tr/index_turkce.htm
Süleyman Demirel University Library	http://library.sdu.edu.tr/
Marmara University Library	http://library.marmara.edu.tr/
Rivalry Association Library	http://www.rekabet.gov.tr/kutuphane.html
Cartography Museum	http://www.hgk.mil.tr/muze.html
Banknote, Small Change Museum	http://www.tcmb.gov.tr/yeni/banknote/muzemain.html
Çankaya Pavilion Museum	http://www.cankaya.gov.tr/muze.htm
Air, Space, Plane Museum	http://www.hho.edu.tr/muze/muze.htm
Environment History Museum	http://www.mta.gov.tr/muze/muze.asp
Turkish History Association	http://www.ttk.gov.tr/
Online subscription for technical magazines service of TÜBITAK	https://abone.tubitak.gov.tr/
Tax duties, financial and statistical Services	
The businesses and also citizens can use this web site about their income operations	http://www.gelirler.gov.tr/gelir2.nsf/IVDMenu?OpenPage&BaseTarget=Work
You can find your tax identity card number from this web site.	http://vedop.mb-ggm.gov.tr/vkn_sorgu/VKNO_SORGULAMAinput.asp
State statistical services.	http://www.die.gov.tr/
State bank services.	http://www.tcmb.gov.tr/
Other bank services.	http://www.ziraat.com.tr/ , http://www.halkbank.com.tr/, http://www.vgm.gov.tr/, http://www.vakifbank.com.tr, http://www.eximbank.gov.tr/, http://www.tkb.com.tr/
State planning organization services.	http://www.dpt.gov.tr/
Commerce of undersecretary.	http://www.dtm.gov.tr/
Customs of undersecretary services.	http://www.gumruk.gov.tr/
Treasure of undersecretary services.	http://www.hazine.gov.tr
Privatize of undersecretary services.	http://www.oib.gov.tr/
Foreign trade undersecretary services.	http://www.dtm.gov.tr/
Bank arrangement and audit committee.	http://www.bddk.org.tr/
Capital market committee.	http://www.spk.gov.tr/
Ministry of finance.	http://www.maliye.gov.tr/
Developing small and medium industries.	http://www.kosgeb.gov.tr/
Income services.	http://www.gelirler.gov.tr/

Ministry of industry and trade services.	http://www.sanayi.gov.tr/
Turkish patent institution services.	http://www.turkpatent.gov.tr/
Turkish cooperation and progress services.	http://www.tika.gov.tr/
High inspection committee presidency	http://www.ydk.gov.tr/
Tourism, culture, sports services	
Ministry of culture services	http://www.kultur.gov.tr/
Ministry of tourism services.	http://www.turizm.gov.tr/
Authorized accommodation foundations.	http://www.turizm.gov.tr/turizm.tb?app=tesisler&tur=1
Authorized eat, drink, entertainment foundations.	http://www.turizm.gov.tr/turizm.tb?app=yeicgiris
Tourism activity guide.	http://www.turizm.gov.tr/turizm.tb?app=etkinliksor
Protection areas guide.	http://www.turizm.gov.tr/turizm.tb?app=krnngiris
Cultural transportation guide.	http://www.turizm.gov.tr/turizm.tb?app=ulasimgiris
Tourist guide.	http://www.turizm.gov.tr/turizm.tb?app=seyehat
Agent guide.	http://www.turizm.gov.tr/turizm.tb?app=agency
Touristical areas guide.	http://www.turizm.gov.tr/turizm.tb?app=destigiris
Tourism dictionary.	http://www.turizm.gov.tr/turizm.tb?app=sozluk
Youth and sport services.	http://www.gsgm.gov.tr/
Football federation.	http://www.tff.org/
Disaster, meteorology services	
Disaster management center	http://www.aym.org.tr/
Earthquake research department	http://www.deprem.gov.tr/kurul.htm
Meteorology services	http://www.meteor.gov.tr/
Housing, public works services	
Prosperity and housing ministry	http://www.bayindirlik.gov.tr/
Title deed and cadastral general directorate	http://www.tapu.gov.tr/
Collected housing management	http://www.toki.gov.tr/
Housing and building land management	http://www.arsaofisi.gov.tr/
Electronic sale service of state supply office	http://www.dmo.gov.tr/esatis/default.asp
Environment, agriculture, forest services	

Agriculture and village works ministry	http://www.tarim.gov.tr/
Agriculture and village works ministry – protection and control general directorate	http://www.kkgm.gov.tr/
Agriculture and village works ministry – agricultural research general directorate	http://www.tagem.gov.tr/
Agriculture and village works ministry – publication general directorate	http://www.tb-yayin.gov.tr/
Land product office	http://www.tmo.gov.tr/
Agriculture administration general directorate	http://www.tigem.gov.tr/
Tea administration general directorate	http://www.caykur.gov.tr/
Atatürk forest farm directorate	http://www.aoc.gov.tr/
Village works general directorate	http://www.khgm.gov.tr/
Environment ministry	http://www.cevre.gov.tr/
Forest ministry	http://www.orman.gov.tr/
Forestation general directorate	http://www.agm.gov.tr/
National parks and wild life general directorate	http://www.milliparklar.gov.tr/
Forest general directorate	http://www.ogm.gov.tr/
Agriculture village works general directorate	http://www.orman.gov.tr/orkoy/orkoy.htm
Other government management web sites	
Turkish national assembly (TBMM)	http://www.tbmm.gov.tr/
Republic of Turkish President Office	http://www.cankaya.gov.tr/
Republic of Turkish Prime Ministry	http://www.basbakanlik.gov.tr/
State personnel presidency	http://www.basbakanlik-dpb.gov.tr/
Foreign affairs ministry	http://www.mfa.gov.tr/
Internal affairs ministry	http://www.icisleri.gov.tr/
Local government general directorate	http://www.mahalli-idareler.gov.tr/

10. A PUBLIC SURVEY

The Government of İstanbul is planned to prepare "İstanbul Portal" to develop, improve communication with İstanbul people by using information technologies' possibilities

10. 1. RESEARCH METHODOLOGY

The survey methodology and target users were as follows:

- The public survey questionnaire project has been started at 14th of March, 2002, and ended 28th of March, 2002. On 14th of May 2003, "İstanbul Portal" has been broadcasted after the 15 days test broadcast.

- The public survey questionnaire is prepared by the government of İstanbul - IT Department and OLA (Online Information Solution- Professional Online Market Researcher Firm) OLA supported Government of İstanbul by researching İstanbul citizens and focused on helping Web Portal Concept Survey. The companies that ekolay.net, hurriyetim, koc.net, NTV, radikal, showtv.net, turk.net, ibb.gov.tr, ido.gov.tr, iett.gov.tr, igdas.com.tr are broadcasted the public survey questionnaire advertisement. And OLA builds a database for this public survey questionnaire and collects and evaluates them. Thanks for OLA, ekolay.net, hurriyetim, koc.net, NTV, radikal, showtv.net, turk.net, ibb.gov.tr, ido.gov.tr, iett.gov.tr, igdas.com.tr companies for giving a huge support to İstanbul Portal to reach wide mass and to get lots of important clues about the expectations of İstanbul citizens

- The number of 3681 people joined from İstanbul. The number of 1713 participations completed the whole questionnaire. This proportion (%47) is over than the world standards.

- The participations that were at least 18 years of age who live in İstanbul and who had accessed the Internet in some ways.

The participants features are given with tables at the below.

Question: Gender of the participants (The number of given answers : 1713)

Table 10.1. : Gender   **Graphic 10.1: Gender**

SEX	PERCENTAGE
Male	% 14
Female	% 86
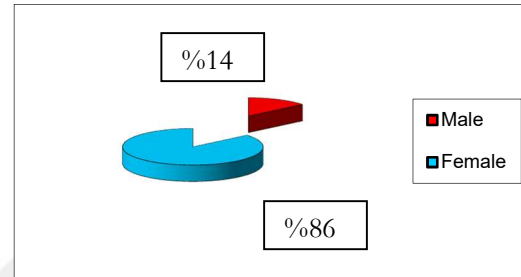
Question: Age Statue (The number of given answers : 1713)

Table 10.2. : Age Statue   **Graphic 10.2: Age Statue**

AGE	PERCENTAGE
18-25	% 23
25-34	% 47
35-44	% 19
45<	% 11
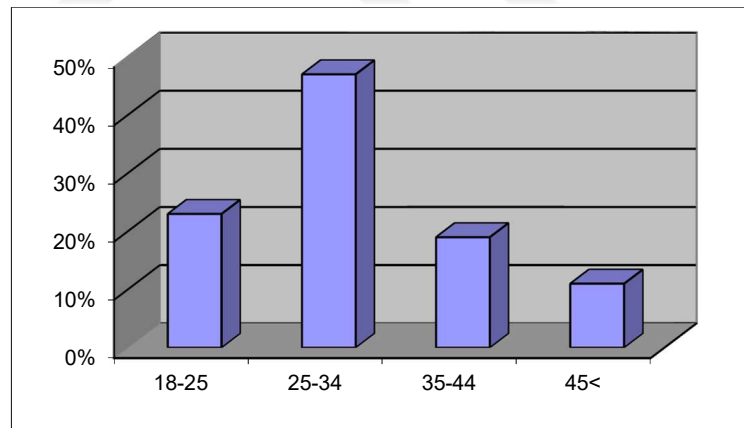
Question: Occupation of the participants (The number of given answers : 1713)

Table 10.3 : Occupation

OCCUPATION	PERCENTAGE
Engineer	% 34
Finance Expert / Economist	% 26
Counselor	% 12
Technician	% 10
Academician	% 10
Other	% 8

Grafic 10.4 : Occupation
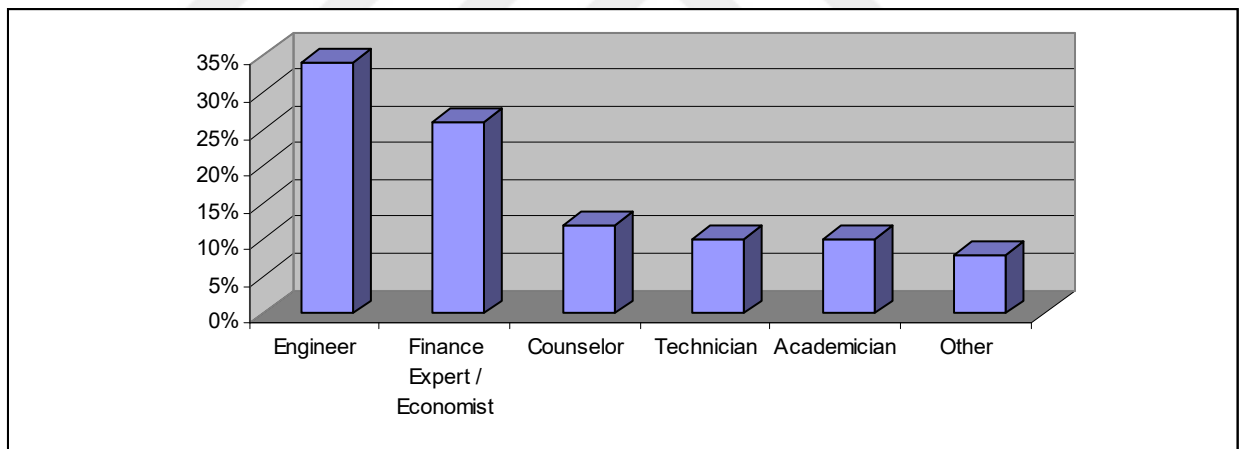
Question: Level of education of the participants (The Number Of Given Answers : 1713)

Table 10.4 : Level of education   **Graphic 10.4 : Level of education**

GRADUATE/ STUDENT	PERCENTAGE
Graduate	% 75,8
Student	% 24,2
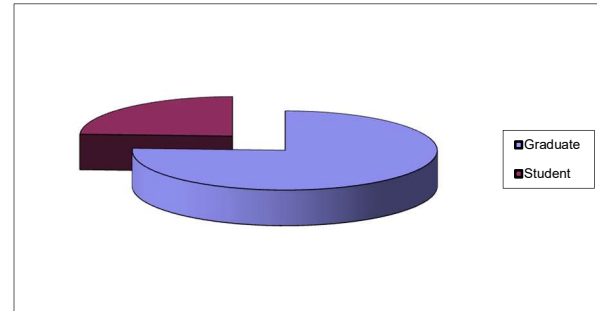
GRADUATE (% 75,8)	PERCENTAGE
Primary school	% 0
Secondary school	% 1
High School	% 15
Bachelor Degree (2 years)	% 9
Bachelor Degree (4 or more)	% 55
Masters Degree	% 16
Ph Degree	% 4

STUDENT (% 24,2)	PERCENTAGE
Primary school	% 0
Secondary school	% 0
High School	% 6
University (2 years)	% 4
University (4 or more)	% 64
Masters Degree	% 21
Ph Degree	% 5

Question: How many years you have been living in İstanbul? (The number of given answers : 1713)

Table 10.5 : Time (Living in İstanbul)

TIME	PERCENTAGE
>5	% 87
1-5	% 8
<1	% 4
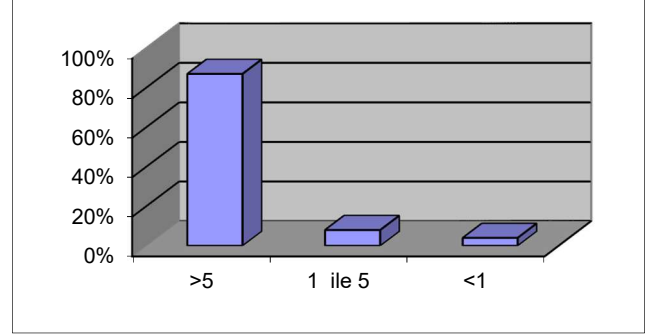
Grafic 10.5: Time (Living in İstanbul)

Question: Which county, district you have been living in? (The number of given answers : 1713)

Table 10.6 : County (Living in İstanbul)

TIME	PERCENTAGE
Kadıköy	% 32
Beşiktaş	% 28
Bakırköy	% 12
Şişli	% 8
Üsküdar	% 7
Fatih	% 7
Other	% 6

Grafic 10.6 : County (Living in İstanbul)
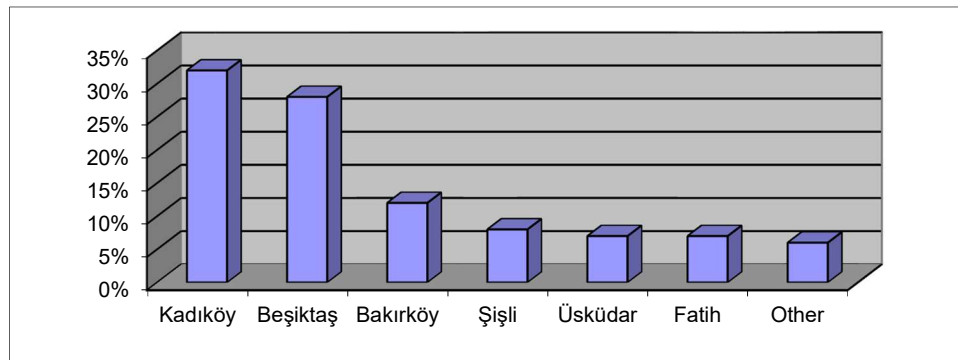
10. 2. PUBLIC SURVEY RESULTS

Question: At the below, the prior content that is planned to take a part in Portal of İstanbul is arranged in order. Please point out the importance of your personnel suggestion for from these contents. (5 = Very important, 1 = Not important) (The number of given answers : 1713)

Table 10.7 : Prior Content

CONTENTS	AVERAGE	POSITIVE	NEGATIVE	NO IDEA
The portal must contain all public associations' foundations and civilian society foundations' information of communication.	4,4	% 83	%7	%10
The portal must contain renewed public surveys that are taken from the Istanbul people's thoughts about the events with continuously.	4,2	% 76	% 9	% 15
The portal must contain expenses, needed documents, petition examples and forms which is used for the applications to the public associations foundations.	4,3	% 80	% 8	% 12
The portal must contain student scholarships, help, adjudication announcements that given by Government of Istanbul and can able to take applications	4,2	% 75	% 10	% 15
The portal must contain some articles, was written by experts, about different topics.	3,7	%57	% 17	% 26
The portal must be formed in electronic platform, can able to take users' point of views	4,1	% 73	% 11	% 16

Question: Please give other suggestions about content of İstanbul portal. (The number of given answers: 443)

Table 10.8 : Other suggestions

OTHER SUGGESTIONS	PERCENTAGE
İstanbul's interactive map	% 12,7
Enable to take complaints and follow up	% 10,2
Finding the address feature	% 8,8
Traffic condition reports and live cameras	% 8,4
On duty pharmacy list	% 3,6
Necessary Phone Numbers	%3.6
Earthquake (some information; precautions before earthquake, action plans at the earthquake, first aid, treatment and behaviors after the earthquake)	%3.4

Question: Please point out most needed 3 links in İstanbul portal. (The number of given answers : 443)

Table 10.9 : Most Needed 3 links

MOST NEEDED ASSOCIATION LINKS	PERCENTAGE
Municipality	%13.4
Communications, Transportation Associations (Telecommunication, Airport)	%9.6
Health Associations	%7.8
The Police Force	%7.0
Education Associations	%6.3
Culture Associations	%6.0
Judicial Associations	%5.1

Question: Please give other suggested links in İstanbul portal. (The number of given answers : 187)

Table 10.10: Other Sugessted Public Foundation Links

OTHER SUGGESTED PUBLIC FOUNDATION LINKS	PERCENTAGE
Civilian Community Foundations	%10,7
Universities Links	%3.7
Earthquake Links	%3.2

Question: Please give your opinion about which documents, petition examples and forms the portal must contain (The number of given answers: 412)

Table 10.11: Form and Petition Samples

FORM AND PETITION SAMPLES	PERCENTAGE
Passport Applications	%9.8
Tax Declarations	%9.0
Complaint Petitions	%6.3
Copy of Person Registration	%5.6
Driving License Application and License Loss Forms	%4.4
Telephone Registration Applications	%4.2

Question: Please give your opinion about which information and guides the portal must contain. (The number of given answers: 451)

Table 10.12: Information and Process Guide

INFORMATION AND PROCESS GUIDE	PERCENTAGE
Passport Operations	% 19
Tax Operations	% 11
Driving License Operations	%9,5
Municipality Operations	% 8,9
Title Deed Operations	% 5,6
Population, Person Registration Operations	%5,5
The Military Profession Operations	%4,9
Judicial Operations	% 4,4
Documents, Taxes, Information Guides and Subscription Operations About Natural Gas, Electric, Water	%2,9

Question: Give your opinion about which are the subjects of informative articles the portal must contain. Please point out the most needed 3 subjects at the below. (The number of given answers: 1713)

Table 10.13: Subjects of Informative Articles

SUBJECT	PERCENT
Education	%13
Culture	% 12,7
Traffic	%12,6
Health	% 11,6
Civilian Defense (Earthquake, Flood, Fire etc.)	% 11,2
Cultural Organizations	% 6,0
Public Security	% 10,7

Question: What is your opinion about the most needed features in Istanbul Portal.

(The number of given answers: 1713)

Table 10.14: Most Needed Features

FEATURES	POSITIVE	NEGATIVE	NO IDEA
"Call Me" Feature	% 56	% 15	% 29
"Frequently Asked Questions" Part	% 90	% 5	% 5
Questionnaire	% 83	% 10	% 7
E-newspaper/ Actual News / Last Moment News	% 84	% 10	% 6
Easy to Navigate in Site	% 91	% 3	% 6
Help Information About Usage	% 80	% 8	% 12
Online Forms	% 90	% 4	% 6
Voice / Graphic / Animation	% 49	% 25	% 26
Site Map	% 82	% 6	% 12
Research Engine in Site	% 90	% 5	% 5
Site Membership	% 42	% 41	% 17
Chat Room	% 32	% 42	% 26
Competitions, Promotion Campaigns	%57	% 19	% 24

Question: Please write down, best known 3 public web sites?

(The number of given answers: 1026)

Table 10.15: Best Known Public Web Sites

WEB SITE	PERCENTAGE
İstanbul Municipality	% 36,7
İstanbul Police Directorate	% 17,3
Office of Prime Minister	% 16,6
Turkish Telecommunication	% 16
Ministry of Finance	% 9,3
Republic of Turkey – Center Bank	% 9
General Income Directorate	% 7,6
Ministry of National Education	% 6,1
Social Security Association	% 5,6
Ministry of Culture	% 5
TBMM (Turkish National Assembly)	% 4,9
Meteorology	% 4,9
OSYM (Student Select and Settle Center)	% 4,5
Ministry of Tourism	% 3,9
General Police Directorate	% 3,2

10.3. CONCLUSIONS OF THE SURVEY

To facilitate the daily life.
- ✓ To present an interactive map with address and way description
- ✓ To present traffic condition in different areas by traffic cameras.
- ✓ To inform with SMS warnings at the moment. (Ex: : All schools are closed for 3 three days for bad weather condition)
- ✓ Employee and employment announcements.
- ✓ Pharmacies on duty.
- ✓ Necessary telephone numbers.

To be more practical in bureaucratic processes.
- ✓ Passport Operations
- ✓ Tax Operations
- ✓ Driving License Operations
- ✓ Municipality Operations
- ✓ Title Deed Operations
- ✓ Population, Person Registration Operations
- ✓ The Military Profession Operations
- ✓ Judicial Operations
- ✓ Documents, Taxes, Information Guides and Subscription Operations about Natural Gas, Electric, Water
- ✓ Help Information About Online Forms

To enable setting up communication between citizen to citizen and government to citizen.
- ✓ To get thoughts from İstanbul citizens by renewal questionnaires continuously.
- ✓ An electronic platform that can able to get users ideas, worries, suggestion and expectations.
- ✓ E-newspaper/ Old News/ Actual News / Last Moment News
- ✓ A platform which can able enable to declare and follow the complaints.

10.4. STATISTICAL ANALYSIS OF THE SURVEY

SPSS provides a powerful statistical analysis and data management system in a graphical environment. I used descriptive menus and simple dialog boxes to do most of the work. The purpose of a crosstabulation is to show the relationship (or lack thereof) between two variables. The crosstabulation table is the basic technique for examining the relationship between two categorical variables, possibly controlling for additional layering variables. The crosstabs procedure offers tests of independence and measures of association and agreement for nominal and ordinal data. **The chi-square test** measures the discrepancy between the observed cell counts and what you would expect if the rows and columns were unrelated.

The results are significance (0.05 or less) using SPSS program.The results are given below

Table 10.16: The Analysis of Gender (Table 10.1) with Most Needed 3 Links (Table 10.9)

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	40,640(a)	12	,000
Likelihood Ratio	20,046	12	,066
Linear-by-Linear Association	12,693	1	,000
a 21 cells (80,8%) have expected count less than 5. The minimum expected count is ,08.			

Symmetric Measures					
		Value	Asymp. Std. Error(a)	Approx. T(b)	Approx. Sig.
Nominal by Nominal	Phi	,584			,000
	Cramer's V	,584			,000
Interval by Interval	Pearson's R	-,328	,159	-3,755	,000(c)
Ordinal by Ordinal	Spearman Correlation	-,146	,110	-1,598	,113(c)
a Not assuming the null hypothesis.					
b Using the asymptotic standard error assuming the null hypothesis.					
c Based on normal approximation.					

Table 10.17: The Analysis of Age Statue (Table 10.2) with Prior Content (Table 10.7)

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	18,164(a)	8	,020
Likelihood Ratio	18,237	8	,020
Linear-by-Linear Association	6,857	1	,009
a 17 cells (94,4%) have expected count less than 5. The minimum expected count is ,19.			

Symmetric Measures					
		Value	Asymp. Std. Error(a)	Approx. T(b)	Approx. Sig.
Nominal by Nominal	Phi	,820			,020
	Cramer's V	,820			,020
Interval by Interval	Pearson's R	-,514	,160	-2,992	,006(c)
Ordinal by Ordinal	Spearman Correlation	-,363	,175	-1,948	,063(c)
a Not assuming the null hypothesis.					
b Using the asymptotic standard error assuming the null hypothesis.					
c Based on normal approximation.					

Table 10.18: The Analysis of Occupation (Table 10.3) with Best Known Public Web Sites (Table 10.14)

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	17,859(a)	14	,213
Likelihood Ratio	20,343	14	,120
Linear-by-Linear Association	5,611	1	,018
a 24 cells (80,0%) have expected count less than 5. The minimum expected count is ,29.			

Symmetric Measures					
		Value	Asymp. Std. Error(a)	Approx. T(b)	Approx. Sig.
Nominal by Nominal	**Phi**	,368			,213
	Cramer's V	,368			,213
Ordinal by Ordinal	**Kendall's tau-b**	-,180	,072	-2,469	,014
	Gamma	-,300	,118	-2,469	,014
	Spearman Correlation	-,203	,081	-2,362	,020(c)
Interval by Interval	**Pearson's R**	-,207	,080	-2,412	,017(c)
a Not assuming the null hypothesis.					
b Using the asymptotic standard error assuming the null hypothesis.					
c Based on normal approximation.					

Table 10.19: The Analysis of Level Of Education (Table 10.4) with Form And Petition Samples (Table 10.11)

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	16,644(a)	14	,276
Likelihood Ratio	18,292	14	,194
Linear-by-Linear Association	4,538	1	,033
a 24 cells (80,0%) have expected count less than 5. The minimum expected count is ,35.			

Symmetric Measures					
		Value	Asymp. Std. Error(a)	Approx. T(b)	Approx. Sig.
Nominal by Nominal	**Phi**	,355			,276
	Cramer's V	,355			,276
Ordinal by Ordinal	**Kendall's tau-b**	-,162	,078	-2,063	,039
	Gamma	-,265	,126	-2,063	,039
	Spearman Correlation	-,183	,088	-2,121	,036(c)
Interval by Interval	**Pearson's R**	-,186	,087	-2,160	,033(c)
a Not assuming the null hypothesis.					
b Using the asymptotic standard error assuming the null hypothesis.					
c Based on normal approximation.					

Table 10.20: The Analysis of Level of Education (Table 10.4) with Subjects Of Informative Articles (Table 10.12)

Chi-Square Tests			
	Value	**df**	**Asymp. Sig. (2-sided)**
Pearson Chi-Square	31,996(a)	14	,004
Likelihood Ratio	38,014	14	,001
Linear-by-Linear Association	10,381	1	,001
a 24 cells (80,0%) have expected count less than 5. The minimum expected count is ,48.			

Symmetric Measures					
		Value	**Asymp. Std. Error(a)**	**Approx. T(b)**	**Approx. Sig.**
Nominal by Nominal	**Phi**	,492			,004
	Cramer's V	,492			,004
Ordinal by Ordinal	**Kendall's tau-b**	-,258	,071	-3,598	,000
	Gamma	-,392	,106	-3,598	,000
	Spearman Correlation	-,291	,081	-3,466	,001(c)
Interval by Interval	**Pearson's R**	-,282	,079	-3,345	,001(c)
a Not assuming the null hypothesis.					
b Using the asymptotic standard error assuming the null hypothesis.					
c Based on normal approximation.					

Table 10.21: The Analysis of Level Of Education (Table 10.4) Most Needed Features (Table 10.13)

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	17,133(a)	14	,249
Likelihood Ratio	16,337	14	,293
Linear-by-Linear Association	8,215	1	,004
a 24 cells (80,0%) have expected count less than 5. The minimum expected count is ,08.			

Symmetric Measures					
		Value	Asymp. Std. Error(a)	Approx. T(b)	Approx. Sig.
Nominal by Nominal	**Phi**	,360			,249
	Cramer's V	,360			,249
Ordinal by Ordinal	**Kendall's tau-b**	-,206	,067	-2,512	,012
	Gamma	-,560	,159	-2,512	,012
	Spearman Correlation	-,232	,076	-2,722	,007(c)
Interval by Interval	**Pearson's R**	-,250	,081	-2,949	,004(c)
a Not assuming the null hypothesis.					
b Using the asymptotic standard error assuming the null hypothesis.					
c Based on normal approximation.					

11. SERVICES IN THE FUTURE

11. 1. PROCUREMENT

The benefit of e-procurement is reduced transaction costs, reduced cost of goods and services, and enhanced capacity to manage and track purchases and expenditures. Former New York City First Deputy Comptroller Ed Fitzpatrick observed: "The largest single business process that could be aided by Internet technology is the area of City purchasing. The City spends tremendous amounts of money on goods and services. Online purchasing promises to be the single cost fertile area for reducing cost to the City. Many vendors offer online solutions that can accommodate some of the many rules related to government purchasing although to fully leverage online buying the City will have to re-engineer the processes. Such solutions offer the benefits of lower cost, reduced paperwork, just in time inventory and fast order fulfillment." (Fitzpatrick: 2000)

Automating the procurement process can enhance purchasing by allowing staff to requisition goods and services and receive permission to purchase items through requisitions sent over the Internet. The capacity to purchase over the Web is useful, but electronic and streamlined approval procedures are also critical. The speed of the technology will place greater pressure on organizations to speed up, decentralize and automate all elements of purchasing. This will serve to reduce the administrative costs associated with purchasing. If the procurement system is fully integrated into the financial control system, it will have the effect of providing more up -to-date information on agency spending. This in turn will enhance the agency's ability to control spending.

Web sites will describe each element of purchasing, and easily track choices, availability of stock, shipping, delivery progress and costs. To take full advantage of the web's potential we expect to see the development of government-wide consortia for volume purchasing, to hold auctions and to sell unneeded or unused supplies or equipment.

11.2. INTERNAL PAPER PROCESSING AND INFORMATION SHARING

An important internal use of e-government technology in ten years will be the electronic submission of time sheets, budget submissions, formal memoranda, travel reimbursement forms, and virtually any forms now processed by paper. This will reduce the volume of paper deliveries, the need for filing space and the cost of creating, moving and storing paper. This government-to-government use of the Internet holds enormous potential for improving the speed, efficiency and cost-effectiveness of government's sharing of data and information with other government organizations.

Government's political environment and accountability mandates require that financial and performance data be shared among a large number of organizations. Within the agency information must be shared with policy, budget and oversight shops. Career and political appointees frequently interact over the collection, timing, analysis and reporting of these data. The cost of information collection and sharing may be reduced significantly as a result of the use of the Internet. This may have the effect of making it more difficult to control information, leading to a new set of conflicts between organizations over the use of information. One effect of the web on the younger generation is a sense of entitlement regarding information. The students we teach believe that Information should be easily accessible, inexpensive and always available. They have grown in a society where information is as ubiquitous as oxygen, and they do not have much tolerance for those who seem to influence events, people and organizations through the control of information. As the volume of information released continues to increase over the next decade; sorting, analyzing and summarizing key information is likely to become a more important function of government organizations. Control will be obtained through methods of summary and analysis rather that of controlling the release of information itself. As information's volume becomes too large to digest, control of analysis will have an effect similar to the current control of information itself. The Web and the Internet will reduce the costs of information, but increase its volume and increase the need for analysis.

11.3. GOVERNMENT-PUBLIC INTERACTION

E-government is an excellent technology for responding to requests for services, which include obtaining and filing of permits, registration or license forms. People can sign up for appointments and can pay fees through the use of credit cards. A number of cities provide online complaint and request forms for services, such as repairing broken traffic lights, picking up large garbage items such as couches and refrigerators, and repairing sidewalks and potholes. While some web sites require residents to request a form, download and print it for manual submission, within a decade all of these forms will be submitted on-line. According to a 2000 United Nations/American Society of Public Administration (UN/ASPA) survey, e-government exists primarily to "improve citizen access to government information, services and expertise to ensure citizen participation in, and satisfaction with the governing process." (United Nations/ASPA: 2000) E-government can help improve government relations with constituents by eliminating unnecessary bureaucracy, streamlining service delivery, saving taxpayers' money, and reducing the "friction" of cumbersome interactions. Furthermore, the Web can provide a progressive "electronic face" for governmental agencies such as the U.S. Internal Revenue Service, whose popular image does not always encourage approachability.

The Web enables government to provide the public with low cost and convenient access to information. Government Web sites are ubiquitous. A joint study conducted by the International City/County Management Association (ICMA) and Public Technology, Inc. found that 94% of 1,900 responding local governments had an Internet site, or were planning on to launch one within a year.2 Each of the fifty states and their agencies as well as virtually every federal agency has its own Website. Many of these sites are one-dimensional and do not take advantage of the interactive capacities of the Internet. We can, however, see the future of e-government by examining some of the more sophisticated government sites such as those provided by New York City and Phoenix. New York City's web site. New York City's site includes a wide variety of features including: a range of on-line services such as paying or disputing parking fines and getting a birth certificate, the day's weather, job applications and a wide variety of links and electronic forms. While

NYC's site is fairly advanced, most sites are not. In the next decade, public sector web sites will move beyond one-directional sharing of information and provide two-way transactional services. Internet technologies can help government improve the services that it provides for its citizens. E-government never closes. This means that the public can access information whenever they feel like it. It also means they can request services when offices are closed. This also allows government workers to respond to e -mail requests during those times of the day when live and telephone requests are not as frequent.

11.4. VOTING AND REPRESENTATION

One of the more intriguing uses of e-government is to enhance the democratic process. The interactive nature of the web could lead to increased public involvement in government decision making. Web sites offer a convenient means for citizens to provide feedback or input to their government. As home PCs develop interactive TV and video capacity it will be possible to hold virtual town meetings. The public can register their comments in real time or tape them for web casting when time is available.

Voting will also be possible on the web. The authentication of votes will be possible through a variety of technological innovations. The use of on-line voting coupled with increased access for poor people across the "digital divide" holds within it the potential for vast increases in voter turn out. The act of voting often uses utilizes technology that is outmoded and unreliable. The controversy over the Florida vote in the 2000 presidential election provides graphic evidence of the need to update voting technology.

When Internet access becomes as universal as telephone service over the next decade, the possibility for Internet-based survey research can improve the speed and reliability of polling data, while reducing its cost. The cost of live interviewers and the difficulty of reaching a respondent at the exact time of the call are overcome by Internet surveys. While response rates and representativeness of the sample are issues that must be resolved, many of the experts we spoke with in this study believed that those problems would be addressed in the next decade.

While polling is not always thought of as an institution of representation, it is the only method we have to ensure that all elements of the public are consulted in the policy process. Such passive participation is not without danger of manipulation and misinterpretation, but the Web will make it possible to dramatically reduce the cost of polling. This could make it possible to use the Web to elicit and record public comments on administrative decisions, to hold "instant-messenger" chat room style public hearings, and then use surveys to elicit the views of those who are affected by government's decisions, but typically choose not to participate in government decision making. The costs of getting to and from meetings, of travel and of printed information could also be reduced or even eliminated from government's public participation programs.

The use of the Internet for voting and representation may be the most far-reaching reform based on this new technology. If it happens it can increase participation rates and make government more responsive to the broad public. We should note that those are not necessarily goals shared by all of those holding power in the current political structure. The same forces that have allied themselves to oppose campaign finance laws would very likely line up to oppose the use of the Internet for voting and public participation. For groups with economic power or with well-organized lobbies permitting expanded participation will expand the scope of conflict and cause them to lose control or reduce their influence over the issue.

11.5. LOBBYING

Experts in e-government expect the use of the Web and Internet for lobbying to increase over the next decade. Interest groups will use e-mail coupled with "web mailings" to inform supporters of important events and of decision makers to lobby. This will reduce the printing and postage costs of lobbying operations, and shift design and production professionals from the print-based businesses to the Web-oriented ones. While paper will always be used as a medium of communication, now it will be coupled with and be reinforced by electronic media.

One effect of the use of the Internet for lobbying will be to reduce the costs of these activities. This will allow ad-hoc, single issue and less institutionalized groups to form and have an immediate impact on government policies and programs. By reducing the costs of organization and communication, the Web holds out the prospect yet again, of democratizing policy formulation and implementation.

12. CONCLUSIONS

E-Government brings administrations closer to citizens and businesses through the use of the Internet. The Internet has the potential to transform the way we interact with government. Traditionally, people and businesses have dealt with government face to face, over the phone or with paper based systems, during limited hours of the day. E-government allows more convenient and efficient interaction with government, 24 hours a day, 7 days a week, whether it is from an office desk or a kitchen table. Government already publishes a wide range of information on web sites. E-government enables public sector agencies to interact and conduct transactions with citizens and businesses over the Internet.

The public sector is starting to adopt e-government. It already offers certain transactions (passport applications, petitions) over the Internet. This is just the start. Soon, new bundles of electronic services and interactions will emerge which are tailored to the specific needs of citizens and business. E-government will transform the ability of public servants to serve their communities with innovation and efficiency. Public sector organizations will have to adjust their relationships with citizens, businesses, employees and other public agencies. Indeed, government is in a unique position to be a catalyst for change.

As a result survey shows that most demanded applications by average Istanbul citizens are mostly "citizen centric e-government" type demands. Istanbul citizens are making almost everything over Internet now have an expectation to interact with the government over Internet, too. This is one of the most important factors for building e-government applications. The other factor is the increase in current costs of public services. This increase is mostly originated from the time consuming paper based manual operations and their negative effects on unit operation (process, transaction) durations. Using information technologies seems to be the best way to increase the efficiency of the public services and decrease total costs. Istanbul portal should be designed easy to use and fast to reach for everybody live in Istanbul and for every age, and should be included all e-government services and to show the way of e-applications over the internet.

REFERENCES

1. Atkinson, R.D. and Ulevich, J., Digital Government: The Next Step to Reengineering the Federal Government, Washington D.C., Progressive Policy Institute, Technology and new Economy Project, March, 2000.

2. Barbu, A., Information Infrastructure: The World Bank Group's Experience: A Joint Operations Evaluations Department, Operations Evaluation Group Review. Washington D.C. International Finance Corporation, World Bank, 2001.

3. Bilişim Terimleri Sözlüğü, Türkiye Bilişim Derneği, 2000

4. Cohen S., Eimicke W., The Future Of E-Government: A Projection Of Potential Trends and Issues, Columbia University, School of International And Public Affairs, January 2002

5. Cohen, S. and Eimicke, W., The Use of the Internet in Government Service Delivery, Arlington, Virginia, Price WaterhouseCoopers Endowment for the Business of Government. February, 2001.

6. Copen, B., Dorosin, N., Fye, R., Johnson, C., Levine, D. "Dropping the "E" from EGovernment", Unpublished manuscript, Columbia University, School of International and Public Affairs, Graduate Program in Public Policy and Administration, December, 2001.

7. E-İş'te Başarı – Yöneticinin Yol haritası, Oracle, 2001

8. E-Devlet Yolunda Kamu Kurumları Uygulamaları (E-Kurumlar), Türkiye Bilişim Derneği, Eylül 2003

9. Fitzpatrick, E., New Frontiers in Electronic Government: New York City's Use of Information Technology and the Internet, New York, New York, NYC Office of the Comptroller, 2000.

10. Fountain, J. E., Building The Virtual State: Information Technology And

Institutional Change, Washington D.C., Brookings Institution Press, 2001.

11. General Services Administration, Office of Government-wide Policy, Office of Intergovernmental Solutions, Washington, D.C. Government Without Boundaries Project Plan, August 21, 2001,

12. http://ekutup.dpt.gov.tr/bilisim/ incem/e-devlet.pdf , September 2001

13. http://europa.eu.int/information_society/eerope/action-plan/index_en.html , January 2002.

14. http://europa.eu.int/information_society/international/candidate_countries/ index_en.htm , January 2002.

15. http://www.abgs.gov.tr/dokuman/ulusalprogram main.htm, November 2001.

16. http://www.tuena.tubitak.gov.tr , October 2001.

17. http://www.istanbul.gov.tr, Istanbul Valiliği Web sayfası

18. İnternet- iş Dünyası için Intranet ve İnternet Merkezli Bilgi İşlem, Digital, 2001

19. National Program presented to EU, http://www.abgs.gov.tr/dokuman/ulusalprogram main.htm, November 2001.

20. Prithett P., " Kökten Değişen Dünya için Yeni Çalışma Alışkanlıkları", Fed Training, 2002

21. Seifert, Jeffrey W. "A Primer on E-Government: Sectors, Stages, Opportunities, and Challenges of Online Governance" Congressional Research Service Report to Congress, July 20, 2001. Washington, D.C.

22. Symonds, M "Government And The Internet: Haves And Have-Nots". The Economist, June 24th 2000.

23. Symonds, M "Government And The Internet". The Next Revolution.. The

Economist, June 24th. 2000

24. Symonds, M. "Government And The Internet: No Gain Without Pain".. The Economist., June 24th 2000.

25. The e-Government Project an Invitation to Help Us Shape the Future, 2000, http://lieberman.senate.gov/press/00/05/2000608b20.html.

26. Türkiye'den Örneklerle E-İş Gerçeği, Microsoft- Intel, Capital , Nisan 2001

27. United Nations Division for Public Economics & Public Administration and the American Society for Public Administration: Global Survey of E-Government, .www.unpan.org/egovernment.asp

28. US Dept. of Commerce, US. Census Bureau, U.S. Economics and Statistics Administration. Home Computer Use and Internet Access in the US: Special Study, Washington D.C., August 2000.

29. West, Darrell. Assessing E-Government: The Internet, Democracy, and Service Delivery by State and Federal Governments, 2000 Providence Rhode Island., www.brown.edu

30. Wyld, D. C, The Auction Model: How the Public Sector Can Leverage the Power of E-Commerce Through Dynamic Pricing. Pricewaterhouse Coopers Endowment, Arlington, VA. October 2000.

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