



**MINISTRY OF ECONOMY AND BUDGET PLANNING OF THE  
REPUBLIC OF KAZAKHSTAN**



**JSC «ECONOMIC RESEARCH INSTITUTE»**

# **STATE REGULATION OF THE SPHERE OF INFORMATION AND COMMUNICATIONS TECHNOLOGIES**

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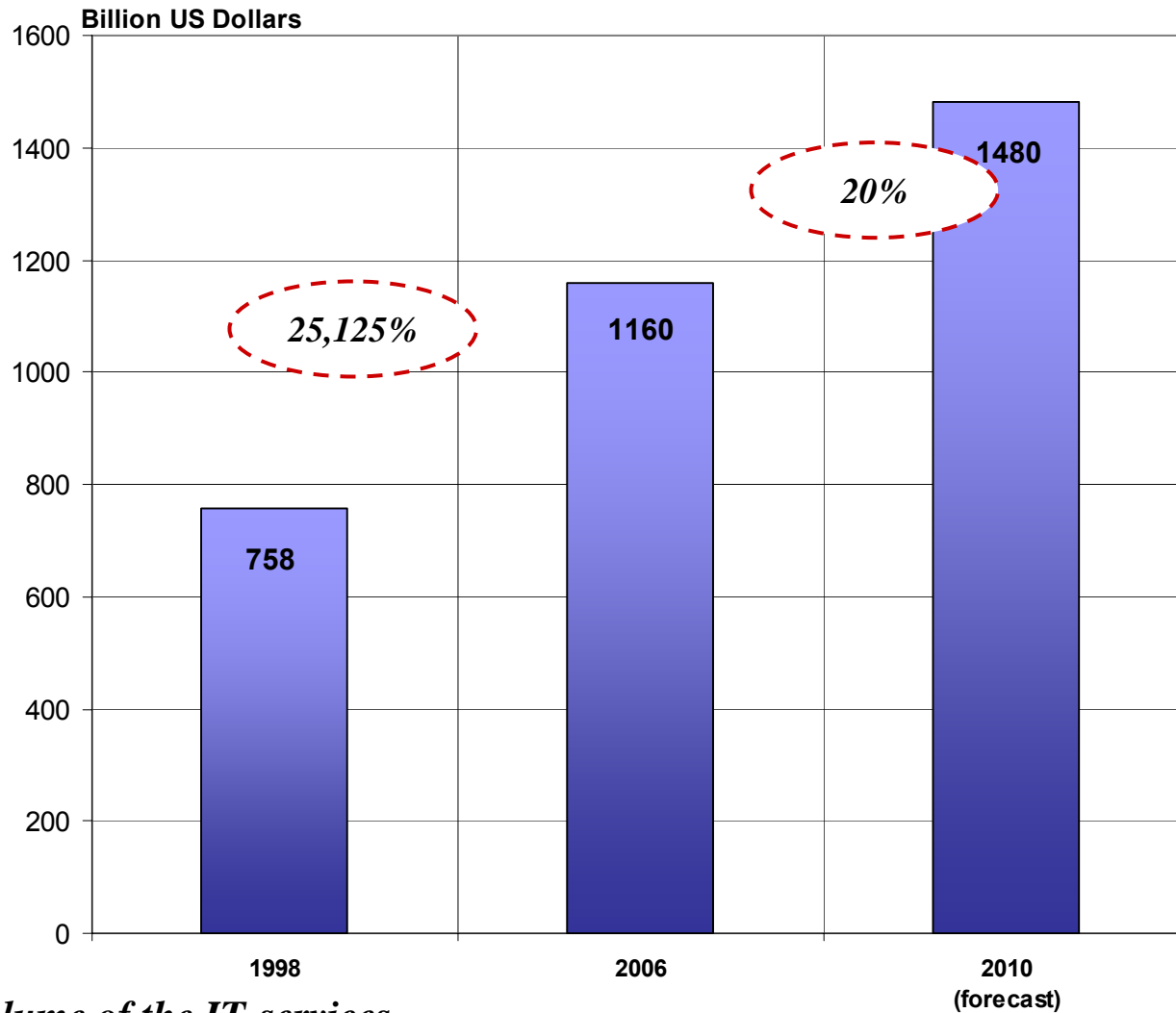
# The main goals of accelerated development of the ICT industry of the Republic of Kazakhstan

- 1) *Competitiveness Development of the Country on the basis of ICT - sphere improvement*
- 2) *IT-индустрия Showing up its niche in world division of labor in the IT-industry sphere*
- 3) *Creation of digital infrastructure in both public and private sectors satisfying the demand of the time and in compliance with the demand for creation of “digital” economy*
- 4) *Forming and development of cluster of national ICT- enterprises*
- 5) *Increase of the share of national software products, decrease of the level of domination of the IT sector of Kazakhstan by foreign companies*
- 6) *Growth of the IT market of the country*

## Principal directions of the work on ICT-sector of the Republic of Kazakhstan in the near future

- ✓ *Priority of ICT sector development*
- ✓ *Emerging role of authorized body in ICT sector development*
- ✓ *Acceleration of legal and normative legal bases' harmonization in ICT-sector*
- ✓ *Forming of ICT-specialists' corpse*
- ✓ *Maintenance of development of national ICT-enterprises and import-substitutionary segment of IT sector*
- ✓ *Software sector development*
- ✓ *Improvement of investment climate in ICT-sector*
- ✓ *Development of Information Technology Park*
- ✓ *Formation of basic infrastructure of IT sector*
- ✓ *Monitoring of ICT sector development*

# World IT-Market (according to the IDC data)



Volume of the IT-services

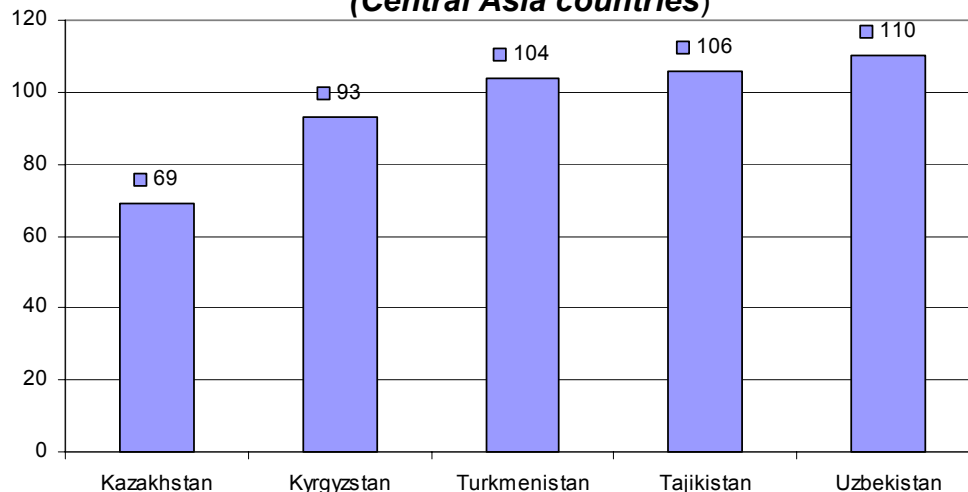
2006 - \$626 billion.

# International Ratings of ICT Level Evaluation

**International Union of Telecommunication (IUT) is the UN special subdivision and conducts researches in the field of ICT development in 154 countries.**

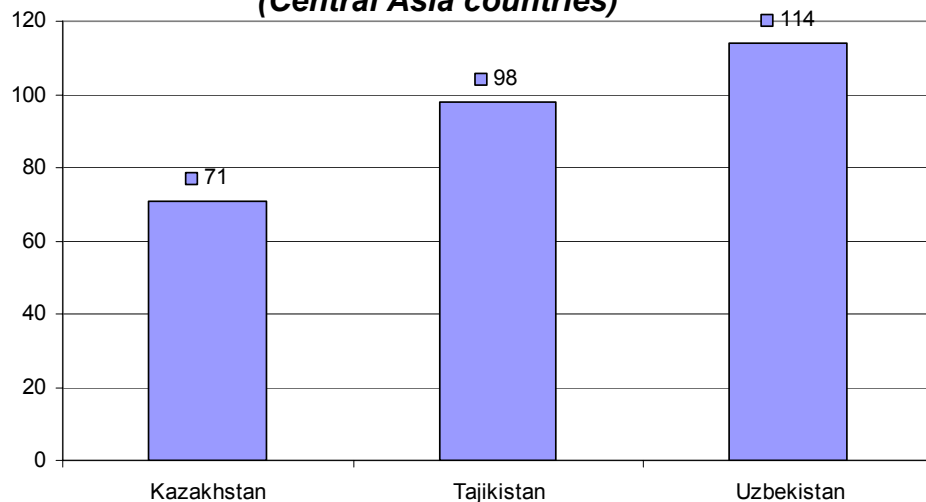
**Rating of the International Union of Telecommunications, 2007-2008.**

**(Central Asia countries)**



**Rating of the World Economic Forum on the informational technologies, 2007-2008.**

**(Central Asia countries)**



**The report of the WEF on information technologies represents the rating of 127 developed and developing of the world on the level of ICT development.**

# Rating of the Republic of Kazakhstan in the WEF Global Index of Competitiveness on factors “Infrastructure Development Level” and “Technologic Development Level”

Index	Current position (place)	Forecasting position (place)		
	2006-2007	2009	2010	2011
- Density of fixed communications connection	67	55-50	50-45	45-40
- Density of subscribers having access to the internet line	112	70-60	60-50	50-40
- Density of subscribers of mobile communications	83	50-45	45-40	40-30
- Density of subscribers having broadband access to the internet line	106	70-60	60-50	50-40

At the current time the Republic of Kazakhstan is the member of the following international organizations:

- International Union of Telecommunications
- Universal Postal Union
- Regional Cooperation in Communication area

# Experience of countries, which adopted development of ICT and IT industries

*Countries making economic breakthrough with the help of IT industries: India, China, Ireland, etc.*

*Common trends:*

*In the sphere of state regulations:*

- ✓ development of the IT industry was raised to the level of the government policy and priority;
- ✓ conditions were created and direct foreign investments were attracted;

*In the sphere of tax assessment:*

- concessional taxation of venture capital funds investing capital in IT industry;
- Tax incentives of the IT-industry export;
- liberalization of imports of IT industry;
- exemption from taxes on profits of technological companies for a certain period;
- Introduction of special tax inducements for companies developing computer software.

*In the sphere of financing:*

- concessional lending;
- special investment conditions for companies and private IT schools.

**Countries that have taken a strategic decision about prioritized development of the IT industry: Estonia, Russia, Armenia, Uzbekistan, a number of East European countries.**

# The list of programs of the Republic of Kazakhstan in ICT-sphere

- ✓ *Strategy of industrial and innovative development of the Republic of Kazakhstan for 2003-2015*
- ✓ *Program on formation and development of the national innovation system of the Republic of Kazakhstan for 2005-2015*
- ✓ *State program of “Electronic Government” development for 2008-2010*
- ✓ *Program of technologic development of the Republic of Kazakhstan by 2015 from November 26, 2007, №1131*
- ✓ *Program of Telecommunications area development of the Republic of Kazakhstan for 2006-2008 that is approved by the decree of the Republic of Kazakhstan Government from 7 July 2006 № 519;*
- ✓ *Program on reduction of information inequality in the Republic of Kazakhstan for 2007-2009 that is approved by the decree of the Republic of Kazakhstan Government from 13 October 2006 № 995;*
- ✓ *Decree of the Republic of Kazakhstan Government from 30 November 2007 № 1155-1 “About approval of the Development Program” of “electronic government” of the Republic of Kazakhstan for 2008-2010”.*
- ✓ *Decree of the Republic of Kazakhstan Government from 17 April 2008 № 358*
- ✓ *«About the Concept of formation and development of the common information space of Kazakhstan segment of Internet network (Kaznet) for 2008-2012»*



# ICT Microsegments of the Republic of Kazakhstan

MICROSEGMENTS OF THE ICT MARKET	VOLUME OF THE MARKET for 01.01.2008, US dollars	SHARE from total volume, in %
<i>Mobile telephony</i>	1 064	59,3
<i>Internet and data transfer</i>	161	9
<i>IP telephony</i>	34,5	2
<i>Cable TV</i>	82,5	4,6
<i>Web hosting services</i>	1	0,1
<i>Development of software package and web sites according to individual orders</i>	170	9,5
<i>Design and maintenance of ICT projects</i>	110	6
<i>System Integration</i>	170	9,5
<b><i>Total</i></b>	<b>1 793</b>	<b>100</b>

# IT-companies in Kazakhstan

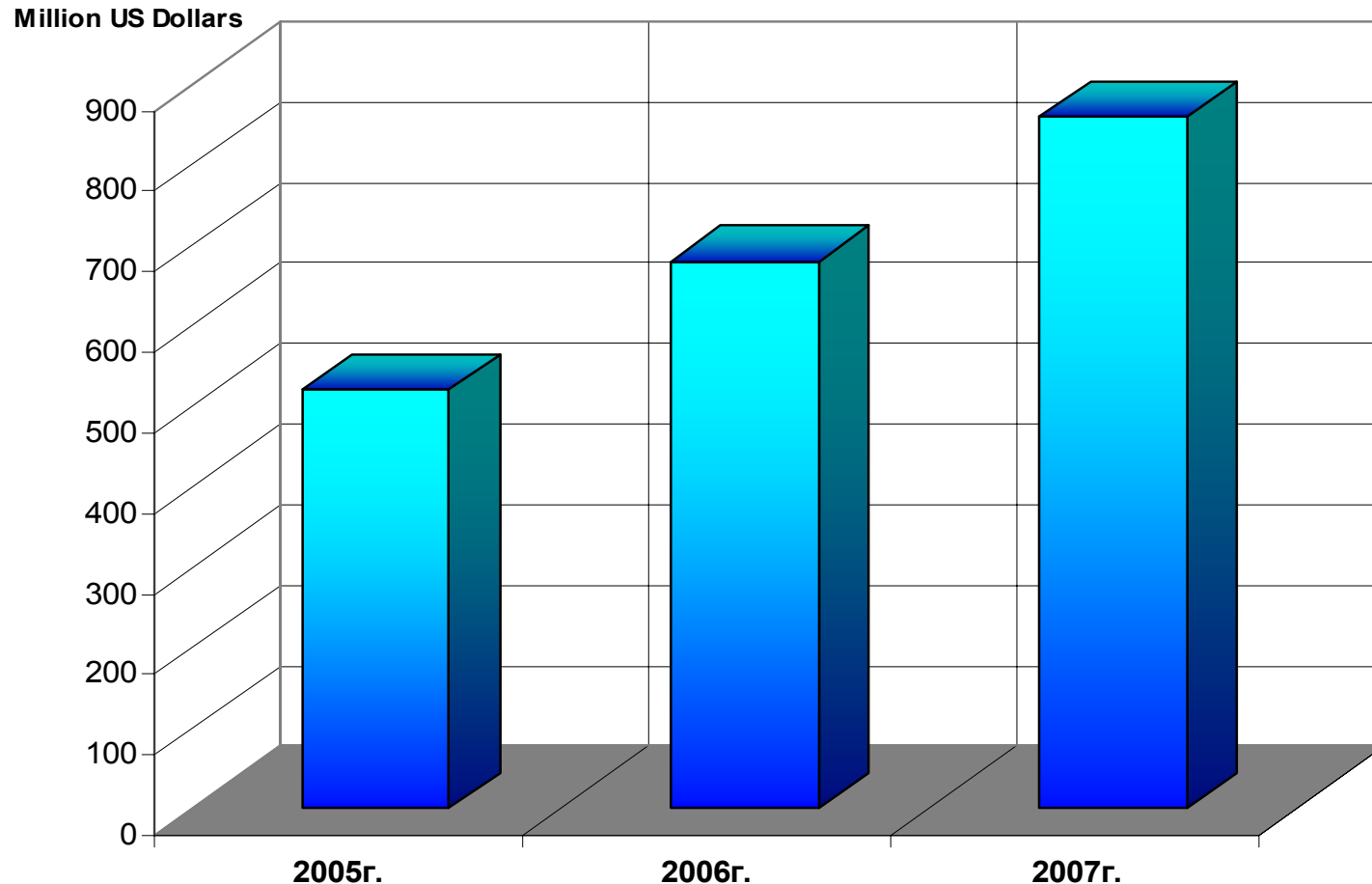
Type of activities	Number of companies	Share in total number
1. Software companies	706	85,6
2. Assembly of computers	25	3,03
3. Technical maintenance and repairs	1	0,12
4. Wholesale of PCs and peripheral equipment	93	11,3
<b>Total:</b>	<b>825</b>	<b>100</b>
<i>the number of companies the government participates in: :</i>		
<i>Republican state budget-supported enterprise</i>	13	1,5
<i>JSC (LLC)</i>	10	1,2
Private sector	802	97,3

Source: Excerpts of database of Kazakhstan enterprises of Agency of Statistics of Kazakhstan in 2007

## Number of companies of ICT sector

	2006	2007	Share, %
<i>Number of ICT sector, including:</i>	3342	3560	100
<i>Large</i>	57	70	2
<i>Medium</i>	122	133	3,7
<i>Small</i>	3163	3357	94.3

# Current state of the IT market of Kazakhstan (according to the IDC data)



## Structure of the Kazakhstan IT market

*Equipment – 75%*

*IT services – 15%*

*Box computer software – 10%*

## Challenges facing national ICT enterprises

- ✓ Acceleration of growth of need in IT products and services both in public and private sectors of economy
- ✓ Expansion of the IT market by foreign companies, primarily by Russian IT companies
- ✓ Creation of IT products in compliance with international standards
- ✓ Growth of demand for outsourced IT services
- ✓ Trend of using applications such as service in exchange for programs which become a property of the customers
- ✓ Trend of liberalization of ICT industry in light of preparation for joining WTO
- ✓ Trend for integration and clustering of the IT enterprises
- ✓ Trend for market capitalization of the ICT enterprises

# Main problems in ICT development

## Economical

- ✓ *imperfect planning of financing of expenses for informational technologies;*
- ✓ *absence of economic tools for accelerated development of the IT industry;*
- ✓ *unattractiveness for direct foreign investments;*

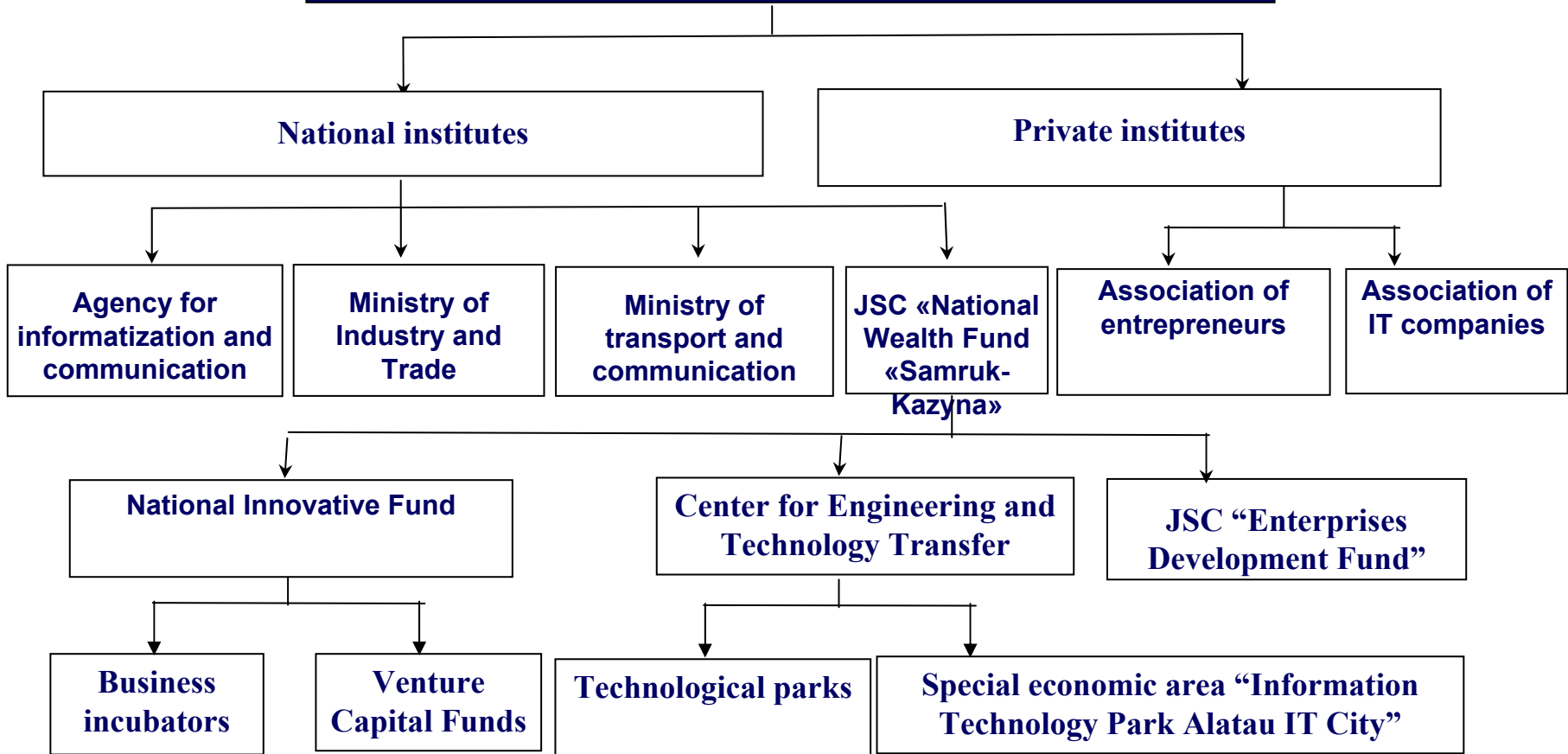
## Legal

- ✓ *insufficient and imperfect legal database;*
- ✓ *low level of performance in terms of standards in the IT industry.*

## Organizational

- ✓ *shortage of qualified personnel;*
- ✓ *absence of clear system of vertical management of the industry;*
- ✓ *presence of administrative barriers;*
- ✓ *underdevelopment of informational infrastructure;*
- ✓ *underdevelopment of consulting services for design of techno-economic justification, TR, technical specifications for subject fields;*
- ✓ *a low level of statistical information of the industry;*

# System of specialized institutes on maintenance of SMES, focused on ICT



# State Agency of the Republic of Kazakhstan of Informatization and Communication

**Mission** – *creation of the most optimal and favorable conditions for the development of infrastructure and also competitive market of communication and electronic services.*

**Vision** – *developed and accessible informational, telecommunicational and postal infrastructure integrated with a global informational society conducive to improvement of quality of public administration and competitiveness of the Republic of Kazakhstan.*

## Strategic goals for 2009-2011

- 1. Provision of state electronic services to the population and organizations.*
- 2. Supply of accessible and quality communication services to the population and the organizations.*
- 3. Transition of the population and organizations to the wide usage of information and communications technologies in everyday life.*



# JSC “National Innovative Fund”

**History:** Fund was established on basis of the Resolution of the Government “ On creation of joint-stock company “ National Innovative Fund” of May 30, 2003 with 100 per cent state participation in nominal capital



**Mission:** Promotion of innovative activity growth, developing of high-tech and science absorbing industry in the Republic of Kazakhstan.



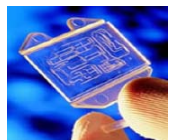
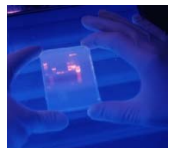
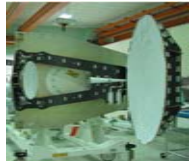
**Facts:**

- \$265 mln. – nominal capital of JSC NIF
- 11 Venture capital funds
- 5 Techno parks



## **Technological priorities:**

- Informative-computer technologies*
- Alternative energy sources*
- Biotechnologies and pharmaceuticals*
- Technologies for hydrocarbon service*
- Nutritive technologies*
- New materials and nanotechnology*



# Participation in consortium of European Union “Istok-Soyuz”

## *About the project:*

Creation of informative infrastructure to determine investment focus in ICT for the European Union to the CIS countries, creation of *open informative base* between the countries-participants in IT sector with subsequent information update on countries' potential and sector's perspectives.

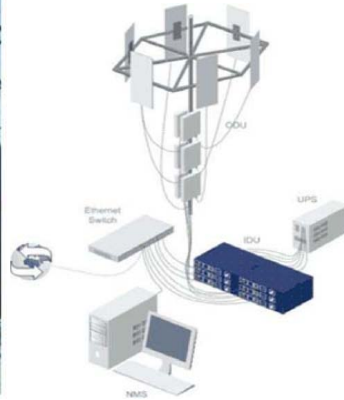
Experience of successfully implemented project in Russia in the years of 2006-2008 will be widened in Eastern Europe and Central Asia for identification and promotion of mutual R&D potential and opportunity of cooperation.

## *Objective:*

- Joint ICT projects of European Union and opportunities for mutual cooperation.
- To identify the potential for ICT researches between European Union and 12 countries of Eastern Europe and Central Asia (Russia, Ukraine, Moldova, Armenia, Kazakhstan, Azerbaijan, Kyrgyzstan, Georgia, Uzbekistan, Tajikistan, Turkmenistan).
- To extend EU-Russia ICT community to 4 specific countries (Ukraine, Belarus, Armenia and Kazakhstan) through opening platforms Istok and implementation of pilot actions, such as networking and brokerage activities, assistance in integration in European Platform and Network of Experts.
- To provide support research groups from the specific countries to increase the number of ICT FP7 (7th Framework Programme) partnership between researchers from Europe and specific countries.

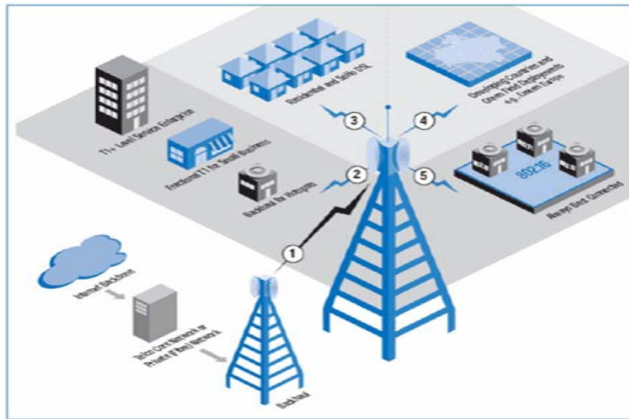


# «Creation of wireless triple-play network of data transmission»



**Objective** – Decompression of operator’s triple-play network of data transmission, composed of three, four sectoral basic station, on the basis of equipment that is the last creation of ALVARION company (Israel).

**Missions** – providing and development in modern triple-play telecommunication services, in Almaty city.



Geographic factor proves key, complexity of cable installation in the populous city raises the necessity of wireless technologies development based on Wi-Max technology:

- data transmission with different speed from 64 Kbit / s to 54 Mbit / s;
- access to the Internet;
- videoconferencing and videomonitoring and other.

- Terms of realization: 4 years (2007-2011)
- Partner: “Aspan-Telecom” Ltd.



# “Providing triple-play services based on fiber-optic network in Astana city”



**Objective** – rapid development of new telecommunications services in the Republic of Kazakhstan (broadband access to the Internet, cellular transmission and mobile content, closed-circuit television).

**Location** – Astana city.

**Missions** – provision and development modern high quality telecommunication services:

- live TV and radio broadcasting services;
- telephony services (IP telephony);
- services of broadband Internet access;
- subsidiary types of modern services (video on demand, interactive services, games, personal video recorder, etc.).



- Terms of realization: 4 years (years 2007-2011)
- Partner: “Business-Telecom” Ltd. (Kazakhstan)

# “Production of monitors and television sets, creation of R&D laboratory”



**Objective** – creation of enterprise, implemented modern scientific and business equipment, new technologies and highly experienced staff that provides entrance to the internal and allied markets with national brand;

**Innovativeness** – transmission and further individual development of “know-how” in integrated circuit and printed board design sector;

**Location** – SEZ “Alatau Information Technology Park”, Almaty city.

- Partners: JSC «Glotur Invest», DS Multimedia Pte. Ltd. (Singapore):
- Terms of realization: 5 years (years 2004-2009)

# Center for Engineering and Technology Transfer

## **Mission:**

- Competitiveness improvement of real sectors of Kazakhstani economy by providing transfer of new technologies and rendering engineer service;***
- Activation of innovation activity in country by assisting in development of national innovation system and creation of techno parks networks and other units of innovation infrastructure.***

## **Ways of carrying out missions:**

- ✓ formation of national and regional techno parks system as a center of innovation development;*
- ✓ formation of engineering companies – affiliate network in the regions and mutual enterprises with foreign companies;*
- ✓ providing information access for all parties of innovation activity to modern technology data base (Conception of virtual techno park);*
- ✓ technology transfer and its engineering support;*
- ✓ managers training in the field of innovation activity.*

# Special Economic Zone “Alatau IT City”

**Alatau IT City** is a Special Economic Zone with preferential tax and tariff regimes for all information and telecommunication companies working in the territory of the park

Special Economic Zone “Information Technology Park”

Location of Alatau IT City 25 km. from Almaty city, Alatau village, 7 km. from the airport

The total built-up area is 343 ha.



## **Types of activity of Alatau IT City:**

Formation of modern infrastructure of Alatau IT City, which includes the development of business plans, project estimates, construction and installation works, upgrading the parks' territory

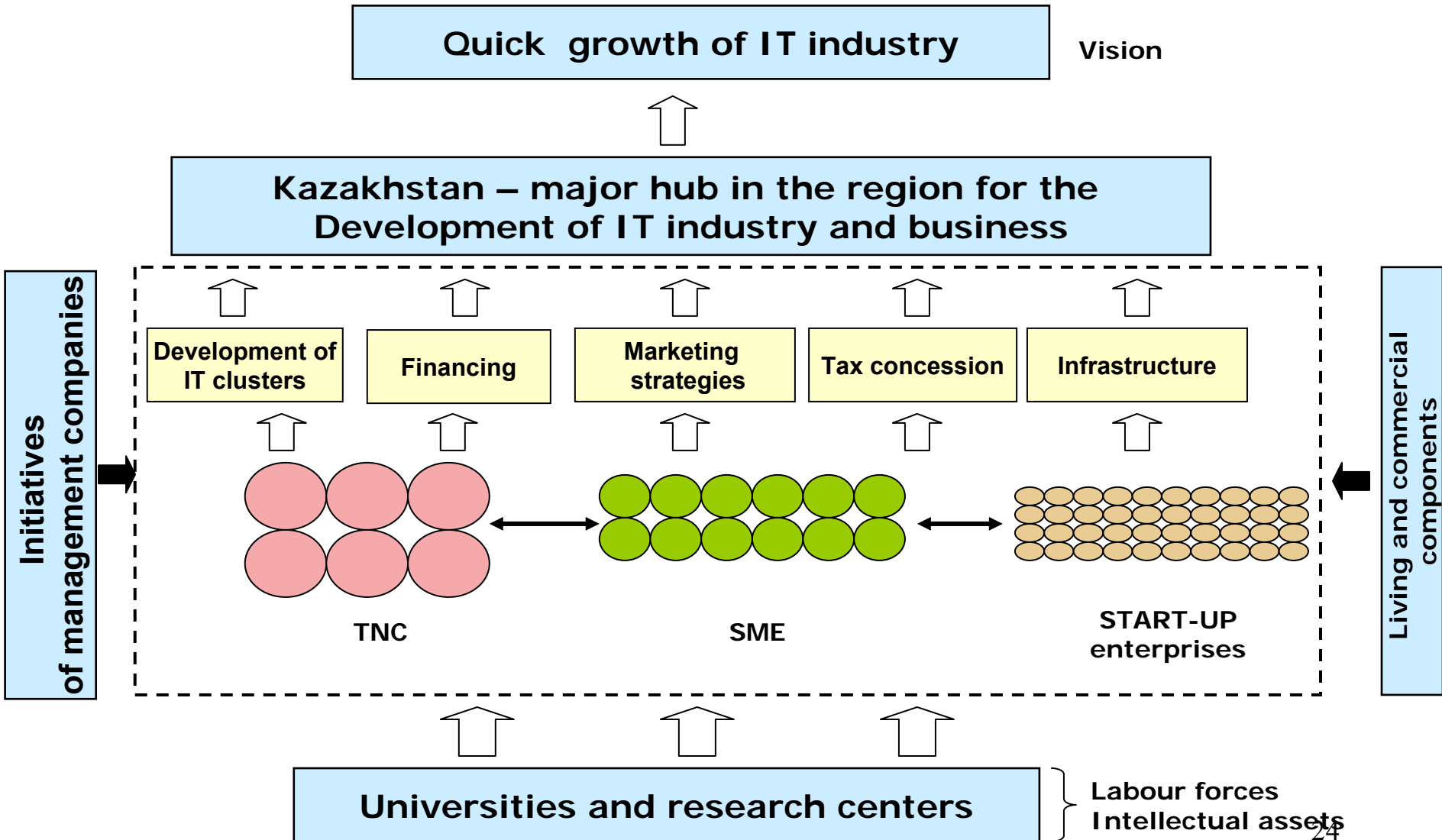
Conducting of scientific-research and experience-design works on creation and introduction of projects in Information Technology field

Projection, development, introduction, production of software and data base, hardware of information and communication technologies

Marketing researches in Information Technologies field

Training and retraining of high experienced specialists having certificates in Information Technology field on international standards

# Alatau IT City development conception



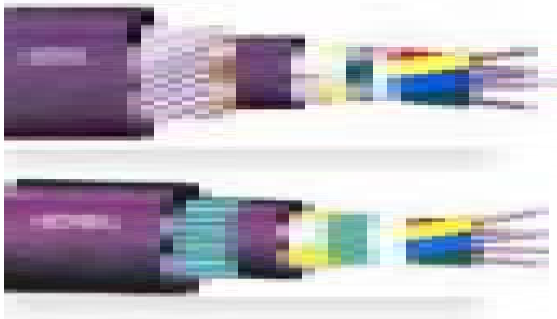


# On the premises of “Alatau IT City” SEZ ITP

**there are the following objects:**

- ❑ *two training centers of foreign companies* that are not members of SEZ ITP are functioning
  - *Microsoft - Microsoft Innovation Centre* companies that carries out training of Microsoft program product and prepossessing the unique service equipment for testing of recreated program products for Kazakhstan.
  - *and Siemens* company – on training in relay protection sector and other ES&I directions;
  
- ❑ buildings' complex, belongs to *Physics and Technology Institute that is a member of SEZ ITP*;
  
- ❑ *JSC “Nursat”* is completing the construction of its own antenna field for provision of complex of services, especially, satellite Internet services;
  
- ❑ Construction of factory on fabrication of liquid-crystalline monitors and television sets of Kazakhstany-Singapore JE *Glotur DS Multimedia* with standard volume of production of 900 thousand pieces per year is continued;
  
- ❑ *Logicom Ltd.* is completing the clearing in land lease for construction of factory on computers' assembling.

# “Organization of fiber-optic cable production on the premises of “Alatau IT City ” SEZ ITP



**Objective** – Creation of product release production with high added value, import substitution, setup for local production:

- Production of fiber-optic cable;
- Creation of laboratory on certification.

During the project implementation, construction of the factory on fiber-optic cable production with the capacity of 4 800 km. per year, and with the use of technology provided by Hesfibel company (Turkey) is planned.

## **Results of project implementation:**

- fiber-optic cable's (FOC) import substitution to the domestic production;
- satisfaction of increasing demand for FOC.

- **Project costs: 1.2 bln. KZT**
- **NIF's participation: 329 mln. KZT**
- **“Arakar” – 360 mln. KZT**
- **Equipment leasing – 550 mln. KZT**

# JSC “Damu” Entrepreneurship Development Fund”

**Mission of “Damu” Fund** – promotion of SMB’s qualitative development, and also Kazakhstani micro financial organizations as an integrator and operator that provides financial and consulting services.

**Since 2007 Fund** has been expanding its activity and working with subjects of small business as well as medium.

Also the Fund transforms from financial institute to the operator on management of means’ assets appropriated by the state: new directions of activity on financial support of SME’s subjects and information-analytic and consulting support of SME’s subjects are developed and realize.

Financing of SME’s subjects is implemented through micro credit organizations and by direct financing.



# International IT University

First IT University in Kazakhstan - **International University of Information Technologies** was opened on **June 10, 2009** in **Almaty city**

International IT University created in April, 2009 on the instructions of the President of the Republic of Kazakhstan with the aim of forming of industrial-innovative IT industry of Kazakhstan.

IT University's founders are the JSC "Zerde" National Infocommunication Holding" and University of International Business.

First Kazakhstan's IT University designed to be the leading educational institution in panasian (Central Asian) region, it will be in the lead in training of qualified, internationally recognized specialists for IT industry in the region.

Term of apprenticeship in the university is 4 years. State-recognized degrees and Carnegie Mellon certificates will be given to the alumnus. All in all about 7500 students will study in IT University. 300 state educational grants have been given to this University this year.

# **State policy directions on development support of national ICT enterprises and software sector**

**Direct support of import substitution segments of ICT sector**

**Sales promotion to enterprises of ICT sector**

**Subsidy and grants promotion for the development of perspective segments of ICT sector of the Republic of Kazakhstan**

**Improvement of investment climate, development and widening of investment mechanisms in ICT enterprises of the Republic of Kazakhstan**

**Elimination of administrative barriers during export-import operations**

# Preference for enterprises working on the territory SEZ ITP «Alatau IT City»

## **Tax incentives**

- **lowering of corporate income tax up to 0%**
- **exemption from land and property taxes**
- **exemption from VAT on all the goods and services consistent with the direction of park operations**

## **Customs privileges:**

- **exemption from customs duties on imported goods, including construction materials, necessary to achieve SEZ objectives**

# Measures to support development of enterprises of IT industry

## Financing of development institutions

- JSC «National Innovative Fund»
- Venture Capital Funds

## On development of infrastructure of software industry

- promotion of creation of consulting firms which organize issuance of techno-economic justification and technical specifications and project evaluation;
- creation of the national system of certification of IT companies based on the principles of SMM certification

# Support system of SME in ICT sector

**For creation of competitive production available for most of the ICT citizens and services in Kazakhstan, it is necessary to develop the support system of SME in ICT sector and involve the representatives of business and financial-banking sector in informatization process**

## *Necessary for this are:*

- 1) to create conducive conditions for the development of “Information Technologies Park” Free Economic Zone as a center of innovative entrepreneurship, enticement of investors in development of informatization and support of national production of low-cost computer technology and software sector;*
- 2) Development of system of measures on innovative activity stimulation of enterprises and private business in ICT sector that includes, for example, development of financial mechanisms of innovative investment;*
- 3) Furtherance the manufacturing and realization of computer technology available for most of the population.*



## Main areas of activity of non-governmental organization on development of ICT sector of the Republic of Kazakhstan

- ✓ *Monitoring of NLA in ICT and work on their implementation with the state bodies*
- ✓ *Cooperation with organizations of education on ICT staff training*
- ✓ *Monitoring of development of ICT sector of the Republic of Kazakhstan*
- ✓ *Creation of free of charge public data base on legislation and standards in ICT sector*
- ✓ *Creation and maintenance of data base of ICT enterprises of the Republic of Kazakhstan*
- ✓ *Creation of Expert Council on public evaluation of ICT projects*
- ✓ *Organization of interchange of experience in Information Technologies sphere*
- ✓ *Legal backing and creation of public institute of ICT companies protection against illegal acts of officials*

# Association of IT companies of Kazakhstan

**Main objective –**  
economic competitive growth  
through national IT sector development

## **Main directions**

- 1. Development of legal and normative legal acts**
- 2. Development of software industry and rendering of IT services**
- 3. Development of IT market**
- 4. Development of Information Technology Park**
- 5. Forming of workforce capacity of IT sector**
- 6. Forming of basic infrastructure of national segment - Internet**
- 7. Forming of basic infrastructure of rendering of electronic services of B2C and B2B types**
- 8. Development of IT sector's statistic**

**Expecting eventual results – Increase in proportion of IT product (services) in GDP,  
Including increase of specific weight of own make of IT product (services)**



# Suggestions on support IT sector development

- *Abolishment of customs tax on import of component parts of computing and communication techniques*
- *Simplification of customs procedure and certification rules*
- *Implementation of specific tax regulation for IT enterprises (production and supply)*
- *Facilitating of reward for reinvestment of new elaborations*
- *Reducing of terms for amortization IT equipments and PE*
- *Encouragement of purchasing PC by physical person (deduction from tax base)*
- *Setting limitation on creation and benefits of state organization and joint-stock companies with 100% state participation on IT market*
- *Establishment of Special economic zone "ITP" by participants with 0 index to corresponding rate by calculating social tax and immunity from VAT turnover on goods realization (work, service) despite market outlet*
- *The issue on reducing terms of computer equipments (amortization) usage and software up to 2 years should be considered for stimulation of demands of IT by companies from all sectors of economy*

**Thank you  
for your attention !**

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