



AZERBAIJAN

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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Azerbaijan

ICT Environment

1 Overview of the main trends in the National ICT Sector

1.1 Recent Trends in Macroeconomic and Market Developments

With a solid rise in income and a reduction in poverty, Azerbaijan weathered the recent global economic crisis much better than many other countries. Its geographical position makes it an important link between the Black and Caspian Seas and between Russia and Iran. Achieving Azerbaijan's potential as a transit economy is essential for the stimulation of economic growth, non-oil economic development, and safety and for the reduction of poverty. Improvement of the road network has been identified as one of the priorities for production diversification for the country.

Over the past few years, the Government of Azerbaijan has worked to integrate the country into the global economic marketplace, attract increased foreign investment, diversify its economy, and maintain positive growth.

Wide-ranging economic reforms implemented by Azerbaijan during the past five years have resulted in notable progress to improve regulatory efficiency and encourage domestic economic diversification, especially in the areas of agriculture, tourism, and information and communications technology. In particular, the substantial economic reforms implemented in 2007 and 2008 led the World Bank to name Azerbaijan as one of the top ten global reformers for 2009 in its annual Doing Business report. Azerbaijan has enjoyed measurable success in diversifying its economy outside of the energy sector.

Azerbaijan's economic freedom score is 61.3 (According with "The Heritage Foundation", an American research and educational institution), making its economy the 81st freest in the 2014 Index. Its overall score is 1.6 points higher than last year, reflecting improved scores in the management of public finance and property rights. Azerbaijan is ranked 13th out of 42 countries in the Asia-Pacific region, and its overall score is above the regional and global averages.

Over the 20-year history of the Index, Azerbaijan has advanced economic freedom significantly to become a "moderately free" economy for the first time in the 2014 Index. A series of major reform measures has enabled the country to rise from the status of economically "repressed." Score improvements of 10 points or more have been achieved in nine of the 10 economic freedoms, and Azerbaijan's overall improvement of 31.3 points is the biggest gain of any country.

Oil and gas production, construction, and private investment are increasing, and exports of gas to Russia have also risen. In June 2012, Turkey and Azerbaijan agreed to build the Trans-Anatolian Natural Gas Pipeline, which will ease Europe's dependence on Russian gas. Negotiations on accession to the World Trade Organization continue.

The World Bank is supporting the Government's financial and private sector reform program through investment operations and policy advice.



According to The World Bank *Country Program Snapshot* GDP growth in Azerbaijan picked up in 2013, aided by a renewed increase in oil production and the continued strong performance of the non-oil economy. Economic output expanded by 5.8 percent in 2013.

The impressive performance of the non-oil sector continued, with a growth of 9.9 percent in the same year. The stabilization in oil production was the key differentiating factor between the economic performance of 2012 and 2013. In addition, saved oil receipts continued to finance public investments, thereby boosting the construction sector, which grew by 23 percent in 2013. Other non-tradables such as hotels and restaurants and communication services were also significant contributors to growth and expanded by 16 percent and 10.7 percent, respectively. A third consecutive year of good harvests resulted in agricultural growth of 4.9 percent in 2013. The manufacturing sector, which is primarily driven by petroleum and food products, maintained its 2012 performance and grew by 5.8 percent.

An increase in imported machinery by the oil sector reduced the trade surplus to 18 percent of GDP in 2013 compared with 20.7 percent in 2012. Oil exports were at the same level as 2012, while gas exports increased by 8.4 percent in 2013. Non-oil exports continued to be marginal and grew by 6 percent in 2013, led by fats and oils, sugar, and tea. Total imports, however, grew by 11 percent in 2013, thus worsening the trade balance.

Growth in imports was led by machineries, which grew by 7.5 percent, and was used as inputs in the oil sector. In addition, cereal imports expanded by 16 percent. The non-oil trade deficit stayed at 21 percent in 2013, almost the same as in 2012.

The current account surplus narrowed to 15 percent of GDP in the third quarter of 2013 from 19 percent in the third quarter of 2012, driven by the surge in oil sector service imports and the reduced trade balance. The deficit in services trade widened from 3.4 percent of GDP in the third quarter of 2012 to 4 percent of GDP in the third quarter 2013. Import of services increased by 11 percent during the period, driven mostly by the oil sector. Service exports are dominated by traditional services, which include travel and transport.

Increases in administered fuel and food prices raised the average inflation rate to 2.4 percent in 2013, marginally higher than 2012. But despite increases in price levels, inflation continued to be below the Central Bank of Azerbaijan's targeted band of 5–6 percent and as a result, the policy rate was reduced.

As for the business environment, Azerbaijan was ranked 70th out of 189 countries in the 2014 *Doing Business report*. In starting a business and registering property, Azerbaijan does particularly well and holds a rank of 10 and 13, respectively. Business start-up has become simpler due to "One-stop-shop" Business Registration System. Required procedures have been reduced to six, and no minimum capital is required.

Azerbaijan improved its ranking from 46 to 39 according to the Global Competitiveness Report (GCR) 2013–2014 published by the World Economic Forum. The main improvements were in the areas of macroeconomic environment, efficiency in the functioning of the market for goods and labor, and innovation.

| Indicator | National performance | EU 27 (28 Average) |
|-----------|----------------------|--------------------|
|-----------|----------------------|--------------------|



| | 2009 | 2013 | 2009 | 2013 |
|---|--------|----------------|------|------|
| GDP per capita in PPS (EU25=100) | 9544\$ | 10149\$ (2011) | 100 | 100 |
| Real GDP growth rate (% change previous year) | 9.3 | 5.8 | -4.5 | 0.1 |
| Labour productivity per person employed (EU25=100) | 22 | 29 | 100 | 100 |
| Inflation rate (average annual) | 1.5 | 5 | 1.0 | 1.5 |
| Unit labour costs (growth rate) | 2 | 6 | 3.3 | 0.6 |
| Unemployment rate (as % of active population) | 6 | 5.2 | 8.8 | 10.8 |
| Foreign direct investment intensity | 10 (6) | 15(8) | | |
| Business investment as a percentage of GDP | 32 | 37 | | |
| ICT Expenditure (% of GDP) | 2 | 3 | | |
| Broadband Penetration Rate (% population with broadband access) | 10 | 35 | | |

Recent Trends in ICT Performance

ICT sector in Azerbaijan, as a sphere of economy, and as a sphere of serving the general socio-economic development of the country, is developing dynamically and share of revenues generated by the sector is roughly 3,5 percent in GDP and 7.2 percent in non-oil GDP.

The ICT sector in the years 2004-2013 expanded almost twice every three years, and for the past 8-10 years, average annual growth in this area was 25-30 per cent.

In 2012, the growth rate of this sector was roughly 18 percent, which is almost 2.5 times higher than the global average rate of development. Telephones were installed in all settlements of Azerbaijan for the first time in 2008 among the CIS countries, and in 2010 made full electronic, more explicitly made digital format. In 2012, with the inclusion of some 20,000 numbers in the network, technology “next generation networks” was applied. Over 400 million U.S. dollars was invested in the sector during the reporting year.

Over the past three years, Azerbaijan is a leader for the density of Internet users among the CIS countries. In 2012, this figure was closer to 70 percent. The quality of Internet services increased, compared to 2011, the volume of output abroad increased 2.2 times, and prices were reduced by nearly 35 percent. Today, the cost of services for 1 megabit per second in Azerbaijan is about 3 percent of the average wage. For comparison, this figure for developing countries is around an average of 20 percent.

In 2012, Azerbaijan was the ninth country in Europe to apply the fourth generation of mobile communication technology, and the 37th in the world. Today, there are about 110 phones for every 100 people in our country. The mobile phone system covered 100 percent of the country in 2010 among the CIS countries for the first time. The majority of mobile users are high-speed Internet users now.

According to the Networked Readiness Index reflected in the Global Information Technology Report 2014 made by the World Economic Forum, Azerbaijan moves up 7 places to 49th place among 148 countries.



Azerbaijan ranks first for mobile network coverage. It means that the country has fully been provided with the mobile network signal. Azerbaijan is in 59th place among 148 countries for the number internet users and 46th place for the number of fixed broadband internet subscriptions, leading in CIS area. Moreover, according to capacity for innovation, Azerbaijan ranks 35th in the world and first among CIS countries.



Azerbaijan holds 6th place for importance of ICTs to government vision of the future. Our country, leading in the CIS area, is in 8th place for government success in ICT promotion and 11th place for ICT use and government efficiency.

Digital television broadcast was launched first in Azerbaijan among the countries of the South Caucasus, Middle East and Central Asia, and now 90 percent of the population has access to this broadcast technology.

Objectives and Targets of National ICT Policy

The priorities and objectives in ICT field in Azerbaijan are to ensure the rapid growth of the ICT sector in coming years. Priority goals are to improve the capacity of production and export of ICT products, application of innovation, attraction of local and foreign investment, the development of broadband internet services, including the organization of services on an “Fiber to homes”, complete the transition to digital broadcasting, strengthening security and the expansion of e-government.

2013 was declared The Year of ICT in Azerbaijan. With the view of further development of ICT the “Action Plan in connection with the declaration 2013 “Year of ICT” in the Republic of Azerbaijan” was worked out by experts of the Ministry of Communication and Information Technologies and the National Academy of Sciences and approved by the Order of the President on March 28, 2013.

First important historical event of declared 2013 the Year of ICT was our country’s entry into the space age: on February 8, Azerbaijan launched its first telecommunications satellite Azerspace-1 into orbit. Satellite, covering the countries of Eastern Europe, CIS, North Africa, Central Asia and the Middle East, will provide various communication services and broadcasting.

In 2013 the IT University, “The State Fund for Development of Information Technologies” for support of innovation ICT projects has been established. “High-Tech Park” has been created, which mainly is designated for realization of innovation ICT projects.

“Regional Innovation Zone” project developed by the Ministry of Communications and Information Technologies in cooperation with Booz Allen Hamilton (a leading US consulting company), will serve techno-parks for the support of innovative entrepreneurship, a regional market for the production and export of electronic equipment and software, of transitional information dimension between the East and the West to provide wide-ranging electronic



services to all countries in the region and of a university for the development of human resources.

The Ministry of Communications and Information Technologies and the State Oil Fund (SOFAR) have worked out a project to establish optical network that provides high-speed broadband Internet services to all communities throughout the country on the model “Fiber to homes”. The project is estimated at about \$ 500 million, and SOFAR has provided \$132 million in 2013 for this project. The project will be implemented within three years and is highly profitable. 30-35 percent of the total cost will be borne by reinvestment starting from 2014. The main goal is to provide access to broadband Internet at speeds of 10-100 Mbps, including remote villages, to increase the number of users to 85 percent, which will allow Azerbaijan to reach the level of developed countries in the world in 2017.

In the short term, another international project initiated by Azerbaijan is expected to develop. It's talked of laying the Trans-Eurasian Information Super Highway (TASIM). Backed by two special resolutions from the UN General Assembly, TASIM project envisages laying of fiber-optic backbone that will connect Hong Kong with Frankfurt and thus provide vast Eurasian space with high-speed Internet. Azerbaijan has experience in similar international initiatives, for instance, in a project Europe-Persia Express Gateway (EPEG) for laying the communication line in partnership with Russia, Iran and Oman, which ended late 2012. For several years, the partners of the future consortium – the largest telecommunications companies of Azerbaijan, Kazakhstan, China, Russia and Turkey have been preparing for this project. And, of course, the implementation of the project will give Azerbaijan an opportunity to become a key information hub in the Caspian region.

Modern computer network of mail system was created together with the World Bank and the Central Bank of Azerbaijan, activities based on principles of modern management and new business were provided, innovative services, including banking and finance, e-government services, logistics, and other services were launched.

In accordance with the presidential decree of May 23, 2011 “On some measures in the sphere of provision of e-services by state agencies”, provision of e-services by the central executive authorities was provided. These services cover economic and social, scientific, cultural and other spheres of public life. With the view of organizing the use of electronic government services, the Ministry of Communications and High Technologies (MCHT) has established a Single portal “Electronic Government”, which operates on the principle of “single window”: provides the population with 219 (out of 417) e-services from 41 state agencies . First network terminals of ASAN (Azerbaijan Service and Assessment Network) have been launched since 2013 in Baku, where people are provided services such as registration of civil status, registration of businesses, giving of electronic tax and customs declarations, as well as submission of applications for admission to civil services and educational institutions, registration of property rights, awarding of pension and reception of targeted social assistance, etc in a centralized order. That is we have all the basic electronic public services that European Union countries have and the next step will be to connect the local authorities to the portal. The portal has more than 50,000 monthly users so far.

As of 2012, 28 government agencies were granted nearly 2,800 electronic signatures by the National Certification Services Center that are operating under the ministry. The use of an electronic signature has created conditions to increase the use of electronic services, provide



better and safer services. By 2020, government agencies will be provided with e-services completely, and it will be an important tool in providing full transparency in government activities, as well as contribute to eliminate negative cases and bureaucratic impediments to businesses and citizens.

The interest of foreign companies in Azerbaijan is high. Today 10 out of the 20 top-rated ICT companies such as Microsoft, Cisco Systems, Hewlett Packard, IBM, Apple Computer, Intel, Oracle, Google, Nokia-Siemens Networks, Ericsson operate in Azerbaijan, and are actively involved in various projects in the country.

In 2012, along with the annual International Conference and Exhibition “BakuTel” with joint organizational support of the UN and the Government of Azerbaijan the biggest event of the year on the Internet – Internet Governance Forum (IGF) was held in Baku. The forum was attended by over 1,600 foreign and 1,200 citizens of Azerbaijan, 3,800 foreign participants joined the forum via videoconferencing.

Annex 1: Overview of ICT Policy Documents

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

| Title of document (in English) | Date | Organisation responsible | Legal status |
|--|-------------------|--|--|
| On approval of the National Strategy on development of the information society in Republic of Azerbaijan in 2014-2020 | 02 April, 2014 | Ministry of Communications and High Technologies, Cabinet of Ministers | The order of the President of Azerbaijan Republic |
| Approval of the Action Plan in connection with declaration of 2013 the Year of information communication technologies in Azerbaijan | 28 March, 2013 | | The order of the President of Azerbaijan Republic |
| On Ensuring the activities of the Electronic Security Center under the Ministry of Communications and Information Technologies of the Republic of Azerbaijan | 05 March 2013 | Ministry of Communications and High Technologies | The decree of the President of Azerbaijan Republic |
| Establishment of the University of Information Technology | 01 February, 2013 | | The decree of the President of Azerbaijan Republic |
| “2013 The Year of information communication technologies in Azerbaijan”. | 16 January, 2013 | | The decree of the President of Azerbaijan Republic |
| “On creation of the High-Tech Park” | 05 November, 2012 | | The decree of the President of Azerbaijan Republic |
| The decree on approving Development Concept | 29 December, 2012 | | The decree of the President of Azerbaijan |



| Title of document (in English) | Date | Organisation responsible | Legal status |
|--|--|--|--|
| "Azerbaijan 2020: A Look into the Future" | | | Republic |
| "Azerbaijan 2020: A Look into the Future" | Approved by decree of The President on 29 December, 2012 | | Development Concept |
| On Approval of " Rules of use of information technologies, information systems and their means of support in Customs" | 03 August 2012 | | Decision of the Cabinet of Ministers |
| Approval of the Statute of the State fund for Development of IT | 15 March 2012 | Ministry of Communication and High Technologies. | The decree of the President of Azerbaijan Republic |
| On approval of Action Plan for 2011-2015 on Implementation of the State Program on poverty reduction and sustainable development in Azerbaijan Republic in 2008-2015 | 28 June, 2011 | Cabinet of Ministers | The order of the President of Azerbaijan Republic |
| "On some measures in the sphere of provision of e-services by state agencies" | 23 May, 2011 | Cabinet of Ministers | The decree of the President of Azerbaijan Republic |
| On approval of the Statute and structure of "Azerkosmos" public corporation | 23 December, 2010 | | Decision of the Cabinet of Ministers |
| On approval of State Programm on development of information technologies in Azerbaijan Republic in 2010 - 2012 ("Electron Azerbaijan") | 11 August 2010 | Ministry of Communication and High Technologies. | The order of the President of Azerbaijan Republic |

Annex 2: Overview of ICT Policy Measures

| IPM Number | Title of measure | Overview |
|------------|--|--|
| 1 | Development of provision of e-services by state agencies | Single portal "Electronic Government" has been established. Portal is operating on the principle of "single window": provides the population with 219 (out of 417) e-services from 41 state agencies. Network terminals of ASAN (Azerbaijan Service and Assessment Network) have been launched for registration of civil status, registration of businesses, giving of electronic tax and customs declarations, as well as submission of applications for admission to civil services and educational institutions, registration of property rights, awarding of pension and reception |



| IPM Number | Title of measure | Overview |
|------------|---|--|
| | | of targeted social assistance, etc. |
| 2 | Further development of access to Internet | The project “Fiber to Home” is implemented providing the expansion of the country’s infrastructure for model optical FTTH. This will ensure provision of users throughout the country, including remote rural areas, with high-speed Internet at speeds of 10-100 Mbit / s, and bring the number of broadband Internet users up to 85%. |
| 3 | Support to development of Space Industry | “Azercosmos” JSC was established in 2010. On February 8, Azerbaijan launched its first telecommunications satellite Azerspace-1 into orbit. Low-orbit optical satellite will be launched in 2015, and the second telecommunications satellite will be launched in 2016. Providing the country with reliable and cheap satellite communications, national satellite project, in its turn, will contribute to strengthening the information security of the country. Launching of low-orbit satellites will increase efficiency in the field of environmental protection, agriculture, topography and cartography, as well as in the field of national security. |

1.2 Recent National Policy Trends

In 29 December, 2012 President of the Republic Azerbaijan signed a decree approving Development Concept “Azerbaijan 2020: A Look into the Future”. In accordance with the concept a new period of development starts in our country from 2012, and to achieve the goals of the concept, new and important tasks fall on the ICT sphere.

The main goal of the Concept is to double increase in gross domestic product over the next 8-10 years. It will be achieved due to the non-oil sector, including the ICT industry. However, achieving this goal involves 4-4,5 fold increase in the ICT market in the required period. In accordance with the concept of “Azerbaijan 2020: A Look into the Future” our goal is keeping the annual growth of ICT at about 18-20 percent in the next eight years to bring the income of the sector to \$8-9 billion. If in 2011 the profit in the ICT sector was \$ 1.7 billion, this figure should be increased to \$ 8 billion by 2020. To this end, \$ 3.6 billion will be invested through state, similar amount of investments should be provided by private sector, including foreign investors. According to forecasts of International organizations which are rather optimistic about the development prospects of the ICT sector in Azerbaijan, continuation of sector reforms and, in particular, the establishment of preferential environment for potential investors in 2025 will bring the level of income from the ICT sector to 10% of GDP. It is comparable with the expected level of profitability of sector in the developed countries of the world. As it was mentioned before Azerbaijan Government pays special attention to development of space industry. Further steps in this direction will be launching of low-orbit optical satellite in 2015, and in 2016 - the second telecommunications satellite.



Providing the country with reliable and cheap satellite communications, national satellite project will contribute to strengthening the information security of the country. Launching of low-orbit satellites will increase efficiency in the field of environmental protection, agriculture, topography and cartography, as well as in the field of national security.

Development of science in Azerbaijan is one of the priorities of the state policy. Development goals and targets in this direction are varied. These objectives are reflected in the “National Strategy for the Advancing Science.” As the development of science is directly associated with the development of information technologies, the rapid development of information technologies and implemented important projects will allow Azerbaijan to maintain and strengthen its leading position in the region in this field.

ICT Policy Measures

| IP N° | Title | Organisation responsible |
|-------|---|--|
| 1 | Development Concept “Azerbaijan 2020: A Look into the Future”. Approved by decree of The President on 29 December, 2012 | Ministry of Economy and Industry |
| 2 | The National Strategy on development of the information society in Republic of Azerbaijan in 2014-2020. Approved by The order of the President of Azerbaijan Republic on 02 April, 2014 | Ministry of Communications and High Technologies, Cabinet of Ministers |

Lessons from the Evaluation of ICT Policy Measures

Analysis of the current situation allows concluding the following. Important work have been done for development of ICT as a priority in the Republic of Azerbaijan, for faster integration of the country into the global e-space, further development of new forms of social and economical activity (e-government, e-trade, distant education etc.), creation of information and knowledge markets, improving efficiency in various sectors of economy, the quality of products and services

Further steps should be taken:

- to develop ICT as a priority branch to ensure further sustainable development of the country;
- to meet ICT products and services requirements of the society;
- to expand the use of ICT in real sectors of economy and society in general;
- to enhance export-oriented competitive, innovative economic potential in the field of ICT;
- to improve the legal framework and state regulation of ICT;
- to expand the influence are of “Electronic government”, improve the quality, expand the scope of electronic services and ensure their implementation in the form of fully automated interactive services;
- to expand the use of ICT on all levels of state management and in local government bodies;



- to remove the existing difference in ICT use between different population groups, urban and rural communities, different branches of economy;
- to meet the requirements of the branch in highly qualified specialists in the field of ICT;
- to develop electronic resources designed for preservation of the national cultural heritage, wide use in the field of education, health care, culture;
- to raise the level of nationwide information security training and education;
- to increase the share of ICT in the gross domestic product up to the level of developed countries;
- to raise the general level of ICT knowledge of population, civil servants and employees of public offices;
- to take measures for deeper involvement of public organizations in the relevant activities.

Review of Good Practice cases in Azerbaijan

| Year | Title of good practice case | Justification for selection |
|------|---|--|
| 2009 | “One-stop-shop” Business Registration System On-line Business Registration System | Starting a business in Azerbaijan in 2007 involved five different agencies, 13 procedures, 33 documents and a timescale of about a month. While the overall timetable stretched over a period of two years, the early part of the period was devoted to consultation, research and consideration of options. Once the final decisions were made on the solution, implementation was achieved within 60 days. reducing the number of procedures, days and cost. Required procedures have been reduced to six. Azerbaijan was the <i>Doing Business 2009</i> top reformer, with the most regulatory reforms, having jumped to 33 on the list from 96 last year. For Starting a Business, Azerbaijan ranked 13th (64th previous year) |
| 2012 | Single portal “Electronic Government” was established. | Portal operates on the principle of “single window”: provides the population with 219 (out of 417) e-services from 41 state agencies Via network terminals of ASAN (Azerbaijan Service and Assessment Network) people are provided services such as registration of civil status, registration of businesses, giving of electronic tax and customs declarations, as well as submission of applications for admission to civil services and educational institutions, registration of property rights, awarding of pension and reception of targeted social assistance, etc in a centralized order. |
| 2012 | State fund for IT Development of Ministry of Communication and Information Technologies was established on on 15 March 2012 | The Fund supports research and innovation, SMEs in ICT field. With the view of developing businesses in ICT field the Fund will provide financial support to new startups, companies and small businesses. A priority of the State fund for IT Development is to study the export projects in ICT field, assess their cost effectiveness and to attract foreign investment for their implementation. The Fund’s activities creates opportunities for attraction of investment and implementation of technology transfer for industrial and technological cooperation between |



| Year | Title of good practice case | Justification for selection |
|------|--|--|
| | | local and foreign ICT companies. |
| 2013 | On February 8, Azerbaijan launched its first telecommunications satellite Azerspace-1 into orbit. The low-orbit optical satellite in 2015, and the second telecommunications satellite in 2016 will be launched. | Satellite, covering the countries of Eastern Europe, CIS, North Africa, Central Asia and the Middle East, will provide various communication services and broadcasting. Providing the country with reliable and cheap satellite communications, national satellite project will contribute to strengthening the information security of the country. Launching of low-orbit satellites will increase efficiency in the field of environmental protection, agriculture, topography and cartography, as well as in the field of national security. |
| 2013 | High-Tech Park has been created | High-Tech Park mainly is designated for realization of innovative ICT projects. |

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 |
| Advanced Cloud Infrastructures and Services |
| Tools and Methods for Software Development |
| Web Entrepreneurship |
| Content technologies and information management |
| Big data - research |
| Technologies for better human learning and teaching |
| ICT Cross-Cutting Activities |
| Cyber security, Trustworthy ICT |
| ICT in 'Societal challenges' |
| SC1: Health, demographic change and wellbeing |
| Advancing active and healthy ageing |
| Digital representation of health data to improve disease diagnosis and treatment |
| SC3: Secure, clean and efficient energy |
| New ICT-based solutions for energy efficiency |
| SC6: Europe in a changing world – Innovative, inclusive and reflective societies |
| ICT-enabled open government |



Innovation Policy

The principal strategic outlook of the development concept “AZERBAIJAN-2020: LOOKING INTO THE FUTURE” is to achieve, with due account for the existing capacities and resources, a stage of development in Azerbaijan with fully guaranteed sustainable economic growth and high level of social welfare, efficient state administration and supremacy of law, all human rights and freedoms, active status of civil society in the social life of the country.

One of the main tools for achieving the goals defined in the concept is the worldwide introduction and application of innovative technologies.

This will be implemented in the following main steps:

- support of innovative science technical activity and modernization processes, improving the efficiency of state policy tools;
- development of innovative entrepreneurship, setting up of new innovative companies, production of high-end, high-tech products and expansion of the measures to support their entrance to the global markets;
- development of technology parks, business incubators and other innovation structures to design and apply new knowledge and technologies.

In addition, according to the “National Strategy for Information Society Development in Azerbaijan for 2014-2020” approved by the Decree of the President of Azerbaijan on April 2, 2014, the main priority of the strategy of further development of the Azerbaijan Republic is achieving stable economic growth and progress through development of non-oil sector of diversification of economy. For this purpose, the factor of natural resources is to be reduced, and the advantage of non-oil factor in the gross domestic product and in the formation of the state budget of the country is to be ensured; powerful motivational mechanisms to expand the application of innovations in economy are to be created and developed.

According to Decree of the President, 2014 is declared the Year of Industry in Azerbaijan and appropriate Action Plan in connection with the declaration has been prepared and approved by the Order of the President on 12 March, 2014. The Order specifies the Ministry of Economy and Industry as a coordination body in organization of the execution of the Action Plan.

The Plan envisages the reconstruction of existing and creation of new industrial enterprises, preparation of a feasibility study for the development of a steel production complex, making of the proposals for the creation of a complex on oil refining and petrochemical industry, the establishment of production of equipment for the alternative energy, restructuring and improvement of industrial enterprises, the creation and development of industrial parks (including in the regions). The Head of State also commissions to set up a group on promotion of innovations and the creation of sectoral workgroups between governmental agencies and industrial enterprises.

Annex 3: Overview of Innovation Policy Documents

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

| Title of document | Date | Organisation responsible | Legal status |
|--|--|--|--|
| On approval of the National Strategy on development of the information society in Republic of Azerbaijan in 2014-2020 | April 2, 2014 | Ministry of Communications and High Technologies, Cabinet of Ministers | The order of the President of Azerbaijan Republic |
| Approval of the Action Plan in connection with declaration of 2014 the Year of Industry in Azerbaijan | March 12, 2014 | | The order of the President of Azerbaijan Republic |
| Creation of "e-court" Information System | February 13, 2014 | Supreme Court, Ministry of Justice, State Agency on Public Service and Social Innovation under the President of AR | The order of the President of Azerbaijan Republic |
| 2014 The Year of Industry in Azerbaijan | January 10, 2014 | | The order of the President of Azerbaijan Republic |
| The decree on approving Development Concept "Azerbaijan 2020: A Look into the Future" | December 29, 2012 | | The decree of the President of Azerbaijan Republic |
| "Azerbaijan 2020: A Look into the Future" | Approved by decree of The President on December 29, 2012 | | Development Concept |
| On approval of "State Program for development of official statistics in the Republic of Azerbaijan" | December 21, 2012 | | The order of the President of Azerbaijan Republic |
| On creation of the High-Tech Park | November 5, 2012 | | The decree of the President of Azerbaijan Republic |
| On the measures for improvement of information security activity | September 26, 2012 | | The decree of the President of Azerbaijan Republic |
| Establishment of the State Agency on Public Service and Social Innovation under the President of AR | July 13, 2012 | | The decree of the President of Azerbaijan Republic |
| "The rules for rendering of electronic services on specific areas by the central executive bodies» and «Approval of the List of Electronic Services" | November 24, 2011 | | Resolution of the Cabinet of Ministers |



Annex 4: Overview of Innovation Policies

Policy Measure Fiche: overview

| IP Number | Title of measure | Overview |
|-----------|--|--|
| 1 | Centre of scientific innovations was created | http://innovasiya.az/en The Centre provides following Services: Automating of administration; Improvement of administration's structure; Economic analysis of business; Providing penetration to foreign bases; Making essential foreign relations; Providing of participation in international exhibitions; Creating of given data; Compiling grants; Calculation of innovations' efficiency; Analysis of information; Presenting data about scientific-research works in the Republic; Preparation of traditional and electron publications; Consulting about getting information |
| 2 | "High-Tech Park" has been created | http://hightech.az/ "High-Tech Park" mainly is designated for realization of innovation ICT projects. |

International Cooperation

After the disintegration of the Soviet Union, Azeri RTD teams lost their collaborative links with Russia and other former Republics of the USSR. This RTD networks breakup seriously damaged RTD capacities of Azerbaijan that were not able to support large projects because of limited funding and a lack of expertise.

When Azerbaijan became independent, it started the process of negotiating new formal agreements and protocols. The renewal of the earlier bilateral agreements on scientific cooperation is a long and complex procedure, and has therefore proved of relatively small impact on RTD in Azerbaijan.



Between 1991 and 2007, Azerbaijan signed bilateral agreements on scientific and technical cooperation with many countries on the state level (inter alia Belarus, Georgia, Kazakhstan, Uzbekistan, Moldova, Russia, and Ukraine).

In May 2009 with the view of development of science, to enhance the role of science and technology in the solution of important socio-economic problems, increase information resources of the state and accelerate innovation processes the National Strategy for Development of Science in Azerbaijan for 2009-2015 years had been approved. Among the main objectives of the Strategy determining the structure and composition of the Azerbaijan science in terms of current and prospective requirements of the country there are following ones concerning international cooperation:

- Ensure the science of the country to be organized in accordance with priority directions of world science, technics and technology;
- Deepen international scientific relations;
- Intensify the integration of the Azerbaijan science into international scientific sector.

Table 1: Overview of bilateral Azerbaijan-EECA agreements¹

| Title of document | Date | Country/Organisation responsible | Scope of cooperation |
|--|-----------------|--|---|
| Agreement between the Government of the Republic of Belarus and the Government of the Azerbaijan Republic on Cooperation in Informatization and Information Technologies | June 2010 | Belarus - Azerbaijan / Governments | Agreement on Cooperation in the field of Informatization and Information Technologies |
| Belarusian-Azerbaijani Working Group on the Implementation of Joint Innovation Projects | 2012 | Belarus - Azerbaijan / Academies of Sciences | Working group |
| Agreement between the National Academy of Sciences | August 20, 2007 | Belarus - Azerbaijan / Academies of Sciences | Agreement on Scientific Cooperation |

¹ Information was provided by International Relations Department of National Academy of Sciences of Azerbaijan

| Title of document | Date | Country/Organisation responsible | Scope of cooperation |
|--|------------------------|--|---------------------------------------|
| of the Republic of Belarus and the National Academy of Sciences of the Republic of Azerbaijan on Scientific Cooperation | | | |
| Cooperation agreement between the Science Development Foundation under the President of Azerbaijan, and the Republican Foundation for Fundamental Research and the National Academy of Sciences (NAS) of Belarus | September 2013 | Belarus - Azerbaijan/ The Republican Foundation for Fundamental Research- The National Academy of Sciences of Belarus - The Science Development Foundation under the President of Azerbaijan | Cooperation agreement |
| Protocol of Intent | 2013 | Georgia - Azerbaijan / Tbilisi Governmental University of Linguistics - Institute of Linguistics named after Nasimi (ANAS) | Protocol of Intent |
| Agreement between Governments of Georgia and Azerbaijan for the collaboration in the area of telecommunication, radio, post service and communication technologies | 28 July, 2000 till now | Georgia – Azerbaijan Governments | Agreement, Working group, Specialists |
| Memorandum of understanding | 2012 | Georgia – Azerbaijan/ Georgia University - Institute of Oriental studies named after Z.M.Bunyadov | Memorandum |
| Agreement on scientific cooperation | 2012 | Kazakhstan-Azerbaijan/ Institute of legislation of the Republic of Kazakhstan - Institute of Philosophy, Sociology and Law (ANAS) | Agreement on scientific cooperation |
| Memorandum on cooperation | 2012 | Kazakhstan-Azerbaijan/ Caspian State University of Technologies and Engineering - Institute of Chemical Problems | Memorandum on cooperation |
| Agreement on cooperation | 2011 | Kazakhstan-Azerbaijan/ Kazakh National Academy of Arts named after T.Zhurgenov - Institute of Architecture and Art | Agreement on cooperation |
| Memorandum on cooperation | 2011 | Kazakhstan-Azerbaijan/ D.V. Sokolovsky Institute of Organic Catalysis and Electrochemistry (Kazakhstan) - Institute for Petroleum Chemical | Memorandum on cooperation |

| Title of document | Date | Country/Organisation responsible | Scope of cooperation |
|---|-----------|--|---|
| | | Processes of ANAS | |
| Agreement on cooperation | 2010-2014 | Kyrgyzstan – Azerbaijan/ Institute of Economy of Kyrgyzstan - Institute of Economics of ANAS, | Agreement on cooperation |
| Protocol of Intent | 2010 | Turkmenistan - Azerbaijan National academy of sciences of Turkmenistan - ANAS | Protocol of Intent |
| Agreement between the Government of Ukraine and the Government of Azerbaijan Republic on Scientific and Technical Cooperation | 1998 | Ukraine – Azerbaijan / Governments | Agreement on Scientific and Technical Cooperation |
| Science and technology Cooperation program | 2013-2017 | Ukraine-Azerbaijan/ Innovations and Informatization of Ukraine - Innovation Centre of ANAS - State Agency on Science | Cooperation programme |
| Agreement on cooperation in science, studies | 2013 | Ukraine-Azerbaijan/ National University of Kyiv - Shamakhy Astrophysical Observatory | Agreement on cooperation |
| Agreement on cooperation | 2013 | Ukraine-Azerbaijan/ Ukrainian Union of Industrialists and Entrepreneurs - Institute for Petroleum Chemical Processes of ANAS | Agreement |
| Agreement on joint cooperation | 2013 | Ukraine-Azerbaijan/ Institute of Mathematics of National Academy of Sciences of Ukraine - Institute of Mathematics and Mechanics (ANAS) | Agreement on joint cooperation |
| Agreement on cooperation | 2013 | Ukraine-Azerbaijan/ Institute of Mathematics Mechanics (ANAS), I.Franko National University of Lviv | Agreement on cooperation |
| Memorandum of understanding for technical cooperation | 2012 | Ukraine-Azerbaijan/ State Scientific and Research Institution “Chornobyl Center For Nuclear Safety, Radioactive Waste and Radioecology - Institute of Radiation Problems (ANAS) | Memorandum of understanding |
| Agreement on cooperation | 2011-2015 | Ukraine-Azerbaijan/ Social Studies of MV Ptuhi National Academy of | Agreement on cooperation |



| Title of document | Date | Country/Organisation responsible | Scope of cooperation |
|--------------------------------------|------|--|----------------------|
| | | Sciences of Ukraine - Institute of Economy (ANAS) | |
| Memorandum on scientific cooperation | 2011 | Ukraine-Azerbaijan/MASMI of Ukraine - Institute for Petroleum Chemical Processes of ANAS | Memorandum |

ICT policies and programmes facilitating co-operation with the EU

Some of Institutes of Azerbaijan National Academy of Sciences (ANAS) e.g. Institute of Geology, Institute of Physics, Institute of Radiation Problems, Institute of Botany, Institute of Chemical Processes have long-term scientific relations with foreign countries (mainly European countries, Turkey and USA). In 2000-2007 annually 120-150 scientists from different ANAS Institutes participated in various international scientific and technical events, such as symposia, congresses, summer and winter schools, specialized courses and workshops abroad. About 2000 Azerbaijan scientists have been involved in joint projects with foreign colleagues from USA, United Kingdom, Iran, Italy, Germany, Turkey, Belgium, India, France, Norway, Yemen, Saudi Arabia etc.

The ANAS signed bilateral agreements with the Academies of Turkey, Austria, Romania and the Royal Society of UK, CNRS (France) and International Center for Theoretical Physics in Trieste (Italy).

Azerbaijan, like other Republics of the Former Soviet Union, benefits from several international research programmes and organisations: INTAS, US National Science Foundation's CRDF programme, STCU, NATO's Science for Peace, IAEA, etc. These programmes are assistance programmes focusing on research.

New prospects for a closer EU-Azerbaijan cooperation were opened after the inclusion of Azerbaijan in the European Neighbourhood Policy (ENP) Initiative and further development of the ENP Action Plan aiming at contributing to sustainable economic development of the country. In the ENP Action Plan there is an article on the development of Azerbaijan's capacity in technological R&D to support the economy and the society. In the article it is written that the EU will help to develop a research and innovation policy directly relevant to the sustainable and equitable economic development policy objectives of Azerbaijan, including an appropriate programme of reforms in the scientific system of Azerbaijan and in the relevant regulatory framework. Amongst different elements of reform, steps will be taken to create a transparent and unbiased mechanism of competitive funding and management of scientific and technological research through, inter alia, open calls for proposals and an independent and high professional peer review evaluation process. It also contains an article stating the need for a closer integration of Azerbaijan into the European Research Area through a more active promotion of the participation of Azerbaijani research organisations in the EU's Framework Programmes.

Azerbaijani scientific teams and researchers aim at an increased participation in European Framework Programmes, taking into account national interests and scientific and technical priorities of Azerbaijan. Most perspective areas, in this respect, are new sources of energy, resource-saving technologies, information and telecommunications technologies, ecology (including radio-ecology) and rational use of natural resources, food quality and safety.



Azerbaijan Government has involved such international institutes as UNDP, the World Bank, TASIS, Asian Development Bank, etc. in carrying out a number of projects.

Among the most advanced projects are introduction of automatic management systems into department of the Treasury, Tax Ministry, Ministry for Labor and Social Issues, Health Ministry, Ministry of Justice, Ministry of the Interior, State Frontier Service, National Bank, State Customs Committee, State Fund of Social Protection, Central Election Commission, International Bank.

Table 2: Overview of bilateral Azerbaijan-EC agreement²

| Title | Date | Organisation responsible |
|--|------|---|
| Memorandum of understanding | 2014 | Azerbaijan Republic, Spain |
| Agreement on cooperation in culture, education and science (2013) | 2013 | Azerbaijan Republic, Spain |
| Agreement on cooperation | 2013 | Baskov University of Spain, ANAS |
| Memorandum on cooperation in agriculture | 2013 | Ministry of agriculture and fisheries of Spain, Ministry of agriculture of Azerbaijan |
| Agreement on cooperation | 2013 | University of Nice, Institute of Philosophy, Sociology and Law (ANAS) |
| Agreement on cooperation in science | 2013 | Institute of Literature (ANAS), The Humboldt University of Berlin |
| Agreement on joint project design, and increase of science and PhD specialties | 2013 | Institute for Petroleum Chemical Processes of ANAS, Institute of Rostock (Germany) |
| Protocol of Intent on cooperation the increase of science and PhD specialties (2013) | 2013 | Institute for Petroleum Chemical Processes of ANAS, University of Munich |
| Memorandum of understanding | 2011 | Institute of Information technology (ANAS), German Agency for International Cooperation, or GIZ |
| Memorandum on scientific cooperation | 2011 | Institute for Petroleum Chemical Processes of ANAS, Germany Center for Nanotechnology |
| Agreement on cooperation in culture and science | 2011 | Azerbaijan and Slovenia |
| Agreement on cooperation | 2011 | Institute of Archaeology and Ethnography (ANAS) , Rennes 2 University (France) |
| Agreement on creation of international research group | 2010 | University of Nice, Institute of Philosophy, Sociology and Law (ANAS) |
| Memorandum of understanding | 2010 | Institute of Archaeology and Ethnography (ANAS), Rennes 2 University (France) |
| Agreement on creation of international research group | 2010 | University of Nice, Institute of Philosophy, Sociology and Law (ANAS) |

² Information was provided by International Relations Department of National Academy of Sciences of Azerbaijan



| | | | |
|--|-------------|---|---|
| Cross Border Cooperation CBC Moldova – Romania - Ukraine | 2007 - 2013 | Ministry of Regional Development and Tourism, Romania | Cross Border Cooperation |
| Cross Border Cooperation Black Sea Programme | 2007 - 2013 | Ministry of Regional Development and Public Administration Directorate - MA for European Territorial Cooperation Programs, Bucharest, Romania | Cross Border Cooperation |
| Cross Border Cooperation South East Europe | 2007 - 2013 | Ministry of Regional Development and Public Administration, Bucharest, Romania | Cross Border Cooperation partnerships and joint action on matters of strategic importance |

The Republic of Moldova unfolds a dynamic and fruitful international cooperation in the field of information technology and electronic communications. The country is member of various bodies, initiatives and projects in the related field at the level of relevant international organizations; it also develops regional and bilateral collaboration with other states.

Therefore, external cooperation relations in the related area are presented as follows:

Relevant international bodies – UN specialized institutions

- International Telecommunication Union (ITU);
- Universal Postal Union (UPU).

The Republic of Moldova joined to the UN General Assembly Resolution 56/183 (21 December 2001) which started the Moldovan commitment for development of an Informational Society by adherence to the two phases of its implementation under the World Summit on the Information Society (WSIS), the first phase took place in Geneva from 10th to 12th December, 2003 and the second phase took place in Tunis from 16th to 18th November, 2005.

International Telecommunication Union

The Republic of Moldova became member of the International Telecommunication Union (ITU) on October 20th, 1992. The ITU is the oldest international organization of this kind. It was established on May 17th, 1865, by signing in Paris, in 1865, the first International Telegraph Convention. The partnership with the private sector creates conditions for the financial balance, for representation of all interested parties and contribution in technical expertise, etc. Thus, starting February 1st, 2002 the JSC “Moldtelecom”, as a national telephone operator, become a member of ITU, Development sector (ITU-D).

Universal Postal Union

Republic of Moldova became a full-fledged member of the UPU on November 16th, 1992. Since 1997 the Republic of Moldova joined the UPU' basic documents, which were ratified by the Moldovan Parliament on September 30th, 2004(Laws nr. 318-XV; nr. 319-XV; nr. 320-XV; nr. 321-XV from September 30th, 2004). As a result of the joining the UPU the Republic of Moldova benefits from all its advantages: transit freedom, the possibility to realize postal exchange and money orders all around the world, integration into the international postal community. This results in the development and improvement of postal services, technical assistance in order to



promote new postal technologies, offering of grants for participation in seminars, conferences and for raising the level of staff's skill.

External cooperation at the regional level

A valuable contribution to the development of the information society in the Republic of Moldova is made within regional cooperation; Moldova is member of several regional groups and commissions:

- The Council of Europe by its specialized commissions for protection of personal data, human rights in the context of information society and electronic democracy;
- The Republic of Moldova is part to the Convention for the Protection of Individuals with regard to Automatic Processing of Personal Data and its participation in the activity of the Consultative Committee results in a permanent practical support.
- Electronic South-Eastern Europe (eSEE) Initiative, component of the Regional Cooperation Council;
- Electronic South-Eastern Europe (eSEE) Initiative had been launched in 2001, as part of the Stability Pact for South Eastern Europe. The Republic of Moldova was permanently mentioned as one of the countries that had fulfilled in a proper manner the stated objectives by the eSEE Agenda for 2003-2007.
- Regional Commonwealth in the field of Communications (RCC) and the Coordination council of CIS Member States for Informatization;
- The Republic of Moldova participates in the activity of the Regional Commonwealth in the field of Communications (RCC) and its specialized commissions, as well as in the activity of the Coordination Council for Informatization of the CIS member states attached to RCC.
- Organization for Democracy and Economic Development (ODED-GUAM) by means of its working group on information technology and communications;
- One of the main priorities of regional cooperation within the frames of ODED – GUAM represents the collaboration in the field of information technology.
- Organization for Black Sea Economic Cooperation, by means of its Working Group on information and communication technologies.