

The National Information Communication Technology Strategy of Azerbaijan and key indicators on Information society statistics

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Azerbaijan is former soviet republic that has gained independence in 1991. Next years there were some difficulties and problems having been an obstacle in the way of socio-economic development of the republic including development of ICT .

- in connection with transition period of the country and existence of over one million refugees and IDPs as a result of occupation of 20% territory of Republic of Azerbaijan by Armenian Republic, the government can't allocate sufficient financial means for ICTs application;
- legislative base regulating the usage of ICTs was not comprehensive
- the population was poorly aware about advantages and opportunities of the ICTs;
- the disciplines connected with ICTs at all levels of educational process didn't meet the up to date requirements;
- there was a serious "digital divide" between rural and urban areas of Azerbaijan;
- there were serious problems with broad usage of Azerbaijani language in the ICTs sphere, especially lack of Azerbaijani language support in software;
- telecommunication tariffs have created serious obstacles to using of ICTs.

Today, by a pace of economic development Azerbaijan is the most progressive country of the world. Growth of GDP in 2005 was 27%, in the first half of 2006 – 30%. Though, in this development an oil sector still plays a significant role, development of non-oil sector is the main direction of the state economy. In particular ICT field is considered to be the most perspective development direction of the country. The growth of ICT sector in the first half of 2006 was 27,1% and exceeded average world index for 2.7 times. In almost all of the adopted State Programs on development of various fields of the country, the ICT block is taken into consideration. Moreover, there has been adopted 2 State Programs on ICT development.

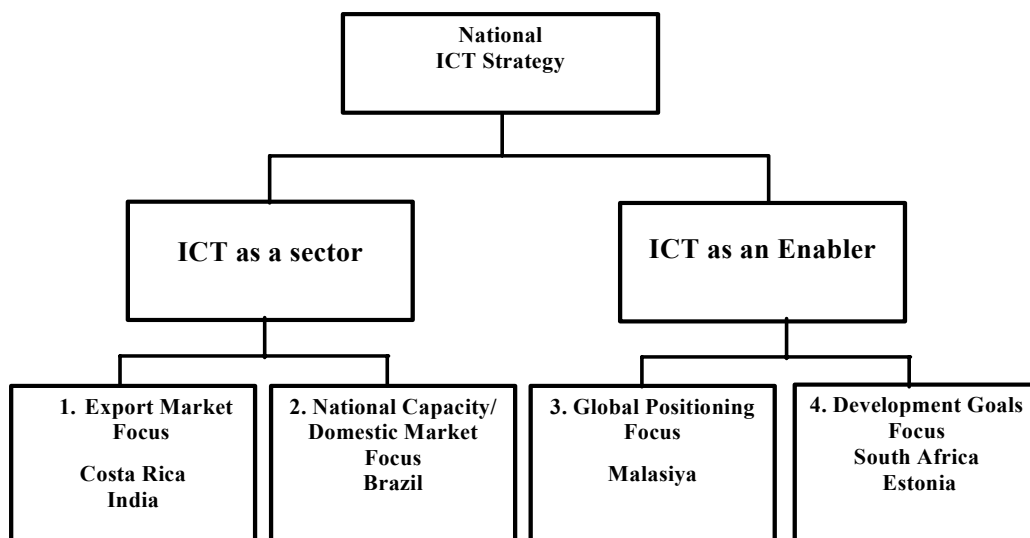
National Information Communication Technologies Strategy of Azerbaijan Republic

Broad usage of ICT not only assists a country's overall socio-economic development, but can also provide an effective means for reducing of poverty. It is therefore crucial for countries to have a national ICT strategy in order to use country's potential for enhancing development. It is particularly important for countries such as Azerbaijan that are undergoing a socio-economic transition and wishes to widely integrate into the world community.

Creating the right environment for transition into information society is stated to go in line with the policy of the Government of Azerbaijan, and the development of a National Strategy on ICT was an important first step in this direction. "The National Strategy on information-communication technologies for the sake of development of Azerbaijan Republic(2003-2012 years)" that determined the general line of the work to be done within the near 10 years was adopted on February 17, 2003. The strategy includes overall principles and priorities, specific operational targets with realistic timeframes, and expected results and outcomes.

At the preparation of the National Strategy were examined and analyzed various national ICT policies and strategies, recommendations of international institutes. Despite the difference in target setting and approaches to its realization, we can note their typology. As it was mentioned in *Creating a Development Dynamic. Final Report of the Digital Opportunity Initiative* (July 2001) – (Accenture, MARKLE FOUNDATION, UNDP) there are two approaches to consideration of ICT:

- ***ICT as a sector of production;***
- ***ICT as a factor, enabling social-economic development.***



Role of ICT in National Strategies

In Azerbaijan was used mixed approach and taking into account realities of the country decided to concentrate on export market (formation of the competitive ICT-industry) and on the aims of development, which were set forth at the Millennium Summit of UN.

It is significant that Azerbaijan is the first country in the South Caucasus, which has accepted the National Strategy on this sphere.

The main goal of the ICT Strategy is to *promote democracy and build information society in the country via wide application of information-communication technologies.*

The main tasks of the strategy are as follows:

- Creation and development of legal base of information society;
- Creation of the favorable environment for the provision of human rights and social institutions for free collection, distribution and use of information;
- Realization of effective, transparent and controlled state regulation and local government, building E-Government, formation and development of E-Commerce;
- Strengthening of economic, social and intellectual potential of the country, building competitive economy, creation and development of information and knowledge market;
- Preservation of the national digital historic, literary and cultural heritage of the nation and information of the world community about them;
- Formation of the developed information –communication infrastructure of the society, expansion of information-communication services;
- Provision of information security of the country;
- Integration of the country to the world E-information space;
- Introduction and development of new information-communication technologies, creation of the national software products, development of the production of science intensive productions (ICT-industries), elimination of the digital divide.

Strategy determines the following priorities:

- Provision of information need of the citizens, provision of overall development of the person, promotion of intellectual potential of the country.
- Creation of the favorable conditions for the building of information society on the base of development of transparent and guided environment for the state structures and municipalities;
- Strengthening of economic potential of the country through introduction of information-communication technologies.
- Preservation and propaganda of the national digital historic, literary and cultural heritage of the people.

The main directions of ICT-activity are:

Improvement of the education system by wide use of ICT, preparation of the national personnel on information-communication technologies and provision of sufficient ICT-literacy.

- Use of ICT in socially oriented spheres (healthcare, social security).
- Development of telecommunication industry.
- Formation and development of E-Government.
- Creation of the normative-legal base connected with informatization.
- Building and development of E-economy.
- Formation and development of the national information resources.
- Strengthening scientific-technical and production potential in the sphere of information-communication technologies.
- Provision of information security of the country and protection of the personal data.

As it's known in 2003 Geneva Summit adopted Declaration of Principles and Plan of Action. On the basis of this program, the ways of preventing the "digital divide" has been determined and accepted as the action program in Tunis Summit on information communities held in November 2005. Azerbaijan took an active part in preparation and holding of World Summits in Geneva and Tunis and declared its decision to take concrete steps toward establishing "E-Government" playing an important role in human development. The economic and political stability ascertained in Azerbaijan within the last years provides any basis for the successful achievement of the goal. Azerbaijan, as the country of the region possessing the more dynamic development level, has large possibilities for broadening the field of information technologies. Our society considers integration to the world union as its main duty. And to perform this duty it implements the necessary work in direction of creating the electron management network.

The Law of Azerbaijan Republic "on the electron signature and the electron document" in Azerbaijan taking the effect since June 01, 2004, has provided the favourable condition for creating of the electron document turnover and the development of new processes applying the electron signature and the development of the new economic activity fields.

On August 10, 2004 state government gave the instruction concerning the preparation of the "State Program for development of communication and information technologies meeting the modern requirements in Azerbaijan Republic".

One the next steps of Azerbaijan was the confirmation on August 21, 2004 of the program of provision of the secondary schools in Azerbaijan Republic with the information and communication technologies for the 2005-2007 yy. In the Program envisaged provision of all schools (more than 4500) with computers (1 computer per 33 pupils) and Internet connection. The program has the considerable role in increasing of the level of quality of education, the

development of the Youth and the improvement of the modern technologies for the future of Azerbaijan.

The forming of the legislative base speeded up and within the current year there were approved the laws of Azerbaijan Republic “on the post” and “on the legal protection of the information collection”, “on telecommunications”, “on the electron communications”, “on the information freedom”.

As the extension of this policy there was put in the forefront the preparation of the state program in the field of ICT as the important matter and there was confirmed the “State program on development of communication and information technologies in Azerbaijan Republic within 2005-2008” (Electron Azerbaijan).

To address the issue of domestic digital divide and ensure equal opportunity to access governmental services, a double-aimed projects must be realized . On the one hand, interim access means must be created for citizens, especially in the poor and rural areas, such as information kiosks, e-enabled postal offices, telephone access etc. On the other hand, the government of Azerbaijan is driving forward improved ICT infrastructure, as envisioned in the National ICT Strategy and in the State Programme for ICT Development.

Currently following projects directed to solving the tasks put forward by the NICTS and State ICT Programme are implemented:

1. “Internet Access and Infrastructure Development for research, educational and civil society development purposes” (AzNET), 2004-2006. (www.aznet.org/)

The project is directed on amplification, expansion and provision of conditions for further steady growth of the national academic, research and educational and community information networks in Azerbaijan. The objectives of the Project are coordination of efforts of all the parties concerned from various sectors including those of educational, science, ICT, civil society and non-commercial and profitless public sector background. The Project will facilitate and streamline data both within educational and academic sectors of the country as well as with their foreign colleagues enabling expansion of information exchange between regions and interested parties both inside and outside Azerbaijan. Another important feature of the project is its consolidating nature since all the key players will concert their efforts in the respective sector.

2. “National E – Government Network Initiative” Project, initiated in 2004 (www.e-government.az) is a platform project for moving forward the e-government agenda in Azerbaijan. One of the cornerstone components of the project is the creation of the national backbone data transmission network “AzDATACOM”. The network is a crucial piece of

infrastructure enabling connectivity for the emerging Azerbaijan information society and the emerging e-governance infrastructure. The envisioned network will provide high-speed interconnectivity for the regions and the capital city Baku.

The second component of the project is all about creating application level connectivity between governmental organizations by establishing information exchange platforms and improving the ICT infrastructure within the governmental agencies. This direction of work is commonly referred to as Government-to-Government, or G2G. It encompasses a wide range of components, such as Public Key Infrastructure, Government Intranet, standardized Government Management Information Strategies, common data platforms, shared databases. Ultimately, government processes can be redesigned to take advantage of ICTs, so the activities must be closely linked to administrative reform.

The third component of the project is the development of e-government services for citizens and businesses (G2C and G2B). Successful implementation of the first and second component of the project will create an enabling environment for provision of a wide range of e-services for citizens, which means improvement in existing government services and also creation of new, e-enabled services.

As a component part of the “National E – Government Network Initiative” project Baku Scientific and Training Centre implements the project REGTARC under the auspices of Ministry of Communication and Information Technologies and other supporting agencies.

The project is designed to build a Regional e-Government Training and Resource Centre in Azerbaijan to provide effective services to the regions. Main directions of the Centre activity will be creation and transfer of knowledge on e-governance and e-democracy, provision of a platform for analyzing and systemizing international and domestic experience in e-Governance into forms of knowledge societies which can be transferred to those interested both in Azerbaijan and abroad.

The project proposes implementation of key objectives envisaged in “National e-Governance Network Initiative” project:

- Preparation of syllabus for training of civilian and government authorities in e-Government;
- Training of designated civilian and government authorities in e-Government;
- Carrying out IT training for civil servants and school informatics teachers
- Training of government technical staff in system and network administration
- Creation of two pilot Citizen-to-Government information access kiosks as well as
- Setting up automated systems for local executive governors offices.

The project is based on the existing infrastructure and manpower of the Baku Scientific and Training Centre. BSTC has 16 branches in different regions of Azerbaijan and part of trainings will be carried out in regional centres.

Ministry of Communication and Information Technologies of Azerbaijan Republic is planning to realize several pilot projects with the aim of creation of new possibilities for implementation of advanced technologies in day-to-day life. Among these projects are the followings:

- Within the framework of “E-Azerbaijan” project it is planned to realize the pilot project “E-Shamakhi” which provides for foundation of telecommunication infrastructure of Shamakhi region of Azerbaijan on the base of New Generation Network (NGN);
- Establishing of International ICT University in Azerbaijan;
- Creation of special economic zones in the Republic with the aim of arranging production and consumption of IKT output, turning Azerbaijan to transit economic region, developing telecommunication infrastructure and training of manpower for economic zones;
- On October 10, 2004, in Azerbaijan a digital TV system was applied as a pilot project for the first time. Following the advice of International Telecommunication Union (ITU) Azerbaijan will fully pass to digital broadcasting till 2015 y.
- It is planned to launch artificial satellite in Azerbaijan in 2008.

DOI for AZERBAIJAN

The level of utilization of the information and communication technologies in the society has increased rapidly and the role of the ICT in the social-economic development of the country has risen. Thus, with the aim of adequate statistical study of events and processes taking place in the country, “The system of key indicators on Information society (statistics of ICT) statistics” has been prepared by the State Statistical Committee by agreeing with the Ministry of Communication and Information Technologies, the Ministry of Economic Development. To obtain the information considered in the system of indicators covering more than 200 indicators the statistical observations among 5000 households and enterprises acting in various sectors of economy has been organised. Indicators agree with main DOI indicators and are given for the end of 2005. Such work and analysis is carried out for the first time among CIS

As a result of analysis of given data according to the ITU/KADO principles the following DOI data in Azerbaijan (for date of 01.12.05) has been obtained:

Economy	Opportunity	Infrastructure	Utilization	DOI
Azerbaijan	0,85	0,22	0,05	0,37

Detailed description of indexes is given in the following table:

OPPORTUNITY	percentage	index	Median index
Percentage of population covered by mobile cellular telephony	99%	0.99	0.93
Mobile cellular tariffs as a percentage of per capita income	15.5%	0.85	
Internet access tariffs as a percentage of per capita income	4.3%	0.96	
INFRASTRUCTURE	percentage	index	Median index
Proportion of households with fixed line telephony	61%	0.61	0.22
Mobile cellular subscriber per 100 inhabitants	27%	0.27	
Proportion of households with internet access at home	16.6%	0.17	
Mobile internet subscribers per 100 inhabitants	0.4%	0	
Proportion of households with a computer	7.3%	0.07	
UTILIZATION	percentage	index	Median index
Internet users per 100 inhabitants	8%	0.08	0.05
Ration of fixed broadband internet subscribers to total internet subscribers	6.5%	0.07	
Ratio of mobile broadband internet subscribers to mobile internet subscribers	5%	0	
DOI			0.4

INTERNATIONAL COOPERATION

Baku Scientific and Training Centre (BSTC) is one of the leading training centres in ICT field in Azerbaijan and one of the first organisations which implemented international projects in IT fields since 1996 y.

Under the UNESCO and UNDP project “Strengthening of Computer Technology and Training Center for Azerbaijan” (1995-1997) the computer centre on the base of BSTC was established.

Further projects implemented by BSTC with the help of UNESCO and UNDP:

- Establishment of Sumgait Computer Centre for Training and Information and Telecommunication Services (1996-1999),
- Establishment of Nakhchyvan Computer Centre for Training and Business Information Services (1998-2000).

Within the framework of UNESCO project “Regional Academy for Online Network Governance and System Administration (RAONGSA)” the first in South Caucasus Regional IT

Academy has been established in 2003. Republic of Korea has also contributed to this project and assisted in providing of IT Academy with modern equipment.

Azerbaijan scientific institutions and universities participated in a numerous projects funded by TACIS, INTAS, Eurasia, SOROS fund and other international programmes.

Since 1996 BSTC successfully implemented 5 projects in the framework of Information Society Technologies (IST) Programme which was one of priorities of FP4, FP5 and FP6 (FP - Framework Programmes) funded by European Commission. The main objectives of the projects were rising of awareness and drawing of Azerbaijan IT organisations and specialists in international IT projects. In December 2006 the new project funded by FP7 is starting.

REGTARC project is implemented by Baku Scientific and Training Centre under UNESCO and UNDP auspices in cooperation with Italian *CYBION* company.

One of the last projects that are implemented by BSTC is RADIT (Regional Academy of Digital Image Technologies) project. Main donors of the project are UNESCO and National Institute of Informatics of Japan. The project envisaged application of digital technologies to preservation, restoration and archiving of national cultural and historical heritage.

Azerbaijan Government has signed numerous projects which have been implemented under auspices of international organisations such as:

- World Bank implemented the program directed towards establishing of “Azerbaijan Development Gateway” (www.gateway.az)
- The State Social Protection Fund (www.pensionreform.az) cooperates with the World Bank in three directions - pension, social assistance and market labour in order to provide wide using of ICT, as a result of which, in the capital and most regions the pension are paid by card system.
- The network of the State Customs Committee (www.scc-undp.org) on data transmission, working in real time mode and online is functioning between the centre and the stations located in the regions that are the initial practical sample of the Wide Territory Network system in the sphere of E-administration in Azerbaijan. The project was implemented under UNDP auspices.
- A Wide Territory Network is being established at the Ministry of Taxes (www.taxes.gov.az). The citizens are already able to receive an operative answer to their questions on the Web-site of the Ministry.
- The State Agency on Standardization, Metrology and Patents in cooperation with UNDP has begun to plan its activity respective to the ICT standards, which are approved in the international level. Electronic operations are being applied to payment sphere. Since, Inter-bank National Settling System is provided within the real time mode. (www.azstand.gov.az)

- As a result of UNDP and Azerbaijan Government joint project implementation the State Students Admission Commission (SSAC) organizes the admission of students to all higher schools of the Republic of Azerbaijan by testing the applicants in centralized form. Selection of personnel for ruling the examinations, grouping of applicants in the rooms for examination, selection of test exercises in the data bank, processing of results are completely automated and computerized.

All entrants, including inhabitants of remote regions of Azerbaijan can get information about exam rules, schedule and exam results from Web-page of SSAC (www.tqdk.gov.az) and information about admission via their mobile phones.

- Since 2000 in the framework of UNDP and Azerbaijan Government project with the aim to improve the overall election system through the ability to provide a range of information in an open and transparent manner an “Information Center” of the Central Election Commission (CEC) of the Azerbaijan Republic has been established.

The Information Center is provided with the necessary computer technology, telecommunication devices and indicator boards to be able to receive information from 32 districts and polling stations simultaneously. On election day the incoming information is saved on the server and transmitted to the three indicator boards set up in the observer’s hall. By means of this system information on the polling process and election results from the Constituency Commissions are transmitted to the Center and through the tele-transmitters international observers, mass media and the community receive the information. In addition, information on the elections is available in five languages on the CEC’s website accessible via the Internet (www.infocenter.gov.az).

- With the purpose of gathering and renewing information on population distribution and structure, area and direction of migration and other significant data and providing state bodies and individuals with that information legally creation of “State Register - state information bank” containing data on all the citizens of the Republic of Azerbaijan, including visiting aliens and the persons who have no citizenship has been started in 2004.
- Canadian Bank Note Company (CBN) has signed a contract with the Government of Azerbaijan for the supply of 13 million national ID cards as well as creation computerized issuing system for both ID cards and passports. Additionally the system ensures the maintenance of a central database and perform border control functions. The solution also includes portable document inspection devices . A Personal Identification Management System (PIMS) concept has been developed for governments. The system has the capacity to link all the government document issuance, inspection and tracking systems to a centralized database.

COOPERATION with KOREA

Economic status of Korean IT industry and progress of the IT8₃₉ Strategy is striking example not only for developing countries as Azerbaijan but also for all countries of the world. Our aim is to increase annual growth rate of IT Industry in GDP in the country like Korea and other developed countries.

Cooperation between Azerbaijan and Korea in ICT field began since 1999 when the first representative of our country took part in KOIL IT training in 1999. Later in 2002 four staff members of Baku Scientific and Training Centre also participated in KOIL training for high and middle level IT managers.

As it has been mentioned above Republic of Korea has also contributed to RAONGSA project of BSTC and assisted in providing of IT Academy with modern equipment.

REGTARC project of BSTC envisages carrying out training for governmental authorities and employees on e-governance and in implementation of this objective we hope on assistance of the Korea Agency for Digital Opportunity and Promotion of The Republic of Korea.

The further cooperation between the two countries was continued by signing a Memorandum of Understanding between the Ministry of Information and communication of the Republic of Korea and the Ministry of Communications and Information Technologies of the Republic of Azerbaijan on Cooperation in Information and Communications Technology which took place on 11 May, 2006 in Baku, Azerbaijan during official visit of the President of Korea Republic to Azerbaijan. At the same time a Memorandum of Understanding between Baku Scientific and Training Centre and KADO on cooperation in the field of overcoming digital divide was signed.

At present government of Korea offered to render technical assistance by way of long-term credit in amount of 30 million USD for realization of E-Azerbaijan project. For further development and successful achievement of the goals in the field of Information and Communication Technologies it will be very important for Azerbaijan to exchange the information, specialists, researchers, exchange the experience and knowledge, technical training and know-how in creation of information society of one of the world's leading developed country as Korea Republic. Unfortunately today a relationship between Korea and Azerbaijan in IT field are being built mainly through free economic zones such as United Arab Emirates. So establishing of direct relations with providers is of high importance for us.

On 28-29 August 2006 in Azerbaijan took place big Azerbaijan – Korea forum. There were representatives of ICT industry of Korea among participants of the forum the main goal of which was establishing of direct relations between two countries.

Memorandum of Understanding signed between Azerbaijan and Korea as well as positive results of the Forum enable to hope on further fruitful cooperation between our countries.