

UZBEKISTAN

ICT ENVIRONMENT, INNOVATION POLICIES & INTERNATIONAL COOPERATION

EECA CLUSTER

This report is a compilation of information and data collected in the framework of the EECA cluster work. It is a part of three wider reports on EECA countries ICT priorities, Innovation Policies and Strategies and International Cooperation.

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Uzbekistan

ICT Environment

1 Overview of the main trends in the National ICT Sector

1.1 Recent Trends in Macroeconomic and Market Development

Comprehensive programs implemented with aim of sector and area development, as well as improved business environment and investment climate ensured further structural transformations, higher competitiveness of the economy and steady economic growth in 2013. In 2013 GDP grew by 8%; GDP in 2011 was \$45,353 million. High economic growth rates were supported by macroeconomic stability characterized by low inflation rate, state budget surplus and positive foreign trade balance.

The inflation rate calculated on the basis of the consumer basket comprising 308 goods and services was 6.8% in 2012. This indicator did not exceed the estimated figure for 2013.

As of January 1, 2014 the resident population of the Republic of Uzbekistan accounted for 30,490 million people or grew by 1.5 % compared to the 2012 level. As of January 1, 2014 the number of people employed in the economy grew by 299,500 people or by 2.5% and accounted for 12.5 million people. As of January 1, 2013, the real unemployment rate in Uzbekistan was about 4.9%.

Due to comprehensive measures implemented with aim to modernize, technically renovate production facilities and update competitiveness of industrial sector, in 2013 Uzbekistan managed to ensure steady high growth of industrial production and efficient structural transformation of the industrial sector. The most significant input into the growth of industrial output was made by machine building and metal working (121.1%), industry of construction materials (113.6%), light (113.2%), food (109.1%) and woodworking (114.9%) industries. The share of these industries in total industrial manufacture grew from 50.3% in 2012 to 53.7%.

In 2013 foreign trade turnover grew by 9.6% compared to the 2012 level, accounting for USD 28.8 billion. Some measures were undertaken with aim to expand export of competitive products. As a result, export of goods and services grew by 10.9% compared to the corresponding 2012 level. Positive changes, observed in sector structure of industrial production, resulted in the increased share of goods with higher value added. The share of energy and oil products grew to 34.8% (18.5% in 2011), services – to 16.3% (11.8%). At the same time, the share of non-oil exports exceeded 70% of manufactured goods. Increase in the physical volume of ammonium sulphate, technical oils (motor and lubricating), natural gas, liquefied gas (propane), secondary aluminum, cotton yarn, knitted fabric, fruits and vegetables and other goods contributed to the growth in exports.

In 2013 import of goods and services grew by 7.7% compared to the 2012 level. The share of machinery and equipment accounted for 44.1%, food for production needs – 6.6%, which is characterized by increasing level of diversification and modernization in branches and sectors of the economy.



In 2013 total investment into economy from all sources of funding amounted to UZS 27.5 trillion or increased by 9.8% compared to the corresponding 2012 level. The share of capital investment in GDP represented 23.2%. Foreign investment and loans represented 20.3% in total utilized investment compared to 21.6% in 2012. The volume of direct foreign investment and loans accounted for USD 2090 million, growing by 8.1% compared to the previous year. The volume of foreign investment under the guarantee of the government grew by 11.4% and accounted for USD 580.6 million. The sector structure of foreign investment changed. The share of foreign investment into fuel and energy sector grew from 30.2% to 35.0%. The share of foreign investment attracted by machine building dropped from 2.6% in 2012 to 1.4% in 2013.

Domestic investments is summarized from investments of own funds of enterprise (UZS 8.7 billion), loans extended by commercial banks (UZS 3.0 billion), investment from off-budget funds (UZS 1.7 billion), investment from funds of the public (UZS 6.9 billion). Total is UZS 1.3 billion, that approximately equal to \$ 64.6 million (Source: State Committee of Statistics, Uzbekistan)

Comparable indicators of economic performance

Indicator	National performance		EU 27 (28 Average)	
	2009	2013	2009	2013
GDP per capita in PPS (EU25=100)	2.796	3.820	100	100
Real GDP growth rate (% change previous year)	8.0	8.1	-4.5	0.1
Labour productivity per person employed (EU25=100)			100	100
Inflation rate (average annual)	10.6	11.0	1.0	1.5
Unit labour costs (growth rate)	27	29	3.3	0.6
Unemployment rate (as % of active population)	0.2	0.2	8.8	10.8
Foreign direct investment intensity	21.6	20.3		
Business investment as a percentage of GDP	31	30.802		
Broadband Penetration Rate (% population with broadband access)	6.6	38.2		
Percent of organizations with web sites	54	N/A		
Number of PCs in organizations	10 per 100-200 staff	N/A		
Percent of organizations which used Internet	7.14	N/A		
Percent of organizations with Broadband access to Internet	22.3	N/A		

In the ICT Development Index 2013 by the ITU¹, Uzbekistan has taken 104th place (comparing with previous edition of the index, country's trend is 0) with the index of 3.12, which is by far the lowest value in the CIS region. In the Global Innovation Index 2014², the country takes 128th place improved its position by 5 points in comparison with 2013. In E-Government Development Index 2014³, Uzbekistan takes 100th place and is included in the group of countries with middle level of

¹ *Measuring the Information Society 2013*, http://www.itu.int/en/ITU-D/Statistics/Documents/publications/mis2013/MIS2013_without_Annex_4.pdf, 04.09.2014.

² *The Global Innovation Index 2014*, <http://www.globalinnovationindex.org/content.aspx?page=gii-full-report-2014>, 04.09.2014.

³ *The E-Government Development Index 2014*, http://unpan3.un.org/egovkb/Portals/egovkb/Documents/un/2014-Survey/E-Gov_Complete_Survey-2014.pdf, 04.09.2014.



e-Government development. Index of economic freedom of Uzbekistan is 46.5 what corresponds with the 163rd place among 165 countries of the world⁴.

Recent trends in ICT development

Indicators of ICT development (2013)

Source: State Committee of ICT <http://ccitt.uz/ru/>:

Indicators	Unit	April'2013
Digitalization of ATS	%	98.8
Number of network operators, service uniform	unit	930
Number of Internet users	thousand	10089.0
Speed of access to international information networks (the Internet)	Mbit / s	7780
Number of domains in the domain zone «. UZ»	thousand	16.3
Number of businesses operating in the field of software products	unit	250
The annual number of registered software products	unit	208
Number of keys and certificates of EDS keys	unit	240330
Amount of state information resources	unit	195
Number of types of government online services	unit	110
Number of types of government online services	unit	197
Number of sites registered in WWW.UZ	thousand	7469
Book fund of information and library centers	million	4.9
Number of educational information resources in the library portal Ziyonet	thousand	41541
Number of national software registered in the Catalogue software.uz	thousand	1502

For more objective evaluation of ICT working conditions in Uzbekistan let us consider the data of NETINDEX. Uzbekistan is on *170th place* of the world on download speed of Internet. According to the rating, made as of 4 January 2014, the download speed in Uzbekistan makes up 2.42 megabit per second. Uzbekistan holds *124th place* in the world on upload speed of Internet. The speed makes up 1.95 Mb/s for Uzbekistan and 2.83 Mb/s for Tashkent.⁵

⁴ 2014 Index of Economic Freedom, <http://www.heritage.org/index/ranking>, 04.09.2014.

⁵ OOKLA Household Download Index 2014, <http://www.netindex.com/download/allcountries/>, 04.09.2014.

Objectives and Targets of National ICT Policy

There are two documents that defined the current trends of ICT development in Uzbekistan. The first one is the Edict of President from March, 21, 2012 № PP-1730 "On measures for further implementation and development of modern information and communication technologies". The following identify key issues for further development and implementation of ICT were marked: ensuring the development of the National Information System; information systems automation activities of government bodies; expansion of the list and improving the quality of interactive public services; improving the system of regulation in the field of information and communication technologies; the protection of its information systems and resources.⁶



The second one is the Integrated National Program for Development of Information and Communication system of the Republic of Uzbekistan for 2013-2020, which was adopted on July 9, 2013, but not published yet. This program outlines tasks such as the provision of opportunity to carry out liaison with government authorities in electronic form, the introduction of the "single window" system of government. The program also determines measures to create complex information systems and databases of the "electronic government" through portal online public services www.my.gov.uz. On April 3, 2014 The President of Uzbekistan Islam Karimov signed a Resolution "On measures for further implementation of information and communication technologies in the real economy", which contentsthe most important tasks and directions of development of ICT in the real economy: widespread adoption of ICT and software products, improving the quality of products and services, introduction of new product sale schemes by enterprises through the Internet; organize of an effective system of advanced ICT training and retraining.

All responsibility for ICT development is in charge of Interagency Coordination Council on the development of computerization and ICT under the Cabinet of Ministers of the Republic of Uzbekistan (www.ictcouncil.gov.uz) and State Committee for Communication, Information and Telecommunication Technologies of the Republic of Uzbekistan (<http://ccitt.uz/ru/>).

⁶The Edict of the President of Uzbekistan PP-1730 "On measures for further implementation and development of modern information and communication technologies" of March, 21, 2012, http://lex.uz/Pages/GetAct.aspx?lact_id=1986811, 04.09.2014.



Annex 1: Overview of ICT Policy Documents

Title of document	Date	Organisation	Legal status
"On measures for further implementation of information and communication technologies in the real economy".	03.04.14№ PP - 2132	Cabinet of Ministers	Edict of President
On approval of the updated structure of the State Committee for Communications , Information and Telecommunication Technologies Republic of Uzbekistan	30.10.2013 , № PP -2058	Cabinet of Ministers	Edict of President
On measures for implementation of the investment project "Development of National Geographic Information System	25.09.2013 № PP -2045	Cabinet of Ministers	Edict of President
On measures for further implementation and development of modern information and communication technologies	21.03.2012 , № PP -1730	Cabinet of Ministers	Edict of President
On additional measures to improve the skills of employees of state and economic management of the state bodies in the sphere of information and communication technologies	27.03.2014,№ 73	Cabinet of Ministers	Government Decision
On measures to organize the activities and formation of material and technical basis of Inho University (Korea) in Tashkent	27.03,2014,№72	Cabinet of Ministers	Government Decision
On measures to implement the system of the development of information and communication technologies assessment in the Republic of Uzbekistan	31.12.2013№ 355	Cabinet of Ministers	Government Decision
On measures on organization of the Center for Development of the system"E-government" and the Center for information security under the State Committee communication, information and telecommunication technologies of Uzbekistan	16.09.2013,№ 250	Cabinet of Ministers	Government Decision

Annex 2: Overview of ICT Policy Measures

The administering Agency for ICT Policy Measures realization is State Committee for Communication, Information and Telecommunication Technologies of the Republic of Uzbekistan; budget for the programs listed below is non-available.

Source: State Committee of ICT (<http://ccitt.uz/ru/>)

IPM Number	Title of measure	Overview
1	The Concept of informatization development in Uzbekistan, 2005.	-creation of a common information space on the basis of the design and development of government information resources and services to ensure effective communication with government, business, citizens and their access to domestic and global information resources ; -creation and development of market information and knowledge

		, the formation of the domestic industry for production of competitive software products; -improving the level of professional development by enhancement education and empowerment of information exchange systems at different levels; -information security .
2	The concept and development of Electronic Document Management (EDM) systems in public administration, 2006	-creation of a single information space for input, processing , analysis and storage of documents; - coverage of the entire document production cycle organization , -from the task of a document creation up to the task of transferring it to the archive for storage and security of documents in any format
3	The concept of creating an integrated information system of state bodies, 2006	Objective of the Concept is to determine the main directions of interagency collaboration between state agencies, and between government agencies and the population of the country through the creation of an integrated information system on the basis of modern information technology, improving the functioning of government, improve the quality and timeliness of their information systems. The main objective of the Concept is the definition of the necessary institutional and legislative measures aimed at creating information systems of government agencies.
4	Program for further implementation and development of information and communication technologies in the Republic of Uzbekistan for 2012-2014; 2012	-Arrangements for the implementation and development of information and communication technologies; -Development of infrastructure for information and communication technologies; -Training, retraining and advanced training; -Development of the Government portal websites of government agencies and interactive public services.

1.2 Recent National Policy Trends

In 2012 will be drawn **\$176, 5** million for ICT progress, particularly for development of fiber channels in south of country, broadening of wireless communication coverage area, development of education network's second stage.

The State Committee for Communication, Information and Telecommunication Technologies of Uzbekistan underlined that the sector increased to render services by 22% and the growth of services, rendered to population, made up 21%. The forecast on projects, implemented due to attraction of foreign direct investments and loans, and own resources of the enterprises of industry, was fulfilled with 213%. Within the project on backup and expansion trunk, zonal and local networks, as well as modernization of subscriber networks based on FTTx architecture. For storing frequently used data Uzbekistan in 2013 last year was launched Center caching with the capacity of 4 Gb/s, which is able to store and process data. Total speed of use of international information networks reached 10.3 Gb/s in 2013, which rose 1.3 times compared to 2012. Total number of ports, installed to provide broadband internet (FTTx and xDSL), reached 575,000 at the end of 2013.



Total number of educational information resources located in the library electronic portal «ZiyoNET», exceeded 75,000.⁷

Lessons from the Evaluation of ICT Policy Measures

As was outlined above the main goal of ICT development in Uzbekistan in nearest years is to create national information system (e-government, e-health, e-commerce, etc). So the attention of effectiveness of ICT policy measures directs on these items. But to-day we have no possibility to evaluate the ICT Policy Measures using standard indicators. The UN uses two indicators in its ranking survey: I) e-Government Index; II) e-Participation Index. And these two indicators will be promoted in the country. As it's shown in ANNEX 1 the special government resolution was approved and in future Uzbekistan will have some standard indicators.

We show some rates, presented by the UN Broadband Commission for Digital Development report "The State of Broadband 2013: Universalizing broadband". Uzbekistan holds 131st place on fixed broadband penetration among 183 countries of the world. Uzbekistan is on 71st place on mobile broadband penetration among 170 countries of the world. The level of mobile broadband penetration in 2012 made up 20.7% per 100 inhabitants. According to the report, the percentage of households with internet in Uzbekistan makes up 9.6% in 2012, which is the 74th figure among 128 developing countries. At the same time percentage of individuals using internet made up 36.5% in 2012. Uzbekistan is on 99th place among 192 countries of the world and 53rd place among 144 developing nations.

So to-day the technical measures of improving ICT status grows in momentum in Uzbekistan. So it was adopted decision on measures directed at improving of quality of telecommunication and mobile communication services, effective use of telecommunication network resources, training high skilled specialists, etc.⁸

Review of Good Practice – Summary of Good Practice in Uzbekistan

Year	Title of good practice case	Justification for selection
2009, October	http://gov.uz/uz/	The portal is the official state information resource of the Government of the Republic of Uzbekistan on Internet. The Governmental portal of the Republic of Uzbekistan is a backbone element of infrastructure electronic information exchange organizations, as well as between juridical and physical persons
2009, June	Educational video portal uTube.uz	The large number of video of lectures, lessons, interview and seminars in the various directions is collected on portal. We make available new forms of education (remote, asynchronous, continuous). All materials are available to watching on-line. Alternatively, there are direct links to download materials from the website
2010, March	Website of reference information on held	Website contains detailed information on organizers of the presented actions, contact information,

⁷ See State Committee on Statistics of Uzbekistan, <http://www.stat.uz/press/1/8359/>, 04.09.2014; Fund of Information and Communication Technologies Development, <http://www.fond-ict.uz/>, 04.09.2014.

⁸ "State Communication Committee discuss quality of telecommunication networks' work", *UZDaily*, <http://www.uzdaily.com/articles-id-23429.htm#sthash.UAkDKCLg.dpuf/>, 04.09.2014.

Year	Title of good practice case	Justification for selection
	competitions, grants and actions http://uzinfocom.uz/ru/projects/tanlov.uz	participation conditions, terms, etc. One can find competitions, actions and grants in the different directions, such as medicine, education, science, etc. in the lists of the events held in the Republic of Uzbekistan and presented on website.
2011, April	Data-center ofUZINFOCOM	The Data-center is a reliable technological platform for placement of information and communication infrastructure. Technological solutions of the Data-center of UZINFOCOM allow guaranteeing to customers high level of availability of services and providing uninterrupted operation of functioning of infrastructure
2012, March	Portal of housing and communal services EK.UZ	The main purpose of the portal is creation of general communication infrastructure in the sphere of housing and communal services which simplifies information exchange between the population, associations and communal services that will lead to objective control over objective use population means
2013, April	Unified identification system ID.UZ	The system providing authorized access the participants of information exchange to information containing in the state and other information systems. Having registered once on ID.UZ you do not have to register on other websites supporting OpenID technology, it is enough to use ID.UZ login.
2013, May	Mail service uMail.uz	Users will be able to receive a convenient mailbox and use a mail service. There are many convenient settings and functions: virus checking, spam cutting off, personal filters setup, messages sorting, etc. Mail service will be recommended for civil servant, businessmen and simple users.
2013, July	Integrated portal for online public services My.GOV.UZ	Integrated portal for online public services (Integrated Portal) is a single point of access to online public services provided by state agencies, including a fee. Providing online government services through a single portal is carried out for applicants that have passed the registration and authorization
2014, last version	Information educational network Ziyonet	The main purpose of Ziyonet is assistance to introduction in education system a wide complex of information and communication services for youth. The portal includes all necessary information for users and represents a complex of the convenient tools necessary for obtaining interesting information.
2014, last version	National information search system WWW.UZ	WWW.UZ is a mechanism of fast access to information of a national segment of the Internet. The main features of system are multilanguage information search (Uzbek, Russian) and close integration with other national information systems and databases. WWW.UZ carries out search of the website in the address and contents.





Updated National ICT R&D priorities towards H2020

Topics-areas
ICT in 'Excellent science'
Research infrastructures
Development, deployment and operation of ICT-based e-infrastructures
ICT in 'Leadership in Enabling and Industrial Technologies'
Future Internet
Smart Networks and novel Internet Architectures
Advanced Cloud Infrastructures and Services
Content technologies and information management
Technologies for better human learning and teaching
Factories of the Future
Process optimization of manufacturing assets
ICT in 'Societal challenges'
SC6: Europe in a changing world – Innovative, inclusive and reflective societies
ICT-enabled open government



Innovation Policy

Documents defining the state policy in the sphere of science and innovation are:

- Concept and Program of innovative development of Uzbekistan for the period up to 2020 ;
- Government programs to promote education , research and development , support for innovation in the economy , information society development , infrastructure development, aimed at the development of high-tech sectors of the economy and others; under government programs was designed detailed mechanisms for the implementation of the Programme , specific measures , sources and amounts of financing;
- Regional programs of innovative development. Feedback gain in the public administration in the field of innovation development will help the republican authorities' better target measures to support innovation to regional needs;
- System of formation and refinement, as well as implementing technological priorities, within which will be determined by the specific priority areas of science and technology, critical technologies, etc.

Monitoring implementation targets laid down in the concepts and their impact on the growth of competitiveness of the national economy will be conducted by the Committee for Coordination of Science and Technology under the Cabinet of Ministers on the basis of indicators to assess the level of innovation development.

The main policymaker is State Committee for Communication, Information and Telecommunication Technologies of the Republic of Uzbekistan.

This section consists of two parts: the first is a description of the overall policy framework (current status and conception for 2015-2020years), and second one is a description of feedback from ICT stakeholders regards influence of pursued a policy in ICT area.

The first part of section based on the analysis of National Innovation System (NIS) and Conception of NIS Development, that were designed within UNDP project no. 000773949 "Support to Innovation and Technology policy"⁹. The S&T and innovation activity in Uzbekistan is regulated by the Presidential Decree no. 436 from 2006 "On measures for further development of coordination and management of science and technology development". In the frame of this Decree, the Committee for Coordination of Science and Technological Development was established, and the responsibilities of the different Ministries, the Academy and the research organizations were re-organized.

According to UNDP program in 2010-2012 was performed the project "**Support to Innovation and Technology policy**", where responsible parties were: Ministry of Economy, Agency for Technology Transfer, Committee For Coordination of Development of Science and Technology, Regional Technology Transfer Centers, Ministry of Higher Education, Patent Agency, State Statistics Committee, Global Ecological Fund's Small Grants Program, United Nations Development Program. Director of this project was Mrs. Galina Saidova (Deputy of Premier-Minister of Republic of Uzbekistan, former the Head of Information-Analytical Department of Cabinet of Ministries). Below we quoted briefly this document.

⁹ <http://www.undp.uz>



The Government of Uzbekistan (GoU) has acknowledged the need for invigorating the innovative activity as the main engine for sustainable growth. Some of the most notable government measures include reorganization of the State Committee for Science and Technology, institutional strengthening of the technology transfer centers and organization of annual innovation fairs. In the real sector of the economy, mass scale modernization is envisaged by the latest government medium-term investment program totaling more than USD 20 billion for that purpose.

For Uzbekistan, achieving innovative and technological development is of critical significance, as only through this way is it possible to create modern technological base, to produce competitive goods, to rationalize the use of natural resources, to increase the efficiency of the agricultural sector, and to improve international competitiveness. However, over the past 10-15 years Uzbekistan's National Innovation System has been suffering from consistent underinvestment in science and technology sector. Most developed economies of Western Europe, USA, Japan, and South Korea spend as much as 3% or more of their GDP on R&D annually, while in Uzbekistan this figure has been less than 0.1% according to most generous estimations.

As a result of insufficient investment of R&D, Uzbekistan has been experiencing severe drops in the capacity to generate, disseminate and absorb innovations. For example, the number of patent filings by Uzbekistan residents decreased 2.5 times from 1995 to 2005, tertiary enrolment (proportion of young population entering universities) in Uzbekistan has dropped sharply and is one of the lowest among CIS countries. The sector has been suffering from massive "brain drain".

Due to structural and administrative reforms that have been carried out in Uzbekistan for the past 15 years many universities and institutes have lost contact and links with the industry. Dismantling of centralized sectorial ministries left the R&D centers outside the value-chains, the R&D centers lost old links and relations with the industry and parent ministries under which they used to function. Many unique R&D centers have gone bankrupt and many of those that still remain are being criticized for not being demand-driven and being unable to produce cutting edge innovations. The system of financing, links and relations between R&D centers (universities and institutes) that have worked under the centralized economy during soviet times has turned out to be maladjusted to the requirements and realities of the current stage of transition to market economy.

The main policy papers: Laws:

1. No. 822-1 "On Telecommunications" August 20, 1999;
2. No. 560-II "On informatization" ,December 11, 2003;
3. No. 562-II "On electronic digital signature", Tashkent, December 11, 2003;
4. No. 611-II "On EDM" Tashkent, April 29, 2004.

Resolutions of President of the Republic of Uzbekistan:

1. No. P -2126, December 2, 2014 "On measures to organize the activities of the national mobile operator";
2. No. PP-2058, October 30, 2013 "On approval of the updated structure of the State Committee for Communications , Information and Telecommunication Technologies of the Republic of Uzbekistan";
3. No. PP-2053, October 22, 2013, "On Improvement of management and use of radio spectrum";



4. No. PP-2045, September 25, 2013, "On measures for implementation of the investment project "Development of National Geographic Information System";
5. No. PP-2042, September 20, 2013 "On measures to further enhance the stimulation of domestic software developers";
6. No. PP-1843, October 30, 2012 "On measures to further improve the efficiency of information and communication system of the State Tax Service of the Republic of Uzbekistan";
7. No. PP-1730, March 21, 2012 "On measures for further implementation and development of modern information and communication technologies";
8. No. PP-1729, March 20, 2012 "On measures on organization of a National Library of Uzbekistan named after Alisher Navoi - Information Resource Center".

The strategic policy objectives and key priorities:

1. Modernization and development of info-communication infrastructure;
2. Development of digital TV-radio broadcasting;
3. Development of sector of working out of software and information services;
4. Development of domestic production of hi-tech equipment in ICT;
5. Development of education in the sphere of info-communications;
6. Development of electronic services and electronic government.

The main methods (tools) of innovative policy

- Establishment of the Information Technology International University (South Korea)
- Establishment of annual fair, internet festivals, competitions in software development

The major sources and amount of financing of innovation policy

State Committee for Communication, Information and Telecommunication Technologies of the Republic of Uzbekistan

Attempts to build modern innovation infrastructure

The Government of Uzbekistan has been making attempts to set up new institutions and a system of links and incentives to form an innovation infrastructure similar to the one observed in developed market economies. A legal system has been put in place to provide the protection of intellectual property, at least at the level of law. The government has been trying to institutionalize both financial instruments (i.e., grant schemes, tax-relieves, venture funding) and non-financial instruments (i.e., technology transfer centers, annual Innovation Fair).

Grant schemes for financing innovation projects

The Government has put in place a grant scheme for financing applied research and innovation projects, which is run by the State Committee for Coordination of Development of Science and Technology. These grants provide vital cushion for the risks borne by innovating projects/firms (especially small start-ups) at the early stages of R&D commercialization, characterized by negative cash-flows and high levels of uncertainty about future cash-flows and the success of the project itself. Such a grant scheme has been functioning in Uzbekistan for quite some time already, however only recently the Committee has introduced the competitive process for those grants. The Committee gathers requests (issues) from various sectors of the economy, including the health and education sectors, and announces competition for project proposals among the many universities and research institutes to address the issues. There are two major criticisms about this scheme. First, the amount of funding allocating for grants is too small to have any positive effect on the results expected from innovations, and secondly, both the Committee and



applicants lack capacities and expertise to select, monitor and manage innovation projects. There are also concerns that the whole competitive selection process is non-transparent.

Venture funds

The GoU is also exploring the idea of setting up a venture fund for financing innovation projects. However, there isn't much evidence that state owned venture funds have been successful in helping accelerate innovations (may be because they are a relatively new phenomenon). This may be one of the reasons why the GoU still has not established any venture fund, despite the fact that several draft decrees have already been submitted for consideration since 2006.

Technology Transfer Offices

The Agency for Technology Transfer (ATT) was established under the State Committee for Science and Technology in 1997 with the following functions: search and networking of partners from both sides, thereby matching the demand and the supply side of innovation process, support in licensing, patenting, negotiations, and whatever other administrative, legal and technical assistance is needed in regards to the process of technology transfer and its commercialization. To give another boost to technology transfer offices, in 2009 the GoU has transferred the ATT to the Ministry of Economy, and began establishing technology transfer centers in the regions. The rationale for transferring the Agency under the Ministry of Economy was to bring the technology transfer process closer to the real economy. According to the international expert from UNIDO2, both ATT and the regional technology transfer centers are in need of extensive capacity building, including training and introduction of information technologies into their work.

Matching events (Non-financial instrument)

Starting from 2008 the GoU has been organizing annual Innovation Fair. In addition to the annual Innovation Fair, sectorial innovation fairs are being held more often each year. The government has been encouraging such events as they are a good way to establish interactions, linkages, and relationships among key agents and stakeholders.

The government and experts seem to agree that the efficiency of the Innovation Fair needs to be increased. There was also a remark that, in addition to innovation projects showcased by country's science and technology sector, the next innovation fairs need to present the demand side for innovations too by inviting industry representatives to present the technological needs and problems they are facing. Another criticism concerns the quality and the degree of novelty of innovation projects presented during the fair. Experts argue that a great deal of the projects and technologies presented have been known for many years and some are even obsolete. They argue for stronger selection criteria of innovation projects for next innovation fairs.

Other issues

Lack of clear strategy at the highest level

Many local experts have been expressing the concern that Uzbekistan has no state program or strategy in the area of innovation and/or creation of knowledge-based economy. The ATT has been tasked to begin drafting a Concept of Innovation Development in Uzbekistan until 2014.

Absence of standards for valuation of intellectual property hinders commercialization of innovations

An often mentioned issue with regard to low commercialization rates of local innovation projects is that there is no standardized and generally accepted system of valuation of intellectual property. While there are attempts to create national valuation standards and guidelines for valuation of tangible assets (ie, real estate, vehicles etc) there is no national valuation that introduction of such valuation standard and guidelines (based on international valuation



standards) will help accelerate the commercialization of new technologies and know-how produced by local R&D sector.

Business incubators should concentrate on innovative (R&D) start-ups

With the support from UNDP a network of business incubators (BIs) was created in Uzbekistan some 10 years ago. Currently there are 34 registered BIs throughout the country, all of which are the members of the Association of Business Incubators and Techno parks of Uzbekistan. However, the GoU has been putting greater accent on improving the general business climate for SMEs (such as easing the process of starting a business, lowering taxes etc), while largely neglecting the BIs as a tool to spur start-ups. As a result, many of the BIs are unsustainable today as many of them do not even have enough premises to accommodate tenants (start-up firms).

The concept of innovative development of the Republic of Uzbekistan for 2012-2020 was developed in accordance with the action plan of the Institute of Forecasting and Macroeconomic Research under Cabinet of Ministries and UNDP Project “Support to innovation policy and technology transfer”.

The scientific potential of Uzbekistan is more than 36 thousand people, of whom 2 549 doctors, 9 254 candidates and over 15.7 thousand researchers. Scientific and research work carried out in 45 research institutes of the Academy of Sciences of the Republic of Uzbekistan, 36 higher educational institutions of the Ministry of Higher and Secondary Special Education (MHSSE), 34 scientific organizations of the Ministry of Health (MOH), 30 scientific and educational institutions of the Ministry of Agriculture and Water Resources (MAWR), 79 other research and innovation centers.

The state budget funds allocated to annual increase by 25-30% for financing state scientific and technical programs, the implementation of which participate annually about 150 scientific , educational institutions and development organizations . Currently, 35% of the allocated budget funds accounted for basic research, about 56% - on the applied research and 9% - for innovations. In Table 1 is shown the target parameters of innovative development for the period up to 2015 and 2020 calculated on the basis of defined growth factor conditions and intensity transformations of National Innovation System (NIS).

Table 1

Target parameters	Report	Forecasting parameters	
		2012-2015	2016-2020
Share of spending on scientific and technical work to GDP,%	0.2	1.0	3.0
Share of high-tech industries (in% of total GDP)	11.3	15.0	31.0
The share of innovative products (in% of total GDP)	2.9	15.0	22.0
Share of spending on innovation (as % of production volume)	0.4	2.8	5.0
Export share of innovative products in total exports , %	5.76	15.0	28.0
Enrolment of students in science and engineering education, %	28.7	40.0	45.0
Number of patents registered annually by residents of Uzbekistan in foreign patent offices, units.	8 (2008)	1000	1300



The main directions and measures to establish NIS:

- **Education**
- **Science:** Modernization personnel policy research and development sector includes the expansion of existing and creation of new mechanisms to attract and retain in science and innovation activities of young professionals. First of all have to find the tools to move from cost management to the management of the results in the field of fundamental science;
- **The private sector:** One of the priorities of Uzbekistan is the activation of NIS innovation entrepreneurial sector, which will lead to continuous technological improvement of production and the emergence of new high-tech industries ;
- **Development Innovation Infrastructure:** Infrastructure is aimed at providing technical, information and methodological support, as well as to reduce the risks of innovation by engaging in projects of public funding. Important tool for the formation of national priorities for technological development and integration efforts of business, science, government to implement them **should be technology platforms** ;
- **International cooperation:** It is important to promote international cooperation in the use of the strategy of «borrowing» of innovative technologies through its institutional strengthening, of the Centre for Engineering and Technology Transfer. Needed to provide direct financial, information and other assistance to small businesses in science and technology, implementing projects to develop and produce new high-tech products and technologies based on these enterprises owned intellectual property.

Feedback of ICT stakeholders on pursued policy was found in the UNDP project “Analysis of the status and prospects of development of the Internet in the Republic of Uzbekistan” performed in Uzbekistan in collaboration with Uzbek Agency for Communication and Informatization, 2009¹⁰.

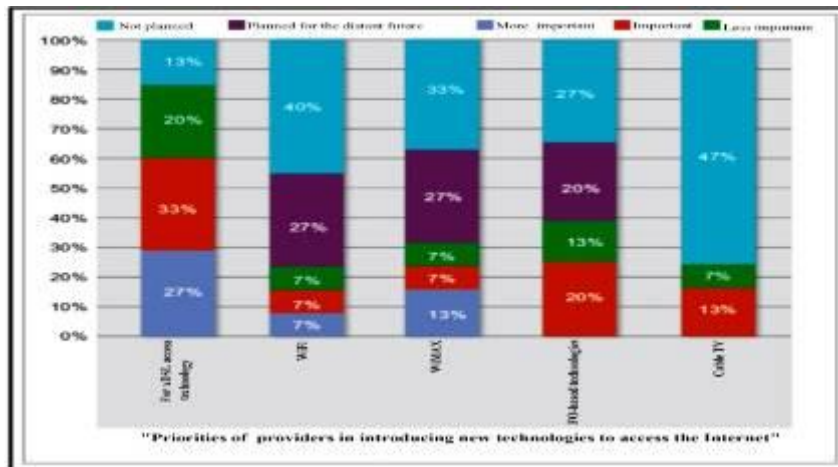
Analytical report was prepared on the basis of official statistical information of the State Statistics Committee of Uzbekistan (SSC), the survey data of 15 leading providers of Internet, as well as the results of structured interviews with leaders of major regulators and operators and providers of telecommunications services, including services Internet access in Uzbekistan.

In conclusion, considering the current state of Internet penetration in the country, the opinion providers and global trends in the global information network, the project identifies the main four problems to be solved for deepening Internet penetration in Uzbekistan:

- I. Insufficient transparency and efficiency of the national telecom operator «Uzbektelecom», which is the only ISP - 1 level and the owner of the main transport data networks across the country.
- II. One exit point in the international data network, and excessive centralization of control over access to the global network.
- III. Very big difference level of Internet penetration in the capital and regions of the republic and the inefficiency of financing the expansion of communication networks.
- IV. Lack of effective strategies and tactics of the information resources of the national Internet segment - UZNET for more intensive use of internal traffic.

¹⁰ <http://www.undp.uz/ru/publications/?&page=17>

Below is shown the diagram of priorities of providers in introducing new technologies to access the internet.



In order to solve the problems mentioned above a set of measures following courses of action were proposed:

1. Technological development issues require further study and implementation of various transmission technologies in the construction or upgrading of transmission channels for a less capital-intensive infrastructure data throughout;
2. Issues of economic and management development policies contain the following tasks:
 - a. Increased independence from the state regulator national telecom operator in the economy and the national operator of the national regulator in the economic and political issues , as well as the wider development of horizontal market relations between market players regard;
 - b. Ensuring transparency and accountability of public disclosure of financial, economic and technological performance «Uzbektelecom» and other public relations firms before its users and the population of Uzbekistan;
3. Social development issues include problems mainly educational nature:
 - a. Establishment of close cooperation between higher education institutions , training of IT specialists and ICT companies represented by the Association of Enterprises and Organizations of Uzbekistan in developing IT training programs for ICT professionals.
 - b. Must provide free or at least discounted rates for internet access for all institutions of higher education, specialized secondary education in the country and development and implementation of regulations for the accreditation of qualifications in higher and vocational education, obtained by using online learning technologies.

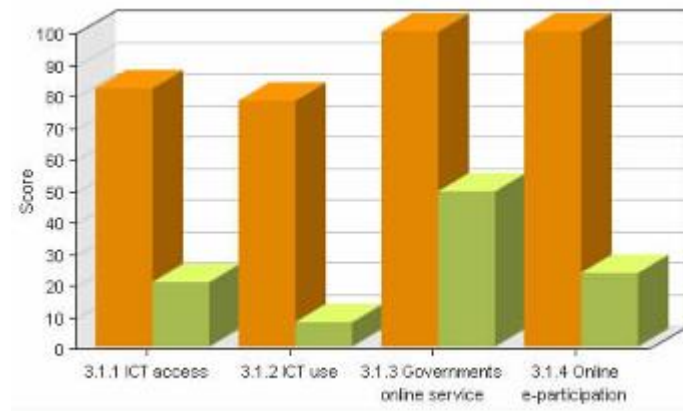
This will allow the country to address such important social issues as continuity and availability of education (life-long-learning and education-for-all), which directly stimulates the training of human resources. Remote sensing technology and mixed (blended) education offered by higher education institutions and others can also create a powerful platform for educational Internet content within the segment UZNET.

Key efficiency indicators of innovation policy

In contemporary international practice use several approaches to assessing innovation:

- The Global Innovation Index, which is the most comprehensive ranking of the world in terms of the level of development of innovation [http:// www.globalinnovationindex.org](http://www.globalinnovationindex.org)

Kazakhstan according to INSEAD ahead of the countries of Central Asia, at the 83 position. On the figure below is shown the comparative Global Innovation Index of South Korea (orange color) and Uzbekistan (Green color).



- ICT Development Index (ICT Development Index) and the Digital Opportunity Index - integrated indicators of ICT accessibility, use and practical knowledge of the population of the world <http://www.itu.int> Uzbekistan takes 110 positions, ahead of India on 5 positions.
- Networked Readiness Index (Networked Readiness Index) - a comprehensive measure of the level of development (ICT) in the world <http://www.globalinnovationindex.org> Kazakhstan - 55 positions ahead of Russia, located at the 56 positions, and India - at 69 positions. Data is not shown for Uzbekistan.
- The index of the competitiveness of IT-industry (Global IT Industry Competitiveness Index) <http://www.weforum.org> From Central Asia, only Kazakhstan is considered assigned to the 60 positions.

The government of Uzbekistan will continue its large-scale investment program, which is set to conclude by 2015. Its aim is to increase industry’s share of GDP to 28% in 2015 from 24% in 2013.

Annex 3: Overview of Innovation Policy Documents

Main policy documents concerning ICT policy adopted/published since 2010-2011

Title of document	Date	Organisation responsible	Legal status
On additional measures to stimulate the implementation of innovative projects and technologies in production <u>With the changes</u> :	July 15, 2008 no. PP-916	Cabinet of Ministries	Decree of the President of Uzbekistan
	January 4, 2010 no. PP-1254	Cabinet of Ministries	Decree of the President of Uzbekistan
	September 9, 2011 no. UP- 4362	Cabinet of Ministries	Decree of the President of Uzbekistan
	February 21, 2012 no. PP -1711	Cabinet of Ministries	Decree of the President of Uzbekistan
About priorities of industry development 2011 - 2015	December 15, 2010 no. PP -1442	Cabinet of Ministries	Decree of the President of the Republic of Uzbekistan
“On measures to implement the Concept of further deepening democratic reforms and formation	January 14, 2011 no. PP -3560	Cabinet of Ministries	Decree of the President of the Republic of Uzbekistan

of civil society in the country in area of reforming the information sphere and protection of freedom of speech and information”			
Legislation of the Law “On Innovations and know-how activity”	October,2012	Committee for Coordination of Science and Technology under Cabinet of Ministries	In according to Decree of the President of the Republic of Uzbekistan no. PP -3560; The document has been considered in Cabinet of Ministries up to now.

Annex 4: Overview of Innovation Policies

Policy Measure Fiche: overview

IP Number	Title of measure	Overview
1	The establishment of Technology Transfer Agency under Ministry of Economics	Purpose TTA: encourage and coordinate the implementation of innovative projects and technologies in production ¹¹ .TTA has drafted a bill “Science”, “On Innovations and Innovation» «The concept of venture financing in Uzbekistan», “The concept of innovation development Uzbekistan”. Realized projects: «Monitoring of innovative capacity in the Republic of Uzbekistan” “Creating a virtual portal of information”; “Development of the concept of creating innovative in Uzbekistan (risky) funds”
2	The establishment of Center of innovation Technologies (CIT)	The main product is considered CIT adaptation knowledge in social and other sciences to local socio-economic conditions. Major trends are studied: trend of globalization of all aspects of economic and social life; change in the geopolitical picture of the world; global climate change ¹² .
3	The establishment of State Unitary Enterprise “Scientific and Technical Information” under State Committee of Science under the Cabinet of Ministers	Data ware: Information on the results of ongoing research and innovation projects; Data base of abstracts; Scientists and Experts; Research Projects; Report on R&D; Publications; Scientific Research Projects; Standards and Regulations; Scientific Journals of Uzbekistan; Catalogue of Trade fairs and Exhibitions; Proceedings Of Conferences And Seminars; STI Index; Forms of reports about research works; Personal page of young scientists; Indicators; List of scientific organizations; Foreign articles ¹³ .
4	Annual (VII) Republican fair of innovative ideas, technologies and projects	The results of previous fairs, during which were demonstrated more than two thousand innovative ideas and technologies, concluded 1545 contracts totaling 44.7 billion uzbek sums. Due to this finished product was

¹¹ <http://siteresources.worldbank.org/INTUZBEKISTAN/>

¹² <http://www.itm.uz>

¹³ <http://www.ita.uz/en>



		produced by 480 billion sums, started mass production of 19 kinds of new products, established industrial pilot production under 24 contracts.
5	Innovation activity of Academy of Sciences	In 2012 year performed 71 innovative projects, instead of 43 in 2011 (Up 65 percent). Scientists of the Academy of Uzbekistan attracted non-budget funds amounting to more than 4.23 billion sums.

International Cooperation

National Policies in area of international collaboration are determined by following governmental decrees: The Presidential Decree of 20 February, 2002 No.PD 3029 “Improvement of the organisation of the scientific-technical activity”, Regulation of Cabinet of Ministers of the Republic of Uzbekistan of 19 January, 1998 “State support for the development of international scientific-technical relations, scientific programs and projects by grants of international and foreign organisations and funds”, and Regulation of Cabinet of Ministers “On measures to improve cooperation between



Uzbekistan and the European Union and its member states from March 22, 2004, Number 134. According to these directives the State Committee of S&T under Cabinet of Ministries and Academy of Sciences has been carried out the joint research programs on a competitive basis with the participation of scientists and specialists of Uzbekistan and the EU within the framework of bilateral agreements in 2004-2008, continuation of work on existing projects and develop new projects between the institutions subordinated to the Uzbek Academy of Sciences and research centers of the EU, coordination of training courses and seminars on performance grants research programs EU.

The Republic of Uzbekistan has signed **forty-two** bilateral agreements on S&T cooperation on a high governmental level. **Nine of them are between Uzbekistan and EU MS** (i.e. Hungary, France, Czech Republic, Latvia, Lithuania, Poland, Italy, Germany and Bulgaria). Bilateral agreements have also been concluded between the Committee for Coordination of Science and Technology Development under the Cabinet of Ministers, the Uzbek Academy of Sciences, Research Institutes of the Uzbek Academy of Sciences and the Ministries. For example: Agreement between the Committee for Coordination of Science and Technological Development and the Ministry of Economy of Korea, the Russian Fund on Fundamental Research, the Department on Science and Technology of India, the CRDF Fund, the Agreement between the Xinjiang Technical Institute of Physics and Chemistry and the Institute of Plant Substances Chemistry of Uzbek Academy of Sciences, the Agreement between the Institute of Bioorganic Chemistry of the Uzbek Academy of Sciences and the Shanghai Institute of Medical Materials, the Memorandum between the Korean Institute of Electronic Technology and the SPC “Physics Sun” of the Uzbek Academy of Sciences, the Memorandum between the Institute of Automatics and Electronics of the Uzbek Academy of Sciences and the Korean Institute of Economics of Energy, the Agreement between the Uzbek Academy of Sciences and the National Centre of Scientific Researches of France (CNRS), the Agreement between the Uzbek Academy of Sciences and the Polish Academy of Sciences and others. Partnership links have been established with ministries and agencies of most EU countries and a number of international S&T foundations.

In June 2010 a call for fundamental research projects under the “Uzbekistan-CRDF 2010” was launched in the field of improvement of ground and water resources use. It allowed

for \$7,402,300 for the implementation of fifty-nine international research projects for the support of the scientific potential of the Republic of Uzbekistan. Grants of \$1,057,445 for the realization of twelve scientific projects are received under the programs of the Scientific Committee of NATO, six grants \$1,530,169 under the programs STCU, nine grants of \$1,228,899 under the programs CRDF, five projects allocated €341,000 (\$443,300) under the programs of the FP7 EU and twenty-seven grants of \$3,142,487 under other international programs.

Cooperation with EECA-countries is carried out within the framework of bilateral and multilateral S&T programs. For example, in 2007 two collaborative calls for joint fundamental research projects were organised in the framework of the programs “Uzbekistan-Russia 2008” and “Uzbekistan-Ukraine 2008.” Under the programme “Uzbekistan-Russia 2008,” a number of twenty-two joint projects have been concluded on the following research priorities: solid-state physics and elementary particles, microelectronics, mathematics, astronomy, biology and biophysics, genetics, bioorganic chemistry, advanced materials, power, laser technologies, geology and seismology, and medicine. In general, with scientific institutions in CIS countries run more than 50 cooperation agreements on the most urgent problems of modern fundamental and applied science. Academy has been supported scientific collaboration with Institute of Astronomy of Moscow State University, JINR (Dubna) in the field of nuclear physics, Ioffe Institute in the field of semiconductors and a number of other leading research centers in the CIS countries. In the table below is shown the main Agreements on governmental and academic levels.

Recently, in order to implement the Agreement between the Committee for Coordination of Science and Technology under the Cabinet of Ministers of the Republic of Uzbekistan and Turkmenistan Academy of Sciences on 28 September 2012 the competition/call of research projects was announced.

A competition/call was announced on the following topics:

- Energy, including energy efficiency;
- Renewable energy and new technologies;
- Agriculture and water management;
- Health,
- Environmental protection

Table 1: Overview of bilateral Uzbekistan-EECA agreements

Title of document	Date	Country/Organisation	Scope of cooperation
Agreement between botanic garden of Academy of Science of the Republic of Uzbekistan and botanic garden of Academy of Sciences of Azerbaijan	2011	Azerbaijan - Uzbekistan / Academies of Sciences	Agreement
Agreement between the Government of the Republic of Uzbekistan and the Government of the Republic of Azerbaijan on further measures for the development of trade-economic and scientific-technical cooperation	September 11, 2008	Azerbaijan - Uzbekistan/ Governments	Agreement

Title of document	Date	Country/Organisation	Scope of cooperation
Agreement between the Government of the Republic of Uzbekistan and the Government of the Republic of Azerbaijan on cooperation in science, technology and information	May 27, 1996	Azerbaijan - Uzbekistan/ Governments	Agreement on cooperation in science, technology and information
Agreement between the Government of the Republic of Belarus and the Government of the Republic of Uzbekistan on Cooperation in the field of Science and Technology	May 19, 1994	Belarus - Uzbekistan / Governments	Agreement
Agreement between Academy of Science of the Republic of Uzbekistan and Academy of Sciences of Belarus	May 24, 2007	Belarus - Uzbekistan / Academies of Sciences	Agreement
Agreement between the Government of the Republic of Uzbekistan and the Government of the Republic of Georgia on scientific and technical cooperation,	September 4, 1995	Georgia - Uzbekistan / Governments	Agreement on scientific and technical cooperation
Agreement between the Government of the Republic of Uzbekistan and the Government of the Republic of Kazakhstan on cooperation in science and technologies	March 20, 2006	Kazakhstan - Uzbekistan/ Governments	Agreement on cooperation in science and technologies
Agreement between the Government of the Republic of Uzbekistan and the Government of the Republic of Moldova on scientific and technical cooperation	March 30, 1995	Moldova - Uzbekistan/ Governments	Agreement between the on scientific and technical cooperation
Agreement between Academy of Science of the Republic of Uzbekistan and Academy of Sciences of Russia	2002	Russia - Uzbekistan/ Academies of Sciences	Agreement
Agreement between the Government of the Republic of Uzbekistan and the Government of the Russian Federation on cooperation in the field of culture, science and technology, education, health, information, sport and tourism	March 19, 1993	Russia - Uzbekistan/ Government	Agreement on cooperation in the field of culture, science and technology, education, health, information, sport and tourism
Agreement between the Government of the Republic of Uzbekistan and the Government of the Russian Federation on scientific and technical cooperation	July 27, 1995	Russia - Uzbekistan/ Government	Agreement on scientific and technical cooperation
Program of economic cooperation between Government of Republic of Uzbekistan and Government of Russian Federation for years 2013-2017	2013	Russia – Uzbekistan / Governments	Program of economic cooperation

Title of document	Date	Country/Organisation	Scope of cooperation
Agreement between the Government of Republic of Uzbekistan and the Government of the Republic of Tajikistan on cooperation in science, technology and information	January 04, 1998	Tajikistan - Uzbekistan/ Governments	Agreement on cooperation in science, technology and information
Turkmen-Uzbek Joint Commission on Trade, Economic, Scientific, Technological and Cultural Cooperation	2009	Turkmenistan - Uzbekistan	Joint Commission
Agreement between the Government of the Republic of Uzbekistan and the Government of Turkmenistan on cooperation in science, technology and information	January 10, 1996	Turkmenistan - Uzbekistan/ Government	Agreement on cooperation in science, technology and information
Agreement between the Government of the Republic of Uzbekistan and the Government of Turkmenistan on Turkmen-Uzbek Joint Commission on Trade, Economic, Scientific, Technological and Cultural Cooperation	December 13, 2009	Turkmenistan - Uzbekistan/ Governments	Agreement
Agreement between the State Committee of S&T of the Republic of Uzbekistan and the Academy of Sciences Turkmenistan	September 28, 2012	Turkmenistan Uzbekistan / Academy of Sciences - State Committee of S&T	Agreement
Agreement between the Government of the Republic of Uzbekistan and the Government of Turkmenistan on Scientific and Technological Cooperation	May 5, 2011	Turkmenistan-Uzbekistan /Government	Agreement on Scientific and Technological Cooperation
Agreement between the Government of the Republic of Uzbekistan and the Government of Ukraine on cooperation in science and technology	June 20, 1995	Ukraine - Uzbekistan/ Governments	Agreement on cooperation in science and technology

ICT policies and programmes facilitating co-operation with the EU

EU-Uzbekistan cooperation without area of R&D is earmarked within two priority areas: poverty reduction and increasing living standards, with a focus on raising living standards through rural and local development schemes; and good governance and economic reform, with a focus on the rule of law and judicial reforms and support to local government bodies (Strategy Paper for Central Asia (2007-2013, 14/07/2010, 17/12/2010, 24/11//2011, Brussels).

The first Central Asia Multi-annual Indicative Programme (2007 – 2010) under the Development and Cooperation Instrument (DCI) allocated €28.6 million towards the development of national cooperation programs in Uzbekistan. These provided technical assistance, training, opportunities for benchmarking with EU experiences and specialized



equipment. Cross-cutting issues such as gender equality and social inclusion for vulnerable groups of the population have also been addressed.

The second Multi-annual Indicative Program covering the period 2011 – 2013 allocated € 42 million. The indicative priority areas for cooperation include: Governance, Agriculture/Rural development, Environment/Energy/Climate, Health, Economy/Trade/Private sector. Since 2002, and under the TACIS approach, a set of programs on Enhancement of Living Standards in Rural Areas (€ 6.5 million) has been helping to respond to immediate community needs. By means of these programs, and in joint management with the UNDP, the European Union has provided support for improved water services, health and education, as well as training, equipment and supplies.

Through the Institution Building Partnership Programme (IBPP) the EU has also been delivering technical assistance to Uzbek local initiatives. This has been made possible through a partnership between local organisations and international NGOs. Focal areas of this program include women entrepreneurship, job creation and integration of children with disabilities in the mainstream education system. So far, the Institution Building Partnership Programme has already implemented 22 projects with an average budget of € 200 000 each. In the area of integration of disabled children into mainstream schools, the EU envisages supporting the process with the transfer of EU Member States' experiences and know-how. The Improvement of Mother and Child Care Services (€ 3.5 million) is a joint program of the EU, the United Nations Children's Fund and the Ministry of Health. The program focuses on the achievement of the MDGs, particularly MDG 4 'Reduction of Child Mortality' and MDG 5 'Improvement of Maternal Health'. Due to the relevance of these objectives, and the positive repercussions in the country, the EU envisages a second phase, expanding on nutrition and enlarging the coverage.

Therefore, the relations between the European Union and Uzbekistan have been developing steadily since the independence of Uzbekistan in 1991. While initially the focus has been primarily on development cooperation, the signature of the Partnership and Cooperation Agreement (PCA) in 1996 created space for broadening of bilateral relations by creating an institutional framework and expanding the scope of areas of cooperation from development to political affairs, trade and economic issues, matters of human and social development and others. The EU – Uzbekistan bilateral relations were put into a regional perspective in the «European Union and Central Asia: Strategy for a New Partnership», which outlines the overall EU co-operation objectives, policy responses and priority fields for engagement in Central Asia. In June 2010, the European Council and the European Commission published their Joint Progress Report on the implementation of the EU Central Asia Strategy. Since 2011, the opportunities for advancing bilateral relations have further increased, as the EU and Uzbekistan signed Memorandum of Understanding on cooperation in the field of energy and the EU established its diplomatic representation in Tashkent.

Up to now there are eight Uzbek research groups participating in the FP7 projects with funds of more than €354,000. One of them participated in a project in the priority area of "Food, Agriculture, and Biotechnologies" and another in "International Cooperation". Two projects have been performed in area of ICT with participation of Uzbek scientists.



Fourteen Uzbekistani researchers funded in Marie Curie Actions (2007-2014). EU budget allocated so far to Uzbekistani organisations (2007-2014) - € 0.015 million.

Since 1994, the European Commission funded the entire 79 Tempus projects involving universities in Uzbekistan for a total amount of 22.16 million euros.

- Tempus II: 6.14 million Euro (1994-2000);
- Tempus III: 11.3 million Euro (2000-2006);
- Tempus IV: 3.6 million Euro (2008-2010);

Over the entire period of its activity in the program were involved 45 universities and 38 non-academic organizations from Uzbekistan and more than 100 universities from 20 countries of the European Union.

On January 1, 2011 10 Tempus projects (7JP & 3SM) carried out with 8 universities in Tashkent and 9 universities from six regions of the country (Samarkand, Bukhara, Khorezm, Kashkadarya, Andijan and Ferghana region). The projects were implemented in cooperation with 48 universities of the European Union from 18 member states of the EU, as well as 7 non-academic partners. MHSE Uzbekistan participates in 3 ongoing projects. The most active participants are: Tashkent University of Information Technologies, Fergana Polytechnic Institute (3 projects); National University of Uzbekistan, Tashkent Institute of Chemical Technology, Tashkent State Technical University, Bukhara State University, Urgench State University, Karshi Engineering Economic Institute (2 projects).

Table 2: Overview of bilateral Uzbekistan - EU agreements

Title of document	Date	Country/Organisation	Scope of cooperation agreed
Protocol to the partnership and Cooperation Agreement between The European Communities and MS of the one part, and the Republic of Uzbekistan	April 30, 2004	EC - Uzbekistan	Protocol to the partnership and Cooperation Agreement
Agreement on Partnership and Cooperation Agreement establishing a partnership between the Republic of Uzbekistan on the one hand, the European Communities and their Member States	June 21, 1996	EC - Uzbekistan	Agreement on Partnership and Cooperation Agreement