

Contribution of
TURKEY
to



Progress Report



State Planning Organization
Information Society Department

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EXPLANATORY MEMORANDUM

This progress report has been prepared as the contribution of Turkey to Final eEurope+ Progress Report. Data provided in this report is not necessarily compiled solely for the report, and some of the data presented might not be compatible with the other candidate countries' data collected by Danish Management Group for Final eEurope+ Progress Report.

Turkey has not been part of “eEurope+ Data Collection, Monitoring and Benchmarking Project” of the European Commission, because the financial resources required for this project has been provided only for 10 PHARE countries. For this reason, State Planning Organization does not guarantee the compatibility of data and the accuracy of methodology regarding data collection process for each and every indicator.

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INTRODUCTION

Turkey has participated in eEurope+ Initiative with other European Union (EU) candidate countries in June 2001. EU's ambitious Lisbon Strategy "to become the most competitive and dynamic knowledge-based economy in the world by 2010" is also well recognized by Turkey, and Turkish government is sharing the very same goal as a candidate country to an enlarged Union. Starting with Turkey's participation, an initiative has been launched to achieve the goals of eEurope+. As an evidence to Turkey's commitment to succeed in transforming Turkey into an information society in line with the Lisbon Strategy, e-Transformation Turkey Project is well underway and achieving its short term targets. **e-Transformation Turkey Project** was launched as part of Turkey's commitment to join the European Union and, in particular, to leverage Turkey's potential to become an important player in the global arena.

The objective of this progress report is to share new developments and projects regarding the objectives set by the eEurope+ Action Plan and progress achieved since the previous report.

e-TRANSFORMATION TURKEY PROJECT

The government took power in December 2002, and introduced the **Urgent Action Plan** (UAP) to help solve the problems on the most needed areas of interest. This Plan takes place in the core of 58th and 59th Governments' Program and the first implementation period has been completed in December 2003. As a part of this Urgent Action Plan's Public Management Reform Section, e-Transformation Turkey Project was declared as a high-priority project. **e-Transformation Turkey Project** aims to foster the evolution and to coordinate information society activities with a coordination unit established solely for this aim.

Responsible institution for this specific project is identified as State Planning Organization (SPO), which is affiliated to the Prime Ministry. SPO is responsible for overall coordination of countrywide economic and social development programs, allocation of funds to public investment projects, and advising to the Government. Prime Ministry, NGOs, and all public institutions are identified as affiliated organizations for this project.

To clarify the objectives and principles about the project, a Prime Minister's Circular, dated February 27, 2003 has been issued. According to this Circular, the objectives of e-Transformation Project are as follows:

- Policies, laws, and regulations regarding ICT will be re-examined and changed if necessary, with respect to the EU acquis; eEurope+ Action Plan, initiated for the candidate countries, will be adapted to Turkey.
- Mechanisms that facilitate the participation of citizens to decision-making process in the public domain via using ICT will be developed.
- Transparency and accountability for public management will be enhanced.
- Through increased usage of ICT, good governance principles will be put in place in government services.
- Spreading the usage of ICT.
- Public IT projects will be coordinated, monitored, evaluated and consolidated if necessary in order to avoid duplicating or overlapping investments.
- Private firms will be guided according to the above-mentioned principles.

In order to realize these objectives and to ensure the success of the project, a new coordination unit, **Information Society Department**, within SPO is established. This Department is responsible for the overall coordination of the project. Before this new project, lack of efficient coordination between institutions made the progress slow and ineffective. For the first time in Turkey, a separate division has been named as the coordinator of information society activities.

To increase the participation and the level of success, an **Advisory Board** with 41 members has been established. This consulting body consists of the representatives of public institutions, non-profit organizations, and universities. The Board had its first meeting at the end of May to discuss and elaborate the Short Term Action Plan. The meeting was chaired by e-Minister, Mr. Abdullatif Sener.

In line with the government's schedule, the initial focal point in this project has been the **Short Term Action Plan (STAP)**, which covers 2003-2004, for implementing specific tasks. Another Prime Minister's Circular, dated December 4, 2003 has been issued for the introduction of STAP ¹. The structure of this action plan describes the objectives, the institutions that are in charge and are affiliated with, the duration, and financial needs if any. STAP puts 73 actions in force under 8 sections. These 8 sections are:

- Strategy
- e-Education and Human Resources
- e-Health

¹ For STAP, visit <http://www.bilgiteplumu.gov.tr/eng/eDTRStap.pdf>

- e-Commerce
- Standardization
- Infrastructure and Information Security
- Legislation
- e-Government

In the meantime, with the same Prime Minister's Circular, a new body, **Execution Board**, has been established. This board is comprised of five members, Mr. Sener, Minister of State and Deputy Prime Minister (Chair), Mr. Yildirim, Minister of Transportation, Mr. Coskun, Minister of Industry and Trade, Mr. Tiktik, Undersecretary of SPO and Mr. Uccan, Chief Counselor to the Prime Minister. In addition to five members, the Circular allows heads of eight other related parties to participate to the Board Meetings. ²

Main duty of this Board is to realize e-Transformation Turkey Project with proper decisions to monitor and steer the actions in STAP. The Board had its first meeting on December 25, 2003 and the second one on January 8, 2004 in Ankara. There are currently two official decisions of the Board, which orders minor revisions in STAP ³ and arranges its own working principles. With the establishment of this high-level coordination authority, it would be possible to solve problems likely to be encountered during implementation of the Project and to further increase the level of political support of the Government.

² These participants are the Heads of e-Transformation Turkey Project Advisory Board, TUBITAK (The Scientific and Research Council of Turkey), Telecommunications Authority, CEO of Turk Telekom, TOBB (The Union of Chambers of Commerce, Industry, Maritime Trade and Commodity Exchanges of Turkey), TBV (Turkish Informatics Foundation), TBD (Turkish Informatics Association) and TUBISAD (Informatics Industrialist' and Businessmen's Association of Turkey).

³ For some actions, which were due late 2003 and early 2004, the due dates have been postponed.

IMPLEMENTATION OF eEUROPE+ IN TURKEY

In this section, what has been achieved since the last Progress Report of June 2002 and what is planned for future is going to be addressed under relevant objectives of eEurope+ Action Plan.

Objective 0 - Accelerate the putting in place of the basic building blocks for the Information Society

There are no more monopolies in the telecommunications sector in Turkey as of January 1, 2004. Turk Telekom's exclusive rights on voice transmission and infrastructure expired on this date. As stipulated by the law, other operators can operate in every segment of telecoms sector by obtaining a license from the Telecommunications Authority (TA). Main policy of the government in the telecommunications sector is to establish a competitive market structure in all segments in order to help increase service quality and number of innovative and value-added services while reducing costs. Obviously, to achieve the goal of full liberalization is crucial, but the process will take time. Nevertheless, this beginning will bring along many opportunities for both companies and citizens. It is expected that full liberalization together with effective regulation will attract many other foreign investors too.

Turk Telekom, currently a 100% state-owned enterprise, is Turkey's biggest telecom operator. Along with full liberalization in the telecommunications market, Turk Telekom's privatization process is underway. As of April 2003, Council of Ministers has adopted a Principal Decree, which stipulates that the preparations as to the minimum %51 block sale and IPO of the company will be undertaken simultaneously. The decision pertaining to the selection of one of these two methods is to be made according to market conditions. In this respect, market analysis for Turk Telekom privatization has been completed and the Council of Ministers Decree for the new privatization strategy has been issued on November 13, 2003. According to this Decree, minimum %51 of Turk Telekom shares will be privatized through a block sale, while tender announcement for such sale will be launched by May 31, 2004 latest. Following the block sale, remaining shares will be offered to public in accordance with the process set by the Tender Committee.

For affordable communication services for all, the only way is to fortify the competition in the market. There would be more players that provide affordable and better services when a full-fledge competition is ensured in all segments of the market.

Turk Telekom had been a monopoly in the market for long years and has the most widespread infrastructure, which serves even to the most remote villages in the rural area. With liberalization, this infrastructure will be shared with new operators at the first step. It is expected that the new operators will invest in their own infrastructures in the mid-term and this will strengthen national infrastructure at large. Internet Access Providers (ISPs) were compelled to obtain services from Turk Telekom, as the owner of the nationwide infrastructure, for international connections, and this has appeared to be the most important concern for ISPs. Soon after liberalization, at the beginning of 2004, three other operators have been granted licenses for data transmission services over fixed lines.⁴ These three operators are also the first group of companies to operate in the segments that has been held under monopoly before January 1, 2004.

The GSM market keeps on growing and the number of GSM subscribers has exceeded the number of PSTN subscribers in 2002 (25 million as of March 2003). Mobile telecommunications have proved that Turkish market provides investors with unpredictable growth opportunities that outperformed other markets with similar size and income. GSM operators are introducing their data services on GPRS networks, and mobile internet connection is believed to be a rival to traditional dial-up connections in the mid-term.

New Telecommunications Law

The need for a new Telecommunications Law has been recognized both in Urgent Action Plan and STAP. There are three institutions working on the draft version of the law, and it is going to be completed soon. The objective of this new law is to renovate the structure of old laws, namely Law No:406, Law No:2813, and some other amending laws, and to cover all needed areas of regulation for telecommunications market, such as interconnection, licensing, universal services and numbering, in line with the Acquis.

Secondary Telecommunications Legislation

Besides a new telecommunications law, TA is ordered in both Urgent Action Plan and STAP to complete the necessary legislation. In order to promote competition and regulate the market effectively, there are several important items, such as; licensing regarding VoIP, long distance telephone service, cable platform and network provision; rights of way; local loop unbundling; co-location and facilities sharing; numbering; personal data protection in

⁴ For a complete list of operators, please visit <http://www.tk.gov.tr/doc/lisans/KVH.html>

telecoms sector; consumer rights and accounting separation needs to be completed as soon as possible.

Tariffs Directive is in force since August 28, 2001. Access and Interconnection Directive and Radio and Telecommunications Terminal Equipment (RTTE) Directive has been published on the Official Gazette in May 2003. There are two other Communiqués regarding the identification of and rules and regulation for the operators with dominant position or having significant market power.

Unfortunately, universal service obligations and the ways in which operators are going to be supported in under-served/commercially unviable areas are still missing parts of telecommunications regulation in Turkey. The universal service is defined in current telecommunications law (Law No: 406) as “minimum service”; but the rules, structure, and financial arrangements of this procedure remain to be introduced. Again, as part of STAP and government’s program, Ministry of Transportation will prepare a Directive for Universal Service. After this Directive is introduced, incentives, financial grants, and other issues will have a legal basis.

Electronic Signature Law

The Electronic Signature Law (law no:5070) is published on the Official Gazette on January 23, 2004. The law legalized electronic signatures and declared Telecommunications Authority as the certification authority in Turkey. The law will be in force by July 23, 2004.

The Law regarding Right of Information

The Parliament approved the law and it has been published on the Official Gazette on October 24, 2003. The Law identifies the principles about the rights of citizens with regards to basis of transparency, openness, and equality of public management.

National Information Security Law

Turkish General Staff and the Ministry of Defense are coordinating a study for the draft law since 2000. Enactment of the law is envisaged in STAP in 2004.

Personal Data Protection Law

There is a commission under the Ministry of Justice working on the draft law since September 2000. It is a part of STAP and envisaged to be completed in 2004.

Secondary Legislation regarding Consumers Protection Law

A directive regarding the protection of consumers who are trading goods and services over electronic media has been published on the Official Gazette on June 13, 2003.

Objective 1- A cheaper, faster, secure Internet

Until late 2003, main type of internet access has been dial-up connection. But broadband access is slowly taking off with the help of recent developments. DSL infrastructure constitutes a significant portion of broadband access in Turkey. Turk Telekom has completed two important tenders for increasing DSL port capacity in 2003. 60,000 ports has been delivered in November 2003 and 200,000 ports will also be delivered in the second quarter of 2004.

Table 1- Broadband Infrastructure Capacity

	2002	October 2003	2003 (E)	2004 (E)
ISDN	27,611	27,645	27,650	2,000
DSL	3,080	15,191	76,000	276,000
Cable modem	2,182,487	2,190,000	2,190,000	2,193,000
Total	2,213,178	2,232,836	2,293,650	2,497,000
Broadband Coverage per 100 inhabitants (%)	3.15	3.14	3.22	3.45

Turk Telekom has also lowered the ADSL tariffs along with increase in the capacity.

For subscribers who would apply before the end of 2004, rates and tariffs will be as follows:

Table 2- Turk Telekom's ADSL Access Prices

Downstream Speed	Previous Price (EUR)	Discounted Price (EUR)	Discount Rate (%)
128 Kbps	35.3	28.8	18.3
256 Kbps	51.2	40.6	20.7
512 Kbps	82.9	64.1	22.7

According to this new pricing structure, there is around a 20% decrease in ADSL tariffs.

UlakNet (National Academic Network) is connecting all state universities, several public institutions, and Armed Forces R&D departments since 1997. Starting from the mid-2002, a new project has been initiated to improve UlakNet infrastructure. In November 2002, the new improved infrastructure started to operate. With this project:

- International capacity increased 10 times, from 64 Mbps to 620 Mbps.
- All the university branches at rural areas are covered.
- The number of users reached 300,000.
- Domestic capacity between nodes increased to 2800 Mbps from 138 Mbps.
- An initial connection to European Academic Network (GEANT) with 155 Mbps is launched.
- The backbone speed is increased from 34 Mbps to 155 Mbps.
- Universities and R&D institutions are now connecting 4 to 75 times faster than before.

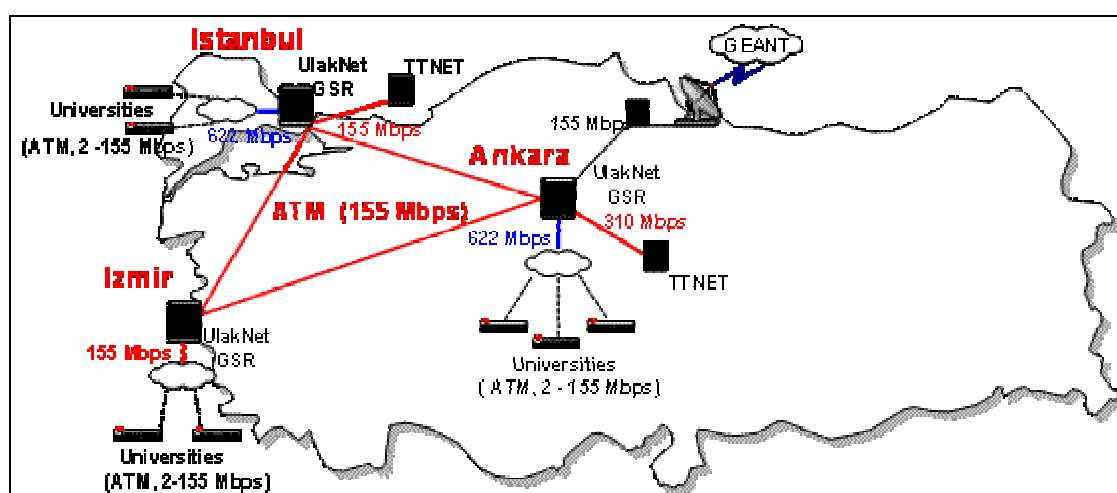


Figure 1 – UlakNet's New Backbone Infrastructure

There are two actions in STAP related to the information security and smart cards. TUBITAK-National Research Institute of Electronics and Cryptography (UEKAE), in coordination with Turkish Standards Institute, is going to prepare a report about smart cards, PKI (Public Key Infrastructure), the security test standards and their implementation in public services. Another action for TUBITAK-UEKAE is developing a pilot project for testing and provision of network security for public networks. Both of these actions are due December 2004.

Objective 2 - Investing in people and skills

ADSL infrastructure, established by Turk Telekom in order to provide broadband access to the internet, is becoming more prevalent in education. In this respect, the Ministry of Education and Turk Telekom agreed on providing ADSL connections to primary and secondary schools all around the country. According to the agreement, 4,700 schools until February 2004 and 20,000 schools until the end of 2004 will have broadband connections. It is planned that 42,000 schools will be equipped with ADSL connections at 512 kbps until the end of 2005, and this figure corresponds to 90% of students across the country.

Under the Basic Education Project, Ministry of Education has provided 2,800 schools with computers laboratories and internet access. During 2003-2004 period, 4,000 more schools will be supplied with computers and internet access. Other than public funds, NGOs are also contributing to equipping schools with computers.

There are about 13.7 million students and 563,400 teachers in 42,220 public and private primary and secondary schools. The Ministry of Education has already provided 195,350 computers, 6,034 computers with Internet access, and 9,232 computer laboratories to 5860 schools. The amount of computer literacy among teachers is 48%. Out of 563,400 teachers, around 271,500 of them have completed programs about basics of computer use. In 2002, 21% of schools in Turkey had internet connections.

The number of private computer training courses under the auspices of the Ministry of Education is 727. The total capacity of these courses is 38.883 students. The content of these courses consist of computer literacy, operator, assistant programming, programming, analyst programming and technical rehabilitation. There is at least 1 course at every province.

Under the Education and Human Resources Development Section of STAP, there are 8 actions, and the Ministry of Education is responsible for six of them. Developing an education portal, computerizing the schools, and improving the curricula for computer education are among these actions.

Objective 3 - Stimulate the use of the Internet

e-Commerce, e-Health, and e-Government are other three important topics in STAP. There are 6, 15, and 23 actions listed under these topics respectively.

For acceleration of e-Commerce, Undersecretariat of Foreign Trade, Ministry of Trade and Industry, KOSGEB (Small and Medium Industry Development Organization) are working together to develop pilot projects, to prepare reports and necessary changes in the legal infrastructure. These actions are composed of preparing a digital registry system for private firms, promotion of e-document and e-commerce by proper financial instruments, producing e-commerce statistics.

As to infrastructure development, connection of Small and Medium Size Enterprises to the internet is another project area for Turk Telekom. There are a number of Organized Industrial Zones (OIZ) projects, jointly conducted by Turk Telekom and OIZ administrations in order to provide broadband access to SMEs. Currently, there are 70 OIZs and 47 of them are connected to Turk Telekom's broadband infrastructure. Public administrations are also connecting to broadband. Especially, central organizations with rural offices across the country prefer broadband access for data transmission. With the introduction of central information systems and databases, and the emergence of massive transactions between central and rural offices in recent years, public administrations are seeking to use broadband. Besides, increased use of internet is another source of push for public administrations to switch to broadband access. Ministry of Agriculture and its affiliated offices, Ministry of Education, Istanbul Stock Exchange, Radio and Television Supreme Council are some of the examples of broadband users among public administrations.

To increase the number of online public services available, introduction of online services to citizens is stated as a priority in STAP strategy. Interoperability, common standards for the provision of services, funding models for e-government projects, e-teams at each public institutions and developing strategy and preparing implementation project for one-stop shop e-government portal are among the important topics covered in e-Government Section of STAP. These actions will provide a solid ground for e-government applications.

Most of the public institutions have web sites and some portion of them can offer interaction between the user and the government. Roughly, out of 200 public institutions 30 of them have the ability to interact with the users. Most of the rest are able to provide information only.

e-Health Section in STAP has 15 actions, and for all actions the Ministry of Health is the responsible institution. Most of these actions are considered to be a part of Turkish Health Information System, which is underway since 2001. The aim of the actions is to establish the set of standards for classification and registry of information.

ANNEX - INDICATORS

Indicators	2001	2002	2003 (E)	Source *
PSTN Exchange Capacity	21,341,000	21,083,000	21,183,000	TT
PSTN Subscribers	18,904,000	18,915,000	18,750,000	TT
PSTN Penetration (%)	27.3	27	26.3	TT
Mobile Phone Subscribers	18,299,000	23,374,000	28,036,000	TA
Analog (NMT 450)	70,000	51,000	36,000	TT
Digital (GSM)	18,229,000	23,323,000	28,000,000	TA
Mobile Phone Penetration (%) (2000:22.2%)	26.5	33.3	39.3	TA
Population (Year End)	69,079,000	70,171,000	71,251,000	SIS
Household Income Per Month (USD)	-	484.18	610.18	SIS
Average Cost of a Computer (USD)	-	600	600	SPO
Affordability of a PC relative to monthly household income	-	124%	98%	SPO
Percentage of people with a PC	2.68	3	3.78	IDC-Turkey
Percentage of people with internet access	-	-	n/a	
Number of Internet Users	2,500,000	4,000,000	6,000,000	SPO
Internet Penetration (%)	3.6	5.7	8.4	SPO
20 Hours Peak Time as % of Monthly Household Income	-	-	2.7%	SPO
Average spending of internet access per month as percentage of monthly household income	-	-	n/a	
Number of secure Internet servers per million inhabitants	-	-	n/a	
Percentage of people with Internet access having encountered ICT security problems in last 12 months	-	-	n/a	
Computer virus	-	-	n/a	
Abuse of personal information	-	-	n/a	
Percentage of individuals having taken ICT security precautions	-	-	n/a	
Number of computers per 100 pupils in primary education	0.81	0.76	1.02	MoE
Number of computers per 100 pupils in secondary education	2.2	2.53	2.47	MoE
Number of computers per 100 pupils in primary education connected to the Internet	0.04	0.06	0.18	MoE
Number of Public Internet Access Points per 1000 population	n/a	-	n/a	
Percentage of enterprises with Internet access using the Internet for banking and financial services	-	-	n/a	
Percentage of users using the Internet for search for goods	-	-	n/a	
Percentage of users using the Internet for purchase of goods	-	-	n/a	
Percentage of Enterprises with a website/homepage	-	-	n/a	
Percentage of Enterprises that have received orders online (via the Internet)	-	-	n/a	
Percentage of Enterprises generating more than 1% turnover from e-commerce	-	-	n/a	

* TT: Turk Telekom, TA: Telecommunications Authority, SPO: State Planning Organization, SIS: State Institute of Statistics, MoE: Ministry of Education, CHE: Council of Higher Education

Indicators	2001	2002	2003 (E)	Source
Percentage of Enterprises that having purchased online in 2002	-	n/a	-	
Percentage of Enterprises offer goods and services online in 2002	-	n/a	-	
Percentage of Enterprises having received online payments in 2002	-	n/a	-	

Other Indicators

Percentage of Tertiary Education Institutes connected to the NREN

Type	%
No connection	0%
Less than ISDN	0%
Up to 2 Mb	32.12%
Up to 10 Mb	46.16%
Up to 100 Mb	18.18%
Up to 1 Gb	3.64%
More than 1 Gb	0%

Source: Ulakbim

Percentage of males and females in ICT related tertiary level education

Student Gender	%
Male	75.4
Female	24.6

Source: CHE

Percentage of Internet users / non-users ⁵

Users	%
Used in last 3 months	3.4
Used more than 3 months ago	5.0
Non-users or used more than 12 months ago	91.6

Source: IDC-Turkey

⁵ IDC-Turkey predicts the percentages of regular and irregular Internet users. In this table, people used the Internet in last 3 months are considered as "Regular Users" and people used the Internet more than three months ago is considered as "Irregular Users".

Home Interconnection Types for 100 People with Computers

Type	%
No connection	n/a
Dial-up	n/a
Other	n/a
<i>XDSL</i>	n/a
<i>Cable-modem</i>	n/a
<i>Digital TV</i>	n/a
Don't know	n/a
Other	n/a
Mobile Connection	n/a

Households with/without fixed line telephones

% of Households	With Telephone	Without Telephone
Metropolitan	N/a	n/a
Urban	N/a	n/a
Rural	N/a	n/a

Place of internet access

Place	%
At home	n/a
At work	n/a
At place of education	n/a
Internet café	n/a

Internet use breakdown

Internet use	%
Search for information	n/a
Played games and music	n/a
Send/receive email	n/a
Chat rooms/forums	n/a
Internet banking	n/a
Other financial services	n/a

Percentage of individuals using Internet to interact with public authorities to obtain return official forms

Type	%
Downloaded official forms	n/a
Sent filled in forms	n/a

Percentage of enterprises using Internet to interact with public authorities to obtain return official forms

Type	%
Social contribution for employees	n/a
Notification of VAT	n/a
Declaration of corporate tax	n/a
Declaration of VAT	n/a

Percentage of General Practitioners (GP) using computers and percentage of GPs using electronic patient records

GP	%
GPs with computers	n/a
GPs with electronic patient records	n/a

Percentage of General Practitioners (GP) with Internet access in the consulting room

GP	%
GPs with Internet access	n/a
GPs with computers	n/a

Use of different categories of web-content by GPs with Internet access

GP	%
Info research	n/a
Communication	n/a
Exchange patient records	n/a
Other	n/a

Percentage of General Practitioners (GP) with Internet using it to communicate with partners

GP	%
With specialists	n/a
With pharmacies	n/a

Reasons for not using the Internet - Skills

Type	%
Internet connection is too expensive	n/a
Computers are too expensive	n/a
Don't know what the Internet is	n/a
Don't know how to use a computer	n/a
Internet is too complicated	n/a
Have no computer at work	n/a
Have no time	n/a
Content is not useful	n/a

Male and female Internet Users

Internet Users	%
Male	n/a
Female	n/a