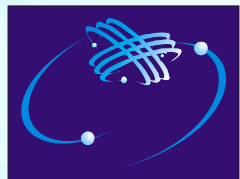


*PROGRESS IN INNOVATIVE  
ACTIVITY IN KAZAKHSTAN:  
PROBLEMS AND SOLUTIONS*



Ұ Л Т Т Ы Қ  
ИННОВАЦИЯЛЫҚ  
Қ О Р Ы

JSC «National Innovation Fund»  
Tokyo, Japan

# *CONTENTS*



- About Kazakhstan
- National Innovation System
- Problems and difficulties
- Solutions

# ABOUT KAZAKHSTAN



**Location:** Central Asia, northwest of China; a small portion west of the Ural River in eastern-most Europe

**Geographic coordinates:** 48 00 N, 68 00 E

**Map references:** Asia

**Area total:** 2,717,300 sq km; land 2,669,800 sq km; water 47,500 sq km

**Area:** comparative slightly less than four times the size of Texas

**Land boundaries:** total 12,012 km, border countries: China 1,533 km, Kyrgyzstan 1,051 km, Russia 6,846 km, Turkmenistan 379 km, Uzbekistan 2,203 km

**Coastline:** 0 km (landlocked); Caspian Sea (1,894 km)

**Climate:** continental, cold winters and hot summers, arid and semiarid

**Natural resources:** major deposits of petroleum, natural gas, coal, iron ore, manganese, chrome ore, nickel, cobalt, copper, molybdenum, lead, zinc, bauxite, gold, uranium

**Land use:** arable land 8.28%, permanent crops 0.05% other 91.67% (2005)

# ABOUT KAZAKHSTAN

## Economic trends

- Strong macroeconomic performance and favorable investment conditions
- Average annual GDP growth rate in 2007-08 at around 10%
- Kazakhstan is the first former Soviet republic to repay all of its debt to the International Monetary Fund (IMF) in 2000, seven years ahead of schedule
- The economy is based on oil export which generate 40% of the country's total revenues
- Huge foreign investments, second after Russia among the CIS (the Commonwealth of Independent States)

## Main branches of industry

- Kazakhstan is rich in natural resources: oil & gas, coal, copper, zinc, uranium and silver. Oil production accounts for 30% of GDP.
- Building & construction sector growth 30-40% a year.
- Manufacturing sector is not well developed given the fact that almost all capital and consumer goods are imported into the country.
- The agriculture sector contributes nearly 7% of GDP and employs around 20% of the active population. Kazakhstan is the sixth-largest producer of grains (includes wheat, rice and barley) in the world.
- Services sector is growing and contributes nearly 55% to the GDP.

## International trade

- Kazakhstan is open to international trade.
- Oil exports account for 50% of the total exports.
- Foreign trade is almost equal to GDP.
- Kazakhstan's top three export partner's are: Switzerland, Italy and Russia. The commodities mainly exported are mineral fuels & oils, iron & steel, copper, and inorganic chemicals.
- The top three import partners are: Russia, Germany and China. Kazakhstan mainly imports machinery, mineral fuels & oils, vehicles, articles of iron & steel, and electric & electronic equipment.

# ABOUT KAZAKHSTAN

## *Strategic Location*

### Length of China–Europe route

Origin	Routes	Distance*
Lianyungang (China)	via Kazakhstan-Russian Federation	9,200 km
Shenzhen (China)	via Kazakhstan-Russian Federation	10,300 km

\*Distances calculated with Frankfurt (Germany) as final destination.



### Advantages

- Gateway from Central Asia and Europe to China and South East Asia
- International airports
- Stable political situation
- Aggressive government initiatives such as:
  - E - government
  - Almaty as a Financial Centre
  - Space development programs
  - Alatau IT city
- Kazakhstan is the most developed economy in Central Asia with GDP per capita of \$4400
- FDI investments: 28.7 billion USD, (2000-Sept 2005)
- Positive investment climate
- Russia, Turkey, EU, Caspian region countries - connected routes

# The Opportunity: *Large Untapped Market*



- Combined population (incl. Russia, Caucasus) = 283 Million and GDP of 1.1 trillion (USD)
- Customs Union with Russia and Belarus to be signed in 2010
- Large demand for IT and telecom equipment in all Central Asian countries due to low penetration rates
- Average compound annual growth rate (CAGR) for PCs and servers and other peripheral in Kazakhstan and neighboring countries is more than 20% a year
- Impending deregulation of the telecom market in KZ and other CIS will spur further growth
- IT market for Central Asia/Eastern Europe = \$22.4 billion
- Growth of IT Services Market forecast for Eastern Europe: 7.83% (CAGR 2003-2008)

# NATIONAL INNOVATION SYSTEM (NIS)

**May 17, 2003**

**Approved a Strategy of Industrial and Innovation Development of Kazakhstan till 2015**

***«...Creation of institutional support of industrial and innovation development as well as stimulating of economy diversification ...»***

**May 30, 2003**

**Established JSC «National Innovation Fund»**

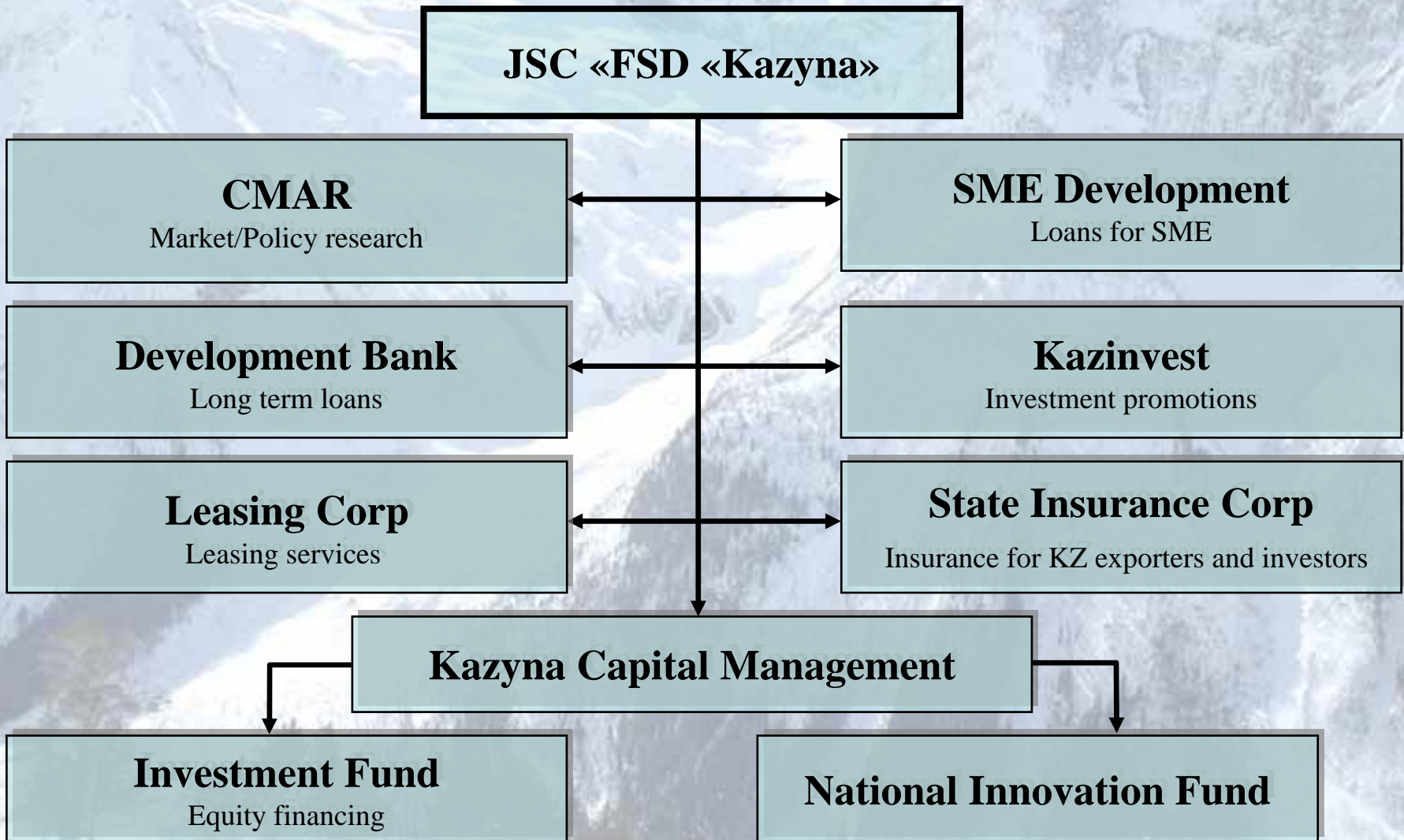
***«...Established National Innovation Fund aims to intensify innovation activities in Kazakhstan...»***

**April 25, 2005**

**Approved a Program for Creation and Development of National Innovation System**

***«...aims to create open innovation development system...»***

# NATIONAL INNOVATION SYSTEM (NIS)





# NIS

## Directions, Principles and limits of Investments

Limit: up to 5 M USD

Innovative projects



Shared passive control participation

Limit: up to 30 M USD

Venture funds



Shared passive control participation

Limit: up to 0,5 M USD

Innovation infrastructure



Shared passive control participation

Limit: up to 0,25 M USD

R&D



Project financing 100%

# NIS

## Investment Strategy of JSC «National Innovation Fund»

### FINANCING INSTRUMENTS

- *100% financing of R&D*
- *Investments in innovative projects up to 49%*

### FOCUS

- *Focus on start-up and early stages private companies*
- *Focus on innovative technology transfer*

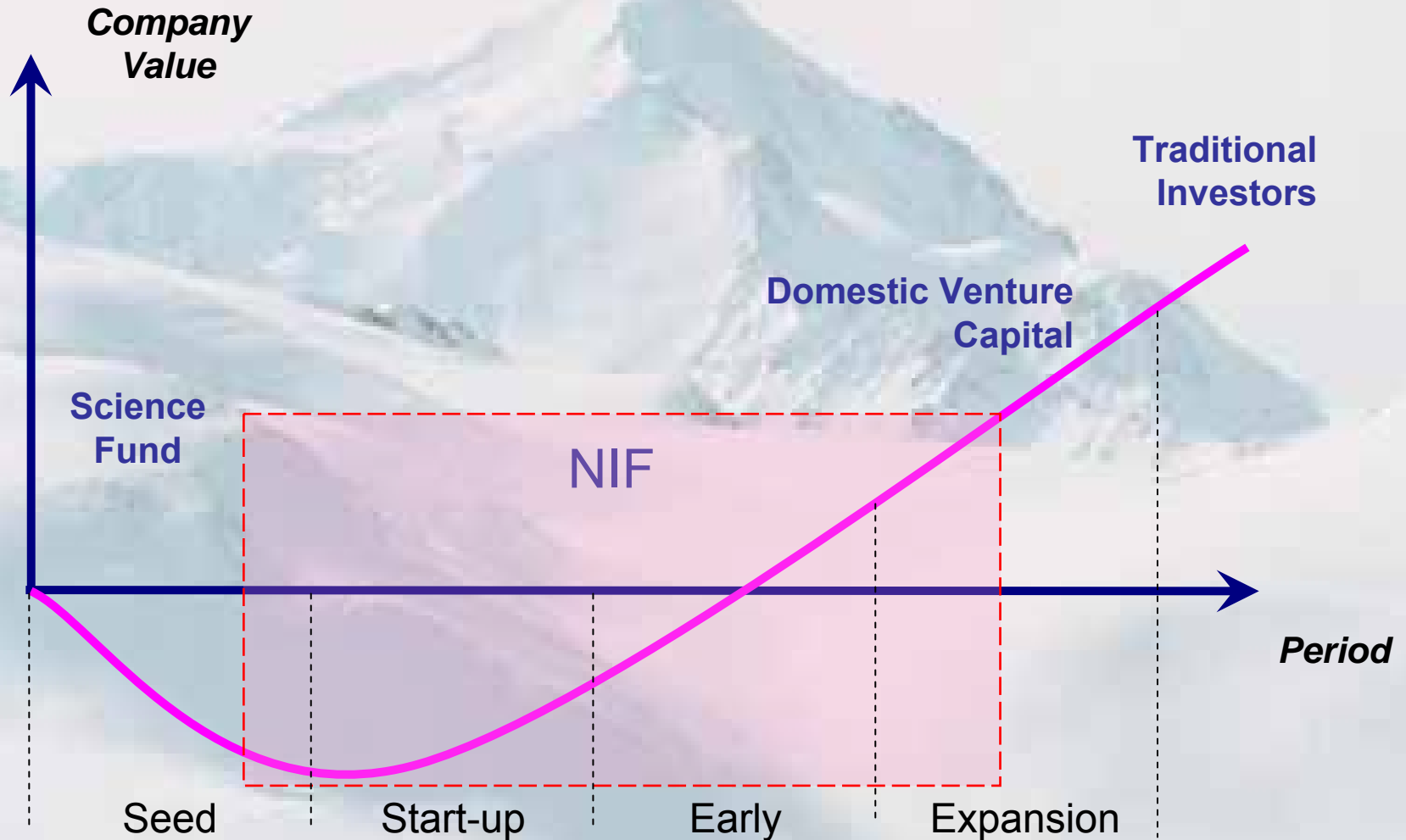
### GEOGRAPHY

- *Projects in Kazakhstan and abroad*

### MAJOR SECTORS

- *ICT and Electronics*
- *BIO-PHARMA*
- *Oil & Gas Services*
- *Machinery construction*
- *New materials*

# NIS COORDINATION



# PROBLEMS AND DIFFICULTIES

## Scientific potential

- Gaps between science, education and business
- Lag between development of domestic science and world's achievements
- Low level of development healthcare and education
- Outdated technical basis in research institutes and labs

## Innovation infrastructure

- Imperfection of legislation base
- Lack of procedures on protection intellectual property
- Low usage of innovation infrastructure

## Financing infrastructure

- Unpopularity of venture financing
- Alternative instruments of investments with similar level of incomes
- Lack of methods and criterions for estimation innovation ideas, know-how, and intellectual properties

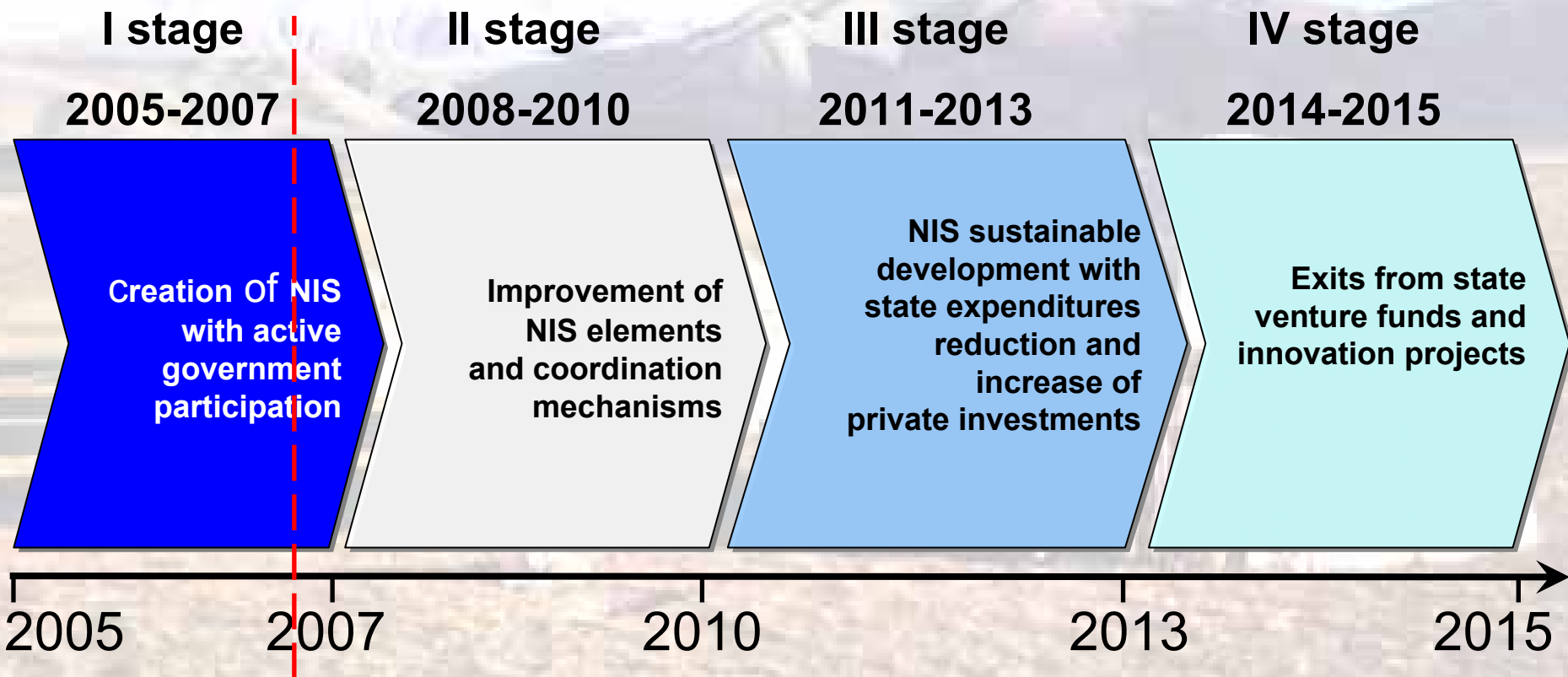
~~INNOVATION~~

- Low level of usage innovation technologies in business
- Lack of experience on implementing innovation technologies
- Raw oriented industries
- Import exceeds export
- Deficit qualified professionals

## Innovation business

# OUR SOLUTIONS

## Realization of NIS Program : 2005-2015



# OUR SOLUTIONS

*Manufacture needs organization/modernization*

Oil & Gas machinery construction



Heavy engineering



Transport machinery construction



ICT equipment



# OUR SOLUTIONS

## Technologies Transfer System

### National Innovation Fund

- Science Fund
- Committee of science

Own Innovations

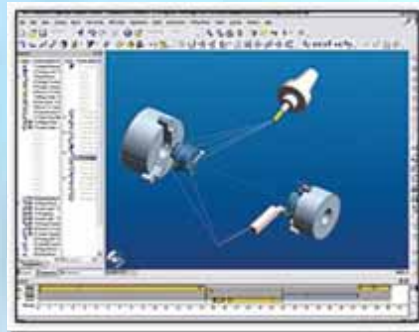
Industrial zones

### ETTC-Industrial Parks



**UTBI**

High Tech Innovations



Mass Production

**Foreign Companies**  
Technologies, equipments,  
products



Output

# OUR SOLUTIONS

## Results

Technologies  
Transfer  
System

NIF

Break-through  
projects

Import  
of technologies

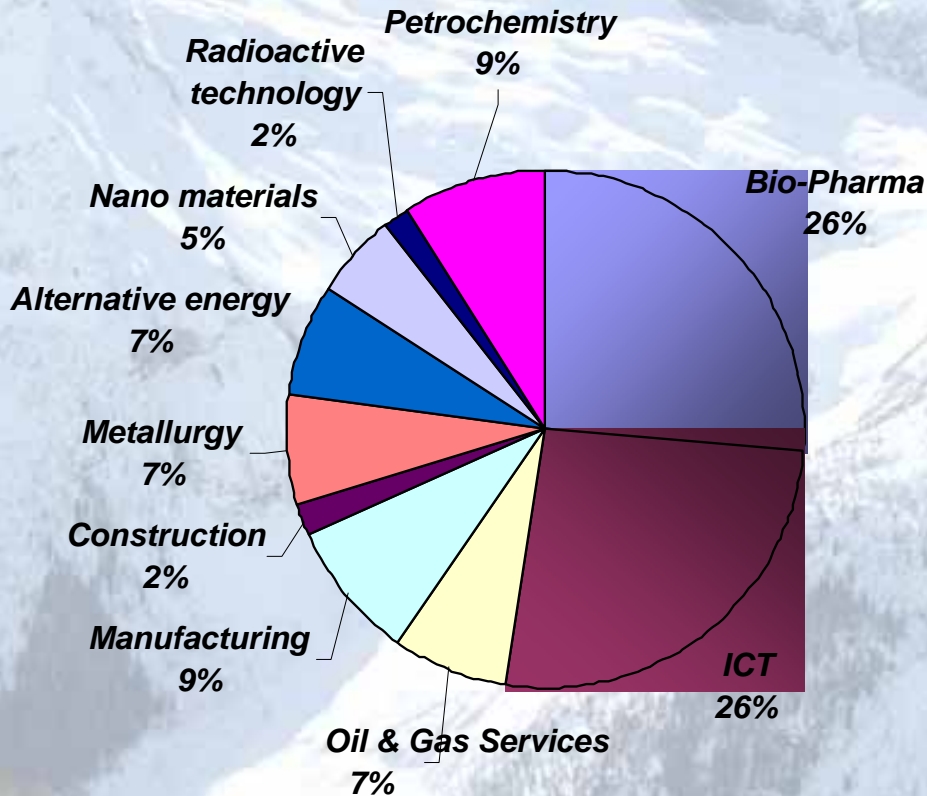
Local Projects





# OUR SOLUTIONS

## Equity Financing



### INNOVATIVE PROJECTS

15

Number of projects approved

280

Total investment, M USD

### R&D

40

7

# OUR SOLUTIONS

## Innovation Infrastructure



LLP «Technopark Algorithm»  
Charter Cap.=539,4 M KZT  
ETTC's share=400 M KZT



LLP «Technopark «UniScienTech»  
Charter Cap.=967 M KZT  
ETTC's share=400 M KZT



JSC «Technopark  
«KazNTU»











LLP «Almaty regional technology park»

Charter Cap.=116,5 M KZT  
ETTC' share=65,8 M KZT

Charter Cap.=588,2 M KZT, ETTC' share=300 M KZT


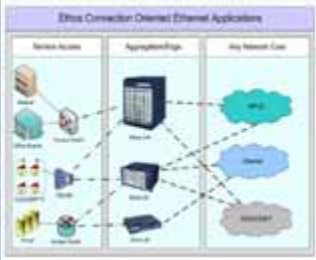

# OUR SOLUTIONS

## Investments in Venture Funds

Kazakhstan's venture funds (5)				
Name		Partner	Charter Cap.	Share of NIF
VF Areket		JSC «Turan Alem Securities»	\$30 M	\$10 M
VF Advant		JSC «Lancaster Group Kazakhstan»	\$20 M	\$9.8 M
VF Centras		JSC «Centras Capital Group»	\$20 M	\$9.8 M
VF Almaty Venture Capital		JSC «Almaty Busines Group»	\$20 M	\$9.8 M
VF Glotur Technology Fund		JSC «Glotur»	\$20 M	\$9.8 M
<b>Overall capitalization:</b>			<b>\$110 M</b>	<b>\$49.2 M</b>
Foreign venture funds with NIF participation (5)				
Name		Partner	Charter Cap.	Share of NIF
CASEF		SEAF, IFC, SECO, USAID (Central Asia)	\$12.8 M	\$2 M
Wellington partners III		Wellington Partners (Germany)	\$180 M	\$10 M
Flagship ventures fund 2004		Flagship ventures (USA)	\$150 M	\$10 M
Mayban-JAIC ASEAN Fund		Mayban, JAIC (Malaysia, Japan)	\$50 M	\$5 M
Vertex III Fund		Vertex venture capital (Israel)	\$150 M	\$5 M
<b>Overall capitalization:</b>			<b>\$542.8 M</b>	<b>\$32 M</b>

# OUR SOLUTIONS

## Companies Acquisition

			Project's cost	Share of NIF
	<b>Safe ID (Germany)</b>	<b>Innovative solutions in safe identification and personalization area</b>	<b>24 M €</b>	<b>4,8 M €</b>
	<b>Ethos Networks Ltd (Israel)</b>	<b>High-quality network equipment and software for corporate major computer networks</b>	<b>18 M USD</b>	<b>2 M USD</b>
	<b>Extricom (Israel)</b>	<b>Organization of Wireless LAN for data, voice (VoWLAN) and video</b>	<b>40 M USD</b>	<b>2 M USD</b>

*THANK YOU FOR YOUR  
ATTENTION!*



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