



TRACECA INVESTMENT FORUM 2012

Brussels, 28th February 2012

RAIL TRADE AND TRANSPORT FACILITATION PROJECT

REPUBLIC OF AZERBAIJAN





CLOSED JOINT STOCK COMPANY “AZERBAIJAN RAILWAYS”



REHABILITATION OF THE BAKU-
BEYUK-KESIK AZERBAIJAN
SEGMENT RAILWAY NETWORK



GEOGRAPHICAL DESCRIPTION

Azerbaijan has an important geographical-strategic position, which is of both economic and political significance. Therefore, Azerbaijan, acting jointly with many states, the European Union and other international organizations, has taken an active part in the development and establishment of the TRACECA Programme, which aims to the restore the "Historic Silk Road". The Republic of Azerbaijan was one of the eight post-Soviet Republics (Azerbaijan, Georgia, Armenia, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan), involved in the initiation and foundation of the TRACECA Programme, which took place at the European Commission in a conference held in Brussels in May 1993.

Center of TRACECA & NORTH – SOUTH Corridors





ISTANBUL

AKHALKALAKI

KARS

MARABDA
BOYUK KESIK

ALYAT
SEA
PORT

CASPIAN
SEA

Black Sea

Caspian Sea



CASPIAN
SEA

ALYAT
SEA
PORT

GEORGIA

TBILISI

Red bridge
AZERBAIJAN

BAKU

AKHALKALAKI MARABDA BOYUK KESIK

KARS

ARMENIA

TABRIZ

Nakhichevan

Tatvan

Van

Oktembryan

Erzurum

Rize

Hopa

Sarpi

BATUMI

POTI

Zugdidi

Sukhumi

Gudauta

Sochi

Pyatigorsk

Georgievsk

Gudermes

RAZ-SULAK

MAKHACHKALA

GROZNY

Karlan-Yurt

Yalama

Belokany

Rustavi

Zestaponi

Kutaisi

Samtredia

Ozurgeti

Sumgait

Yevlach

Gandja

Vanadzor

Akstafa

Gegeti

Ali-bayramly

Saatly

Khar-kendi

Razdan

Vanadzor

Lenkoran

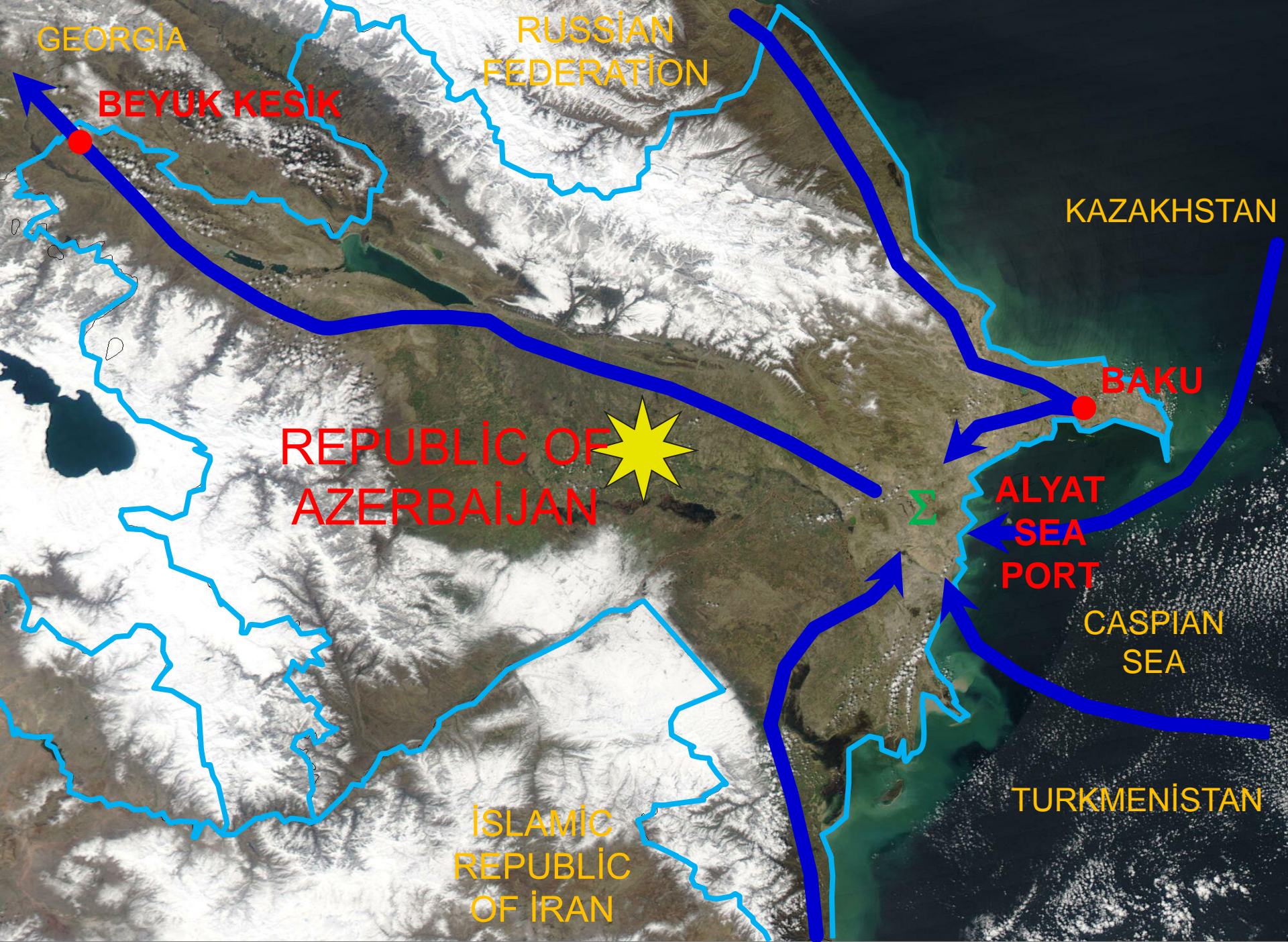
Astara

Bandar Anzali

Recht

Gazvin

Malatya



GEORGIA

RUSSIAN
FEDERATION

BEYUK KESİK

KAZAKHSTAN

REPUBLIC OF
AZERBAIJAN

BAKU

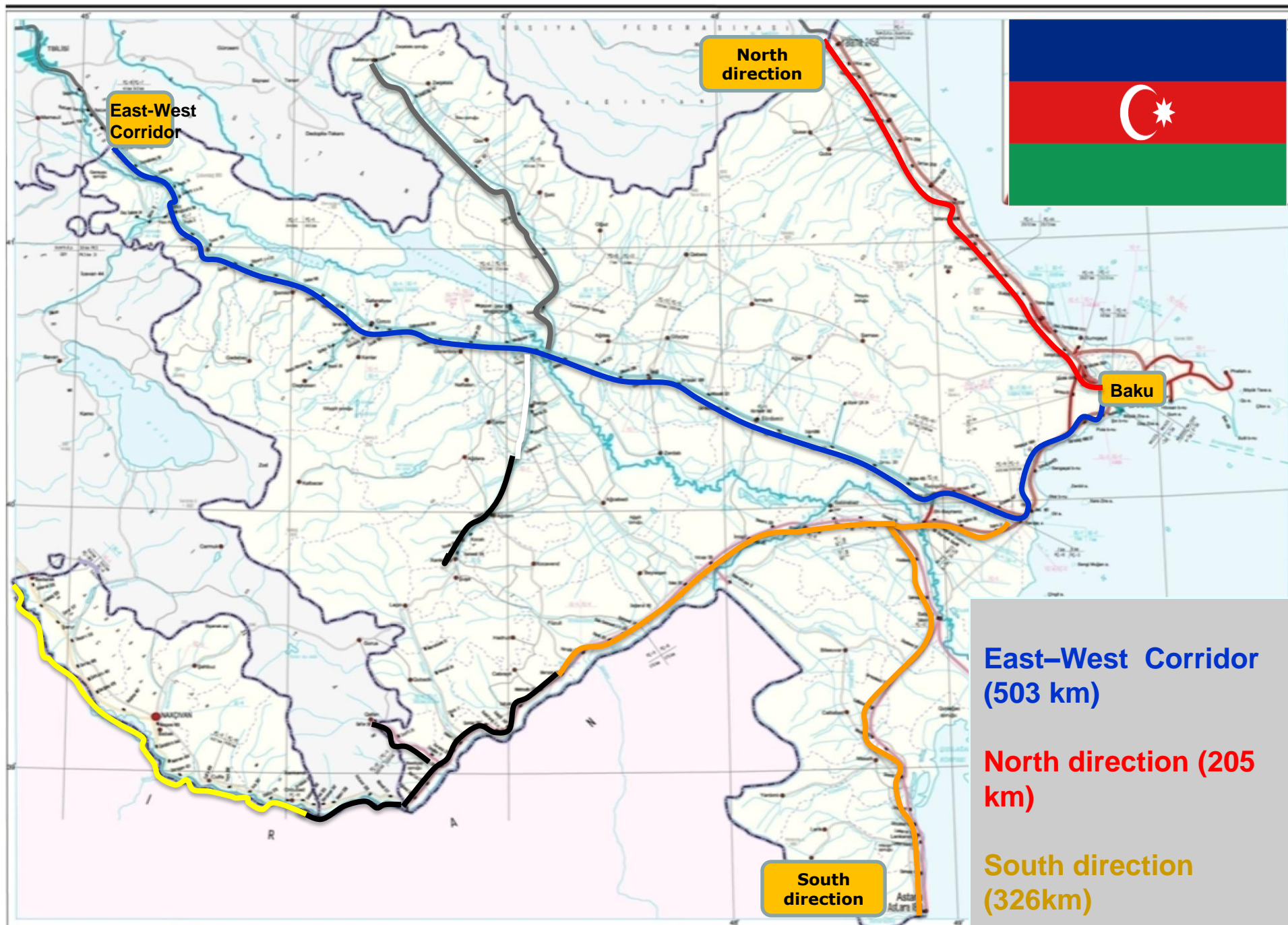
ALYAT
SEA
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ISLAMIC
REPUBLIC
OF IRAN

TURKMENISTAN

Σ



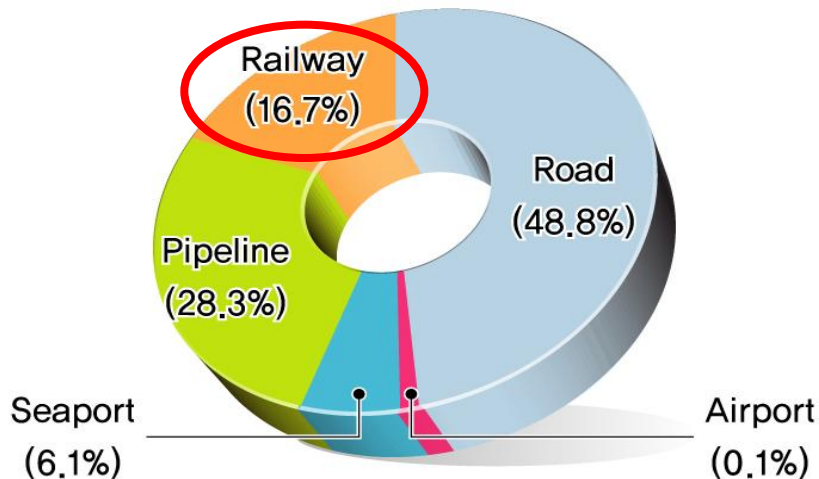


TECHNICAL DESCRIPTION

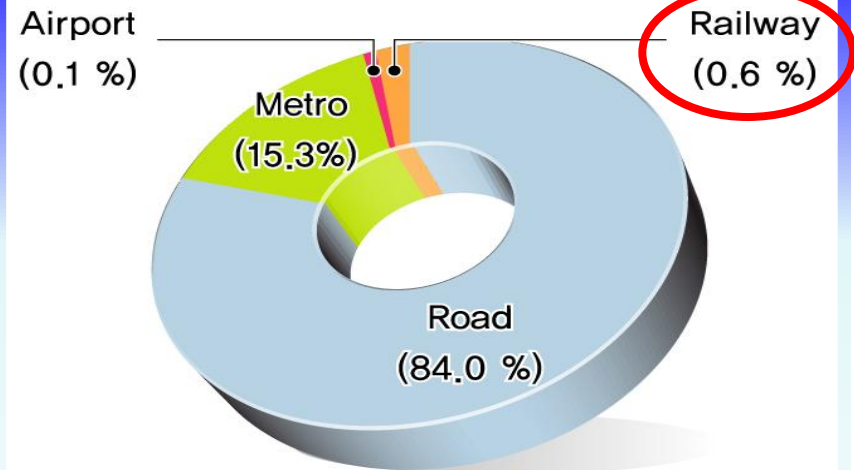
A. Traffic Movement by Mode

- Freight : Road 48.8%, **Railway 16.7%**, Pipelines 28.3%, Seaport 6.1%
- Passenger : Road 84.0%, Metro 15.3%, **Railway 0.6%**, Airport 0.1%

Freight Transportation



Passenger Transportation





TECHNICAL DESCRIPTION

Timeline of main works at East-West railway line financed by RTTF Project

	2011				2012				2013				2014				2015				2016			
	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV
Electrification (conversion ot AC)							Detailed design 12 months		Boyuk-Kesik-Ganja section (138 km) 12 months				Ganja-Ujar (112 km) 8 months				Ujar-Hajigabul (122 km) 12 months				Hajigabul-Baku (131 km) 10 months			
Signalling							Detailed design 12 months		Boyuk-Kesik-Ganja section (138 km) 12 months				Ganja-Ujar (112 km) 8 months				Ujar-Hajigabul (122 km) 12 months				Hajigabul-Baku (131 km) 10 months			
Locomotives																								

				1st party of 10 lokomotives	2nd party of 10 lokomotive;	3rd party of 10 lokomotives;	4th party of 10 lokomotives
Track Rehabilitation (317 km)	40.1 km	111 km	118 km	47.9 km			





FREIGHT AND PASSENGER TRAFFIC

Actual					Forecast			
Indicators	2008	2009	2010	2011	2015	2020	2025	2035
Freight (million ton)	27.40	20.70	20.50	22.10	23.00	29.00	30.00	40.00
Passenger (thousand p.)	5387	5306	4011	3500	5400	5800	6000	6500





GENERAL INFORMATION ABOUT THE PROJECT

- The total cost of the project is estimated at US\$795 million, with US\$450 million of World Bank lending. Project costs include the renewal of critical assets such as track, locomotives, power supply as well as implementation of an IFRS accounting system and technical services to support the restructuring.
- The World Bank has maintained regular contact with representatives of TRACECA, as well as the European Bank for Reconstruction and Development (EBRD) to keep them informed and to consult with them on the content of the Project during its preparation phase. The Project concept fully complies with the objectives of TRACECA and is broadly shared and supported by this program.



GENERAL INFORMATION ABOUT THE PROJECT

- **Project Components:**
- **Component 1** – The *Rehabilitation of East-West Main Line* component would include track, signaling and power supply rehabilitation along the east-west corridor.
- **Component 2** – The *New Mainline Locomotives* component would finance about 50 new mainline electric locomotives to operate on the east-west corridor.
- **Component 3** – The *Modernization* component would include support for the full implementation of IFRS accounting and procurement of equipment for ADY to improve its oil spill prevention and response capacity.
- **Component 4** – The *Project Implementation Component* will support implementation of the project.



Project Purpose:

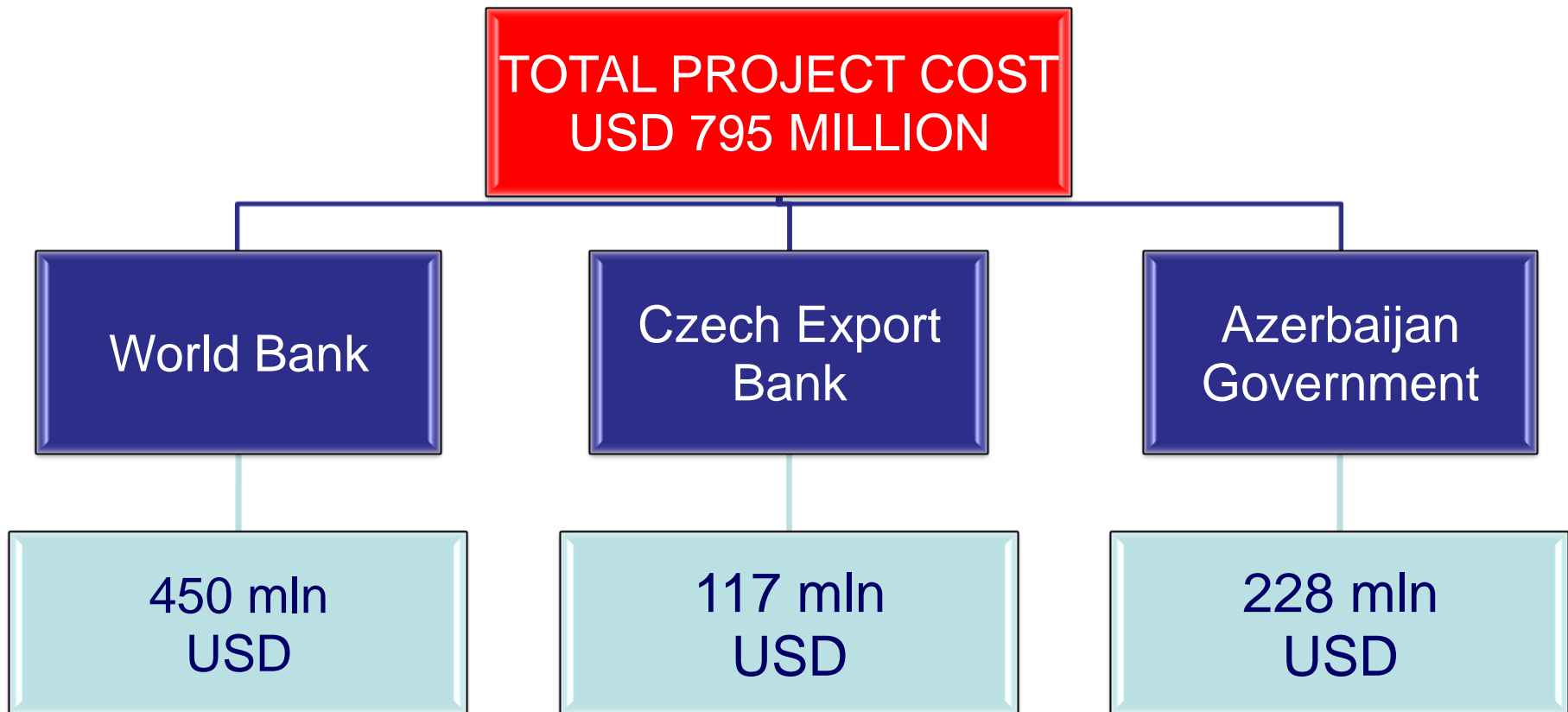
- Satisfy the increasing demand from the population and the economy in railway;
- Transportation services;
- Satisfy the security demands of the state;
- Increase the transit potential of the country;
- Improve the quality of the railway services;
- Progressively attain financial self sustainability for freight services.

Project Background:

- The project is expected to support the development of services by enabling the railway to attract growing transit business to Azerbaijan.
- Although such services remain related to the regional oil industry, they provide Azerbaijan with an opportunity to capitalize on its location by offering value added services for oil and oil products from neighboring countries. This will benefit not only the railway, but also other logistics businesses (port services, storage) that provide services for transit goods. As noted in the State Program for railway infrastructure development, “the long term vision is for Azerbaijan to become a prosperous transit center for energy and goods flowing between Europe and Central Asia”



AGGREGATE FINANCIAL RESOURCES ALLOCATED WITHIN THE STATE PROGRAMME FOR RAILWAY DEVELOPMENT





SOCIO-ECONOMIC DESCRIPTION

- The Project will support the implementation of the first phase of the Government Program, which covers components that are most time-sensitive and will most rapidly generate cash flow. The project will focus on: (i) maintaining and increasing the railway business (increasing revenue from US\$219 million today to about US\$283 million by 2015) by providing the profitable freight market segment with proper service, infrastructure and locomotive capacity; (ii) transforming Azeri Railways into a financially self-sustainable operation in freight transportation by covering all its costs (including infrastructure maintenance and traction) from revenues, while improving its operational efficiency; and (iii) improving the transparency of the railway sector by introducing International Financial Reporting Standards (IFRS) and profit centers (passenger/freight) and by separating on an accounting basis the passenger service that could be self-sustained from others. Overall the Project will ensure lower operating and maintenance costs, lower impact on environment and will open new vacancies during implementation.
- The Project will also contribute towards the goal of a full capacity operation of the Baku-Tbilisi-Kars railway link, which is currently under construction and is expected to be launched by the end of 2013.



ENVIRONMENTAL IMPACT

No significant environmental issues are anticipated for this project. In accordance with the World Bank's safeguard policies and procedures, including OP/BP/GP 4.0 1 *Environmental Assessment*, the modernization of the rail network has been classified as a Category B project for environmental assessment purposes. No affect to the population, i.e. resettlement or demolishing of houses is expected during the implementation phase. The project will create employment for the population living along the corridor and offer considerably higher salaries from private Contractors; this in turn will improve the standard for inhabitants. The study specified measures required to upgrade ADY's capacity in such areas as equipment (emergency trains, station refueling infrastructure, rail tanker cars, etc.), personnel training, proper supply and storage of oil spill response materials and procedures for spill notification and mobilization of response. The project, through a specific component, will provide support to ADY to address these deficiencies and help bring ADY's oil spill prevention and response capacity closer to international standards.



INVESTMENT AMOUNT AND REPAYMENT

- Investment amount: USD 795 million
- Loan amount: USD 450 million
- Repayment period: 23 years
- Source of Repayment: Government budget, ADY revenues



IMPACT & FINANCIAL RESULTS OF INVESTMENT PROGRAM

The net present value of these cash streams, discounted at **ADY's** weighted average cost of capital (7.7 percent) is **AZN 62 million**. The Internal Rate of Return of the investment is 8.4 percent and the payback period is 15.4 years.

ADY is profitable throughout the forecast period. Net income diminishes from about AZN 30 million p.a. in 2008-2010 to about AZN 20 million in 2011-2013, as the investment program boosts interest and depreciation. As the benefits of the program are realized through both traffic growth and improved productivity, however, profit begins to grow again in 2014-2020, reaching AZN 30 million by 2020.



SUMMARY

No	Contracts	Envisaged on the project	Estimated cost	Financial gap
1	Conversion to 25 kV AC energy supply	307.0	525.0	218.0
2	Procurement of new locomotives	334.0	556.0	222.0
3	Signaling and Communication system upgrade	17.0	397.0	380.0
4	Track rehabilitation (870 km.)	345.0	905.0	560.0
5	TOTAL	1 003.0	2 383.0	1 380.0



SUMMARY

New estimations:

1 billion 380 million USD



- Increase competitiveness of the TRACECA corridor.
- Increase the logistics component in trade between the EU and TRACECA countries.
- Provision of modern intermodal facilities and a variety of logistics.
- Services presently absent in Azerbaijan and on the TRACECA corridor.



THANK YOU

WE INVITE YOU VISIT AZERBAIJAN

Joint Stock Company “Azerbaijan Railways”

Mr. Gurban Nazirov - Deputy chairman

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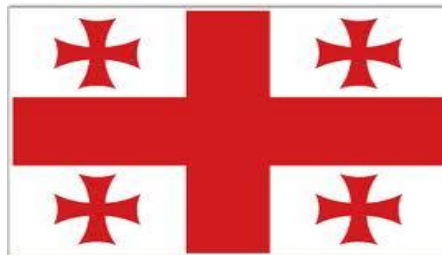


TRACECA INVESTMENT FORUM 2012

Brussels, 28th February 2012

Poti – Baku Container Block Train and International Logistic Center

GEORGIA





GEOGRAPHICAL DESCRIPTION





GEOGRAPHICAL DESCRIPTION

Targeted Markets of the Project Poti – Baku Block Train:

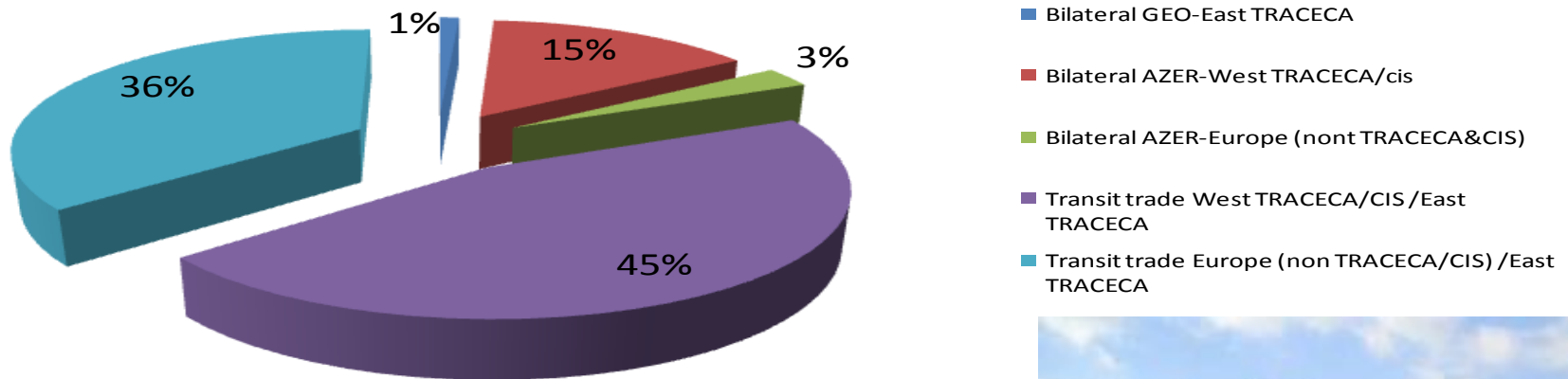
- Transit trade Europe (non TRACECA/CIS) / East TRACECA
- Transit trade West TRACECA/CIS / East TRACECA
- Direct regional trade / TRACECA (Region/Region).
- Direct bilateral trade (Country/Country Georgia Azerbaijan).



TECHNICAL DESCRIPTION

Market Details

Potential Trade For Project * (Total for East and West bound directions)



Trade Directions * (Total for East and West bound)

	Tons
Potential Bilateral GEO-East TRACECA	139 230,0
Potential Bilateral AZER-West TRACECA/CIS	1 955 396,0
Potential Bilateral AZER-Europe (non TRACECA&CIS)	359 338,0
Potential Transit trade West TRACECA/CIS/East TRACECA	6 063 800,0
Potential Transit trade Europe (non TRACECA/CIS) /East TRACECA	4 783 085,0
Total for all directions	13 300 849,0





TECHNICAL DESCRIPTION

Existing Traffic vs. Market Potential

976 436,0 tons

13 300 849,0 tons

Rail Container Flow Georgia / Azerbaijan – 2008	Container (TEU)	Tons equiv. (*)
Transit From/To Poti		
to Azerbaijan	4,092	40,920
to Central Asia	562.0	5,620
Transit From/To Batumi		
to Azerbaijan	1,118.0	11,180
to Central Asia	56	560
Transit From/To Azerbaijan	5,210	52,100
Transit From/To Central Asia	618	6,180
Total Transit	5,828	58,280

Road Truck Flow Georgia / Azerbaijan – 2008	Loaded Truck	Tons equiv. (*)
Border Georgia-Azerbaijan		
Red Bridge	46,240	878,560
Lagodekhi	5,297	100,643
Total	51,537	979,203
Direct Bilateral trade		
Export	1,274	24,206
Import	1,939	36,841
Transit From/To Azerbaijan	43,534	827,146
Transit through and (to central Asia)	4,790	91,010
Total Transit	48,324	918,156

Countries	Partner Countries	East bound	West bound
Georgia	Kazakhstan	19,415	112,604
	TRACECA South East	1,978	5,233
Azerbaijan	TRACECA/CIS	811,415	16,956
	TRACECA West	33,288	1,328
	Turkey	1,052,863	39,592
	Europe (non TRACECA & CIS)	335,513	24,903
TRACECA / CIS	Kazakhstan	1,007,496	1,649,092
	TRACECA South East	597,057	113,366
TRACECA West	Kazakhstan	18,795	32,151
	TRACECA South East	34,441	21,984
	Kazakhstan	334,338	1,416,343
	TRACECA South East	609,708	229,058
(non TRACECA & CIS)	Kazakhstan	1,110,422	2,550,681
	TRACECA South East	635,567	486,653
Total		6,602,297	6,699,943



SOCIO-ECONOMIC DESCRIPTIONS

Existing Conditions

N	Obstacle	Measurement
1	Transport units	Lack of rail wagons, platforms and containers
2	Irregular schedule	3 to 4 weekly
3	Tariff (Varna/Illychevsk to Baku)	In 1000-1300 Euro expensive than road
4	Transit time	48 hours
5	Average speed	Approximately 17 km/hr (800 km in 48 hours)
6	Customs/border	5-6 hours
7	Infrastructure	No Logistics Center for Multimodality operations
8	Competitiveness vs. Tracks	(FOR-FOR) Rail - 600 USD. vs. (FOT-FOT) Track – 1,300 USD.TEU. due to handling and door-to-door, full-empty, Tariff for Rail=Road
9	Competitiveness of Caucasus	1 mln. tons Caucasus vs. 13 mln. tons North
10	Unofficial payments	Increased price and unpredictability



SOCIO-ECONOMIC DESCRIPTIONS

Key Objectives Poti-Baku Block Train

N	Project realization	Measurement
1	Transport units	Purchase of rail wagons, platforms and containers
2	Regular schedule	Daily Schedule (both ways)
3	Tariff (Varna/Ilichevsk to Baku)	Competitive rail tariff, about 4,000-5,000 Euro TEU
4	Transit time	30 hours (target 25)
5	Average speed	Approximately 32 km/hour (800 km in 25 hours)
6	Customs/border	1-3 hours
7	Infrastructure	Tbilisi Logistics Center
8	Compet. vs. Trucks	(FOR-FOR) Rail-600 USD.TEU and competitive additional cost for last mile delivery
9	Compet. vs. North	More than 1 mln. tons
10	Unofficial payments	Elimination of additional payments and unpredictability



CONSISTENCY WITH NATIONAL TRANSPORT POLICIES

Consistency with National Transport Policies

Georgia

- Ratification of Viking project
- TRACECA Multimodal Agreement
- Private management of Batumi and Poti ports
- Improvement of railway services/modal shift from road to rail

Azerbaijan

- Readiness of Participation in Viking project
- TRACECA Multimodal Agreement
- Improvement of railway services
- Development of Baku International (BISP) and Alyat sea **ports**

Block-Train Container/Contrailer operational issues currently is under discussion between Georgia and Azerbaijan railways administration (first draft of operational agreement has been sent to Azerbaijan railway administration on February, 2012).



INVESTMENT AMOUNT AND REPAYMENT

Financial and Economic Indicators

Summary Results for Amortisation* (Option –E Table -6)

		Base Case	Capital +20%	Railway costs +20%	Road costs –20%	External costs –50%
Financial	EIRR (%pa)	138%	119%	136%	117%	127%
	NPV (€M)	184	181	180	148	164
	BCR	14.6	12.0	14.3	11.8	13.0

* Project implemented by Egis International / Dornier Consulting-Cost-Benefit Analysis of a Container Block Train Service Poti–Baku



INVESTMENT AMOUNT AND REPAYMENT

Specific Needs of the Project:

- Adaptation/upgrading of existing port and intermodal facilities
- Purchase or adaptation of transport units and handling equipments
- Inland facilities: dry ports, container depots - associated with logistic centers
- IT systems and solutions - hardware and software
- Related training assistance



INVESTMENT AMOUNT AND REPAYMENT

Fitting platforms for 3 block trains

Initial Investment: 8.0 mln. euro

Estimated Total Cost: **14.5 mln. euro**



OTHER SOCIO-ECONOMIC DESCRIPTIONS

Poti–Baku Container Block Train

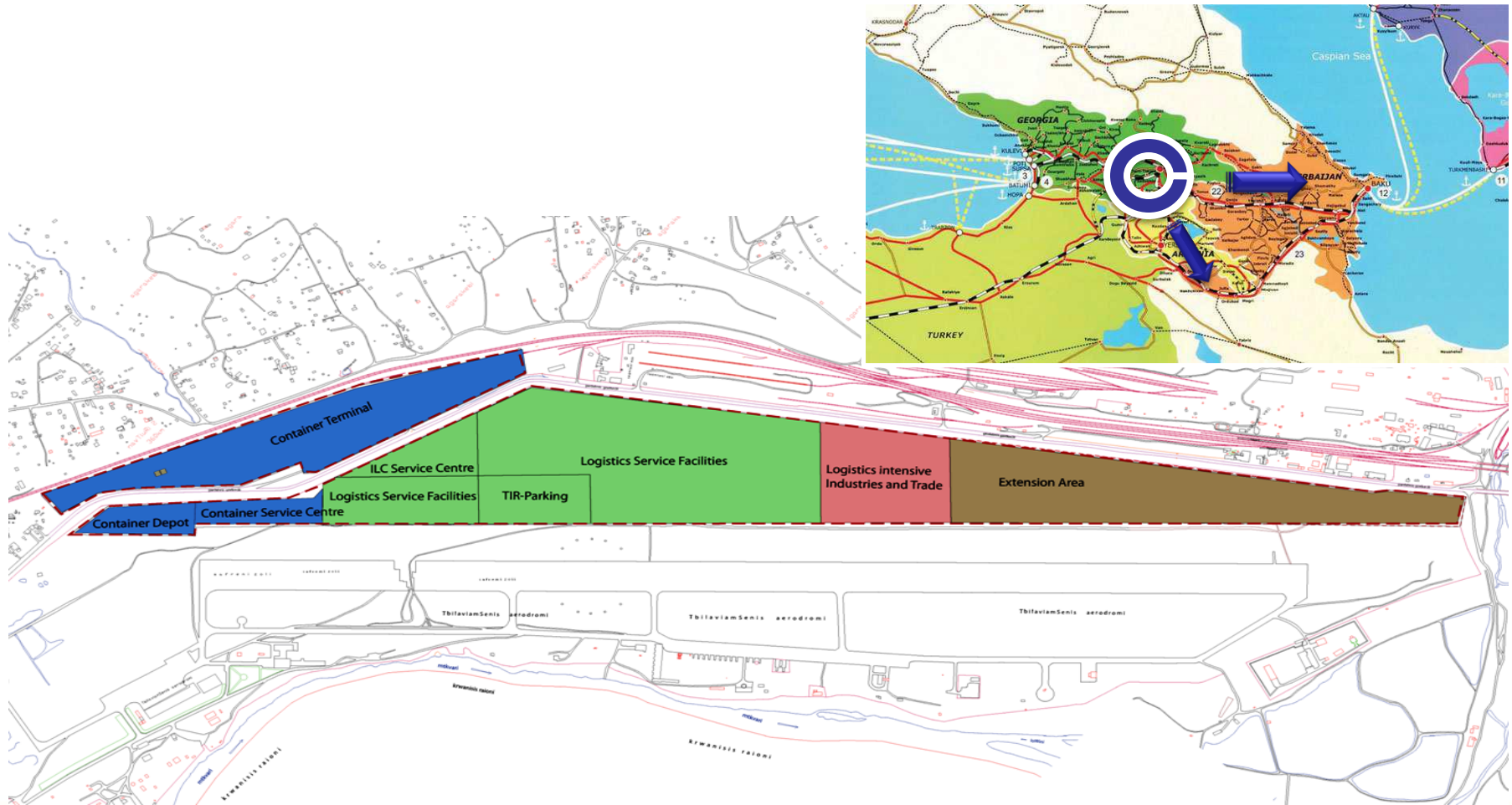
The Pilot Project was identified and a Feasibility Study was prepared with the technical assistance of TRACECA during the project “Motorways of the Sea for the Black Sea and the Caspian Sea” (2009-2011).

Contractor : EGIS bceom, Copetrans, Italferr, Euro-Ukraine Consulting
The Cost Benefit Analysis (CBA) was prepared with the technical assistance of TRACECA during the project “Logistics Processes and Motorways of the Sea II“

Contractor: EGIS International, Dornier Consulting



International Logistics Center at Tbilisi





KEY OBJECTIVES - INTERNATIONAL LOGISTICS CENTER

N	Project Advantages	N	Project realization
1	Major logistic hub in the region	1	Container terminal, with direct road and rail access
2	Strategic location between Black and Caspian sea ports (Poti, Batumi, Supsa, Kulevi and Baku)	2	Container depot
3	3km–Tbilisi City Airport, 15km–City Centre, 300km–Poti Port, 300km–Yerevan, 500km–Alyat Port.	3	Container service center
4	Existing railway line, the major road network, Airport	4	ILC service center
5	Main industrial and commercial centre in the country and region	5	Logistics service facilities
6	Important node on TRACECA	6	TIR parking
		7	Logistics intensive industries and trade
		8	An area for future expansion



STAKEHOLDERS - INTERNATIONAL LOGISTICS CENTER

Public Sector Stakeholders:

- Georgian Railway
- Revenue Service of the Ministry of Finance of Georgia (Customs)
- The Ministry of Economy and Sustainable Development of Georgia
- The Ministry of Defence of Georgia
- The Ministry of Regional Development and Infrastructure of Georgia
- Tbilisi City Hall

Private Sector Stakeholders:

- Logistics service providers
- Industrial and commercial companies



FINANCIAL AND ECONOMIC INDICATORS

Performance Indicators	<u>Social Discount Rate (SDR)</u>				
		5.5%	10%	12%	NA
EIRR Economic Internal Rate of Return	%pa				16%
MIRR Modified Internal Rate of Return	%pa	8%	10%	13%	
NPV Net Present Value	EUR M	43	17	10	



INVESTMENT AMOUNT AND REPAYMENT

The first estimation of required total investment needs (CAPEX) and for each of the three envisaged stages of ILC development has been calculated as follows:

- Total of Development Stages: **41.3 mln. €**
- Sum of Development Stage-I: 31.7 mln. €
- Sum of Development Stage-II: 7.7 mln. €
- Sum of Development Stage-II: 1.9 mln. €





OTHER SOCIO-ECONOMIC DESCRIPTIONS

Tbilisi International Logistic Center

The Project was identified and selected and a Feasibility Study was prepared with the technical assistance of TRACECA during the project “International Logistics Centers for Western NIS and the Caucasus” (2009-2011).

Contractor : Dornier Consulting GmbH / NTU / Inros Lackner AG



SUMMARY

Investments

Poti – Baku Container Block Train

14.5 million Euro

International Logistics Center

41.3 million Euro





DELIVERED BY

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TRACECA INVESTMENT FORUM 2012

Brussels, 28th February 2012

Unified Air Traffic System Implementation

THE KYRGYZ REPUBLIC





UNIFIED AIR TRAFFIC SYSTEM IMPLEMENTATION





GEOGRAPHICAL DESCRIPTION

SE “Kyrgyzaeronavigatsia” is the only state enterprise responsible for the organization and modernization of the air traffic system in the Kyrgyz Republic.

The establishment of an air corridor spanning Europe-China will create an unimpeded air route via the Caucasus and Central Asia for TRACECA.

The location of the Project has the following advantages:

- the opportunity for international airports to be a part of a global aero transport net involving the States of the region;
- the improvement in air traffic control quality makes the air space more attractive for air companies, including most foreign operators.



TECHNICAL DESCRIPTION

The period of realization: 2 years

The quantity of aircraft flow in a month: 500-550

Modernization will increase the number of aircraft up to 700 in a month

The project encompasses:

- Installing modern radar equipment for air traffic service at the main airports of Kyrgyz Republic
- The implementation of modern technology
- The purchasing of aerodrome radars
- The construction of towers and installation of message commutation centers
- The modernization of air traffic controllers' work positions
- The purchasing of an Instrument Landing System and Distance Measuring Equipment



AIRPORT «OSH»

- ATIS
- Messages commutation centre
- Telecommunication modernization
- Aerodrome radar
- Tower





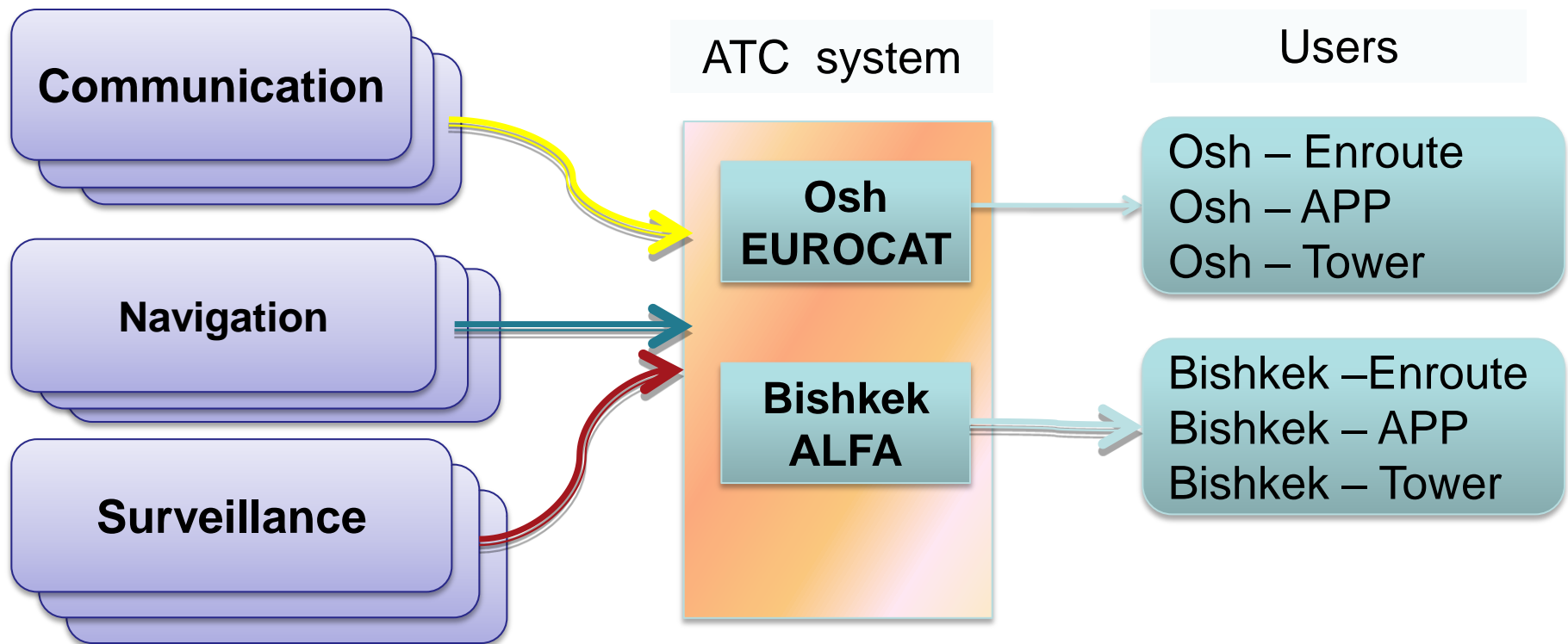
AIRPORT «ISSYK-KUL»

- Automatic radio direction finder
- HF and VHF radio stations
- Telecommunication modernization
- Automated working position for message commutation centre
- Tower
- Automated working position for ATC air controller
- ILS and DME



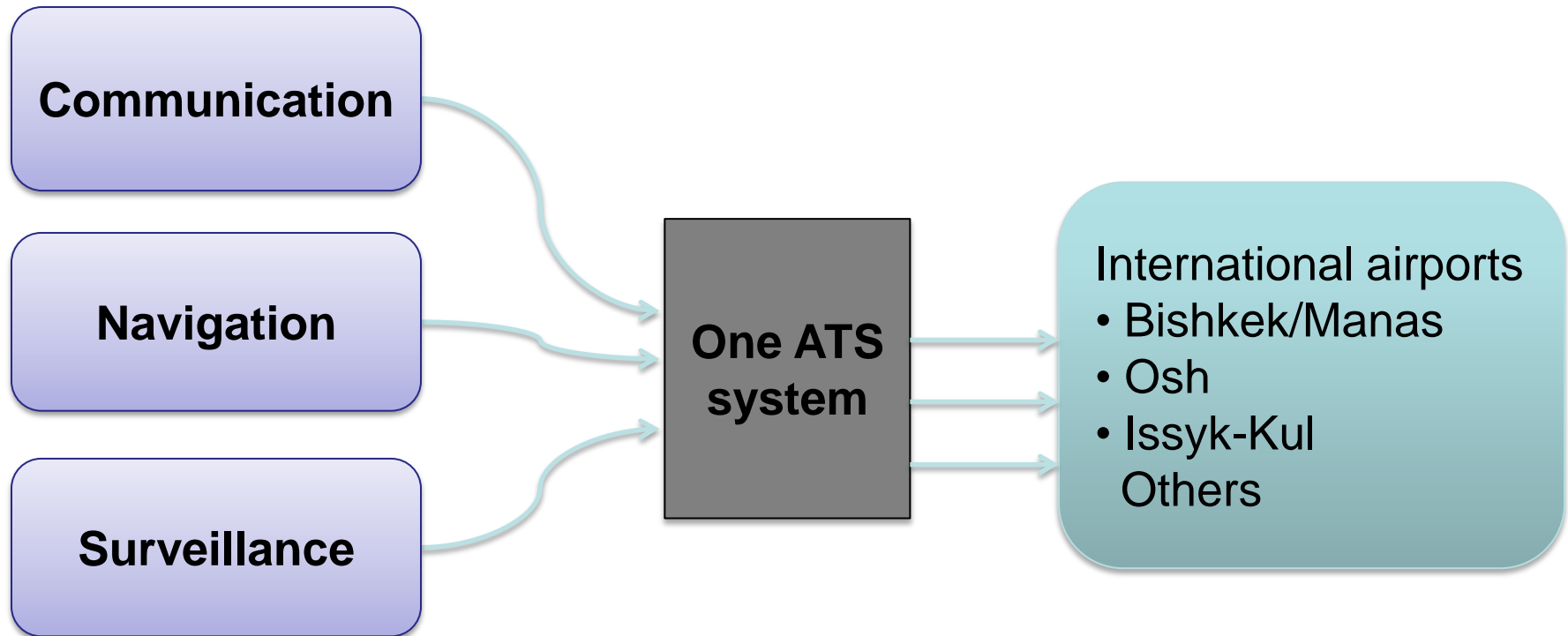


CURRENT STRUCTURE OF ATC SYSTEM





FUTURE STRUCTURE OF ATC SYSTEM - ONE SYSTEM OF AIR TRAFFIC SERVICE





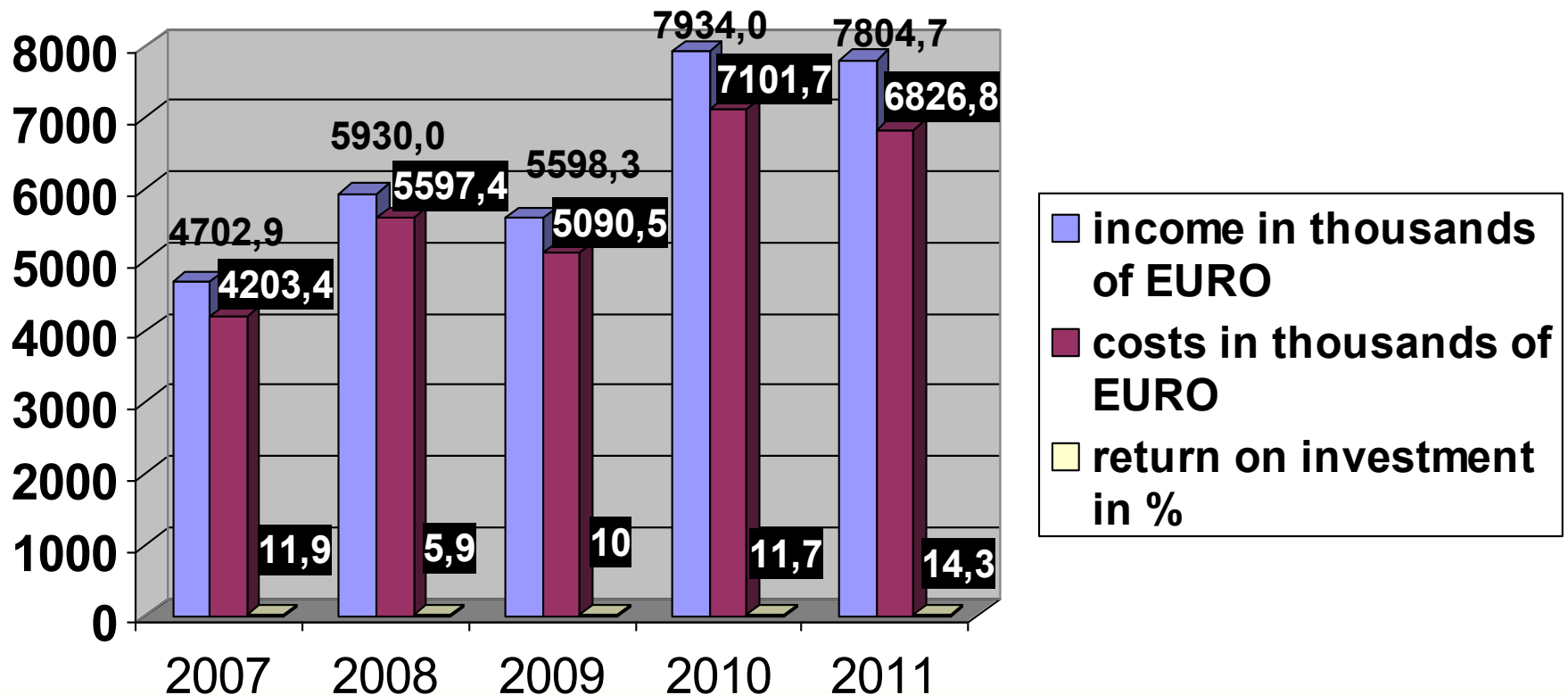
SOCIO-ECONOMIC DESCRIPTION

The availability of aerodromes equipped with modern facilities and air traffic control systems on air routes on the Great Silk Way will attract air companies for the following reasons:

- Offering additional capacity for emergency landing and as alternative aerodrome;
- The best possible route allows significant flight time and fuel savings;
- The provision of flight safety.

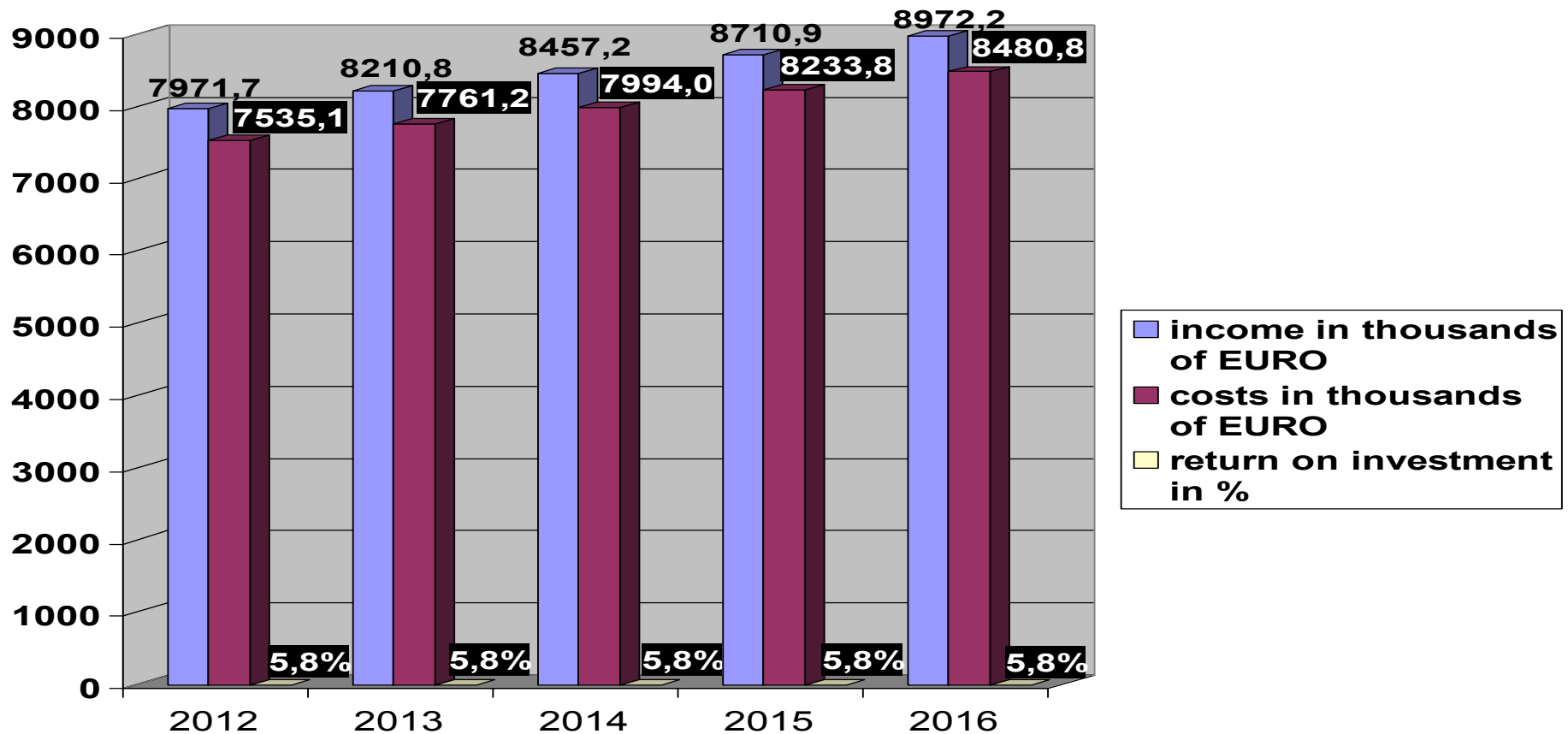


FINANCIAL AND ECONOMIC ACTIVITY OF SE KYRGYZAERONAVIGATSIA" FOR THE PERIOD 2007 - 2011





FORECASTING PLAN FOR THE PERIOD 2012 - 2016





INVESTMENT AMOUNT AND REPAYMENT

- The modernization and implementation of a unified air traffic system requires 15 million 590 thousand EUR
- Repayment source – The Kyrgyz Republic budget
- The estimate time of repayment – 12 years



OTHER SOCIO-ECONOMIC DESCRIPTIONS

- The project involves improving air space control to attract new air companies wishing to operate passenger and cargo transit flights via the Kyrgyz Republic.
- The project will allow SE “Kyrgyzaeronavigatsia” to modernize the main airports of the Kyrgyz Republic and to improve flight safety.
- Unified air traffic system implementation is to take place in conjunction with the establishing of a unique air route via TRACECA countries and will result in a Europe-China route that will save flight time and fuel.
- The training of staff will raise the professional level of air traffic management and level of ATC responsibility.



SUMMARY

Investment Amount

15 million 590 thousand EUR

The project does not depend on other projects and can be fulfilled in short terms.

The States involved in project realization already have significant experience in the realization of such programs.





THANK YOU FOR YOUR ATTENTION

Our web site: www.kanservice.com
e-mail: kan_atm@transfer.kg







TRACECA INVESTMENT FORUM 2012

Brussels, 28th February 2012

**Railway Vahdat - Karamyk
(Kyrgyz Border)**

REPUBLIC OF TAJIKISTAN







MAIN PROJECT AIMS

The proposed railway will connect Kyrgyz Republic with the People's Republic of China along the route Jalalabad–Osh–Saritash–Irkeshtam–PRC border.

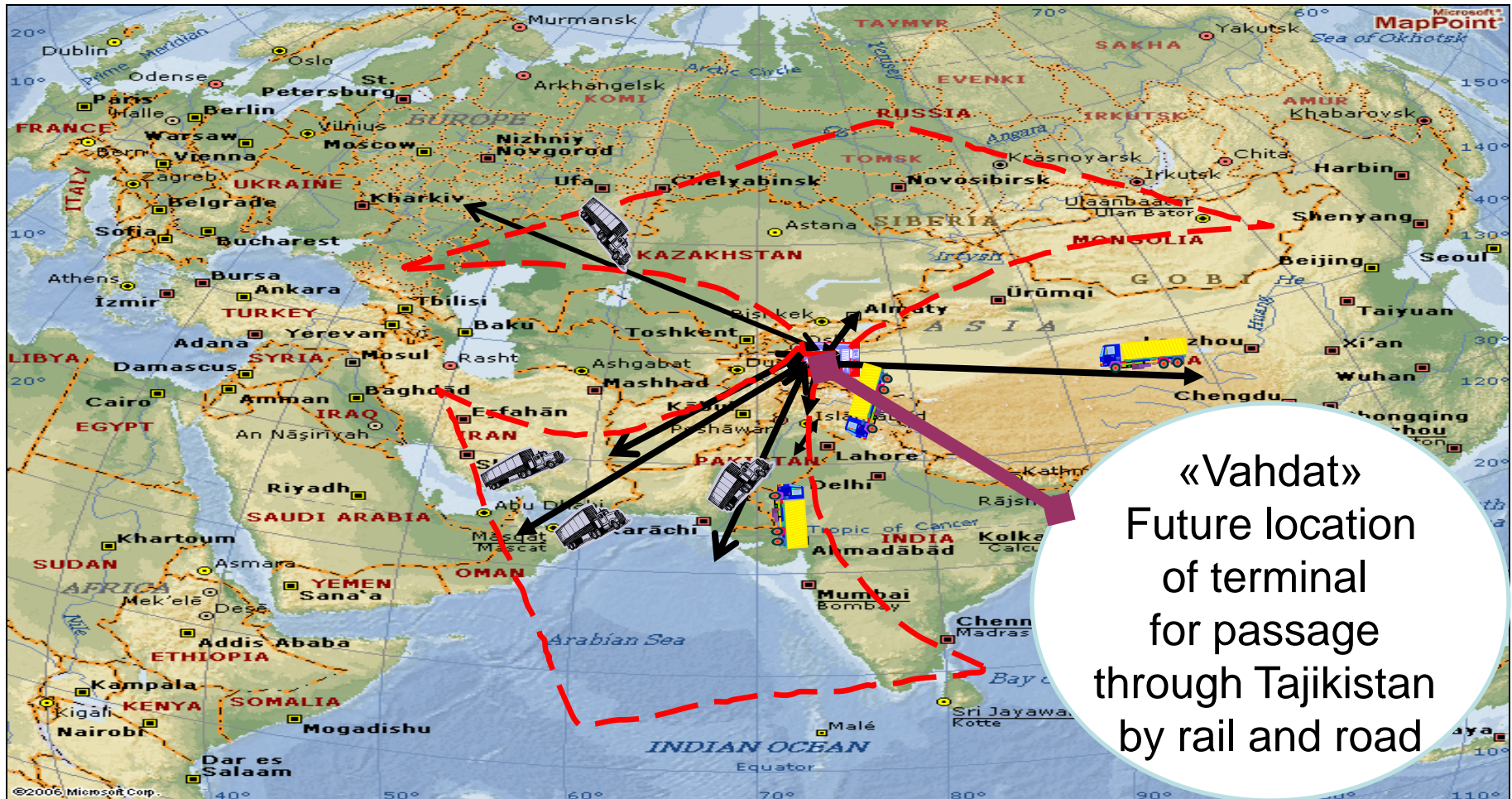
Construction of a new railway will create a seamless railway route from neighbor states China and Kyrgyz Republic passing through Tajikistan to Afghanistan and Iran. Construction of this railway will increase Tajikistan's transit potential.

Construction of this railway is strategically important and has been included in the State targeted program as part of the ongoing development of a transport complex for the Republic of Tajikistan for 2025.





VAHDAT-LOGISTICAL KNOT



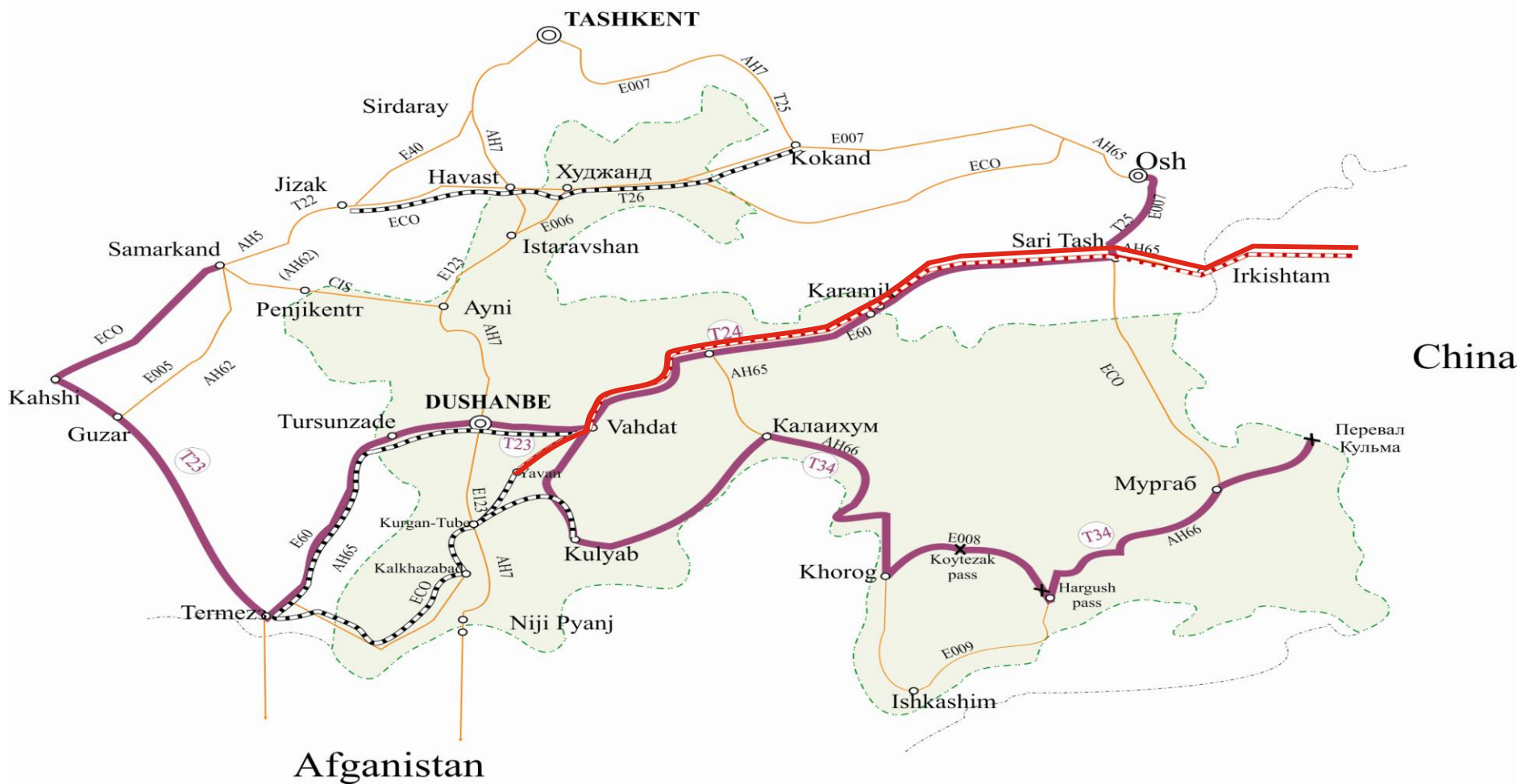


GEOGRAPHICAL DESCRIPTION

- The start of the route is located at the Vahdat/Ilyak station in the Vahdat district in the Regions of Republican Subordination on the existing railway section Dushanbe–Vahdat–Ilyak. The end of the route is the border of Tajikistan with Kyrgyz Republic.
- The railway is planned for construction on TRACECA corridor 24



The scheme of routes TRACECA





GEOGRAPHICAL DESCRIPTION

- Approximate railway road length in the proposed variant in the territory of Tajikistan is 296 km
- The starting point of the road is Ilyak station.
- Further, the road follows the direction of the existing highway passing through valleys of the Ilyak and Obigarm rivers and around many settlements.
- This section is characterized by an irregular mountainous terrain with altitudes 850 - 1900 m above the sea level.
- The section from Obi Garm to Nurabad is the most complex in terms of terrain, geological and hydro geological conditions. On this section the proposed road travels in the direction of the highway.
- The route avoids the Rogunskaya HPS flood zone and crosses many waterways, mudflow beds and mountainous ranges on which the construction of bridges, viaducts, overpasses, tunnels and other artificial facilities is needed.



GEOGRAPHICAL DESCRIPTION

In accordance with standard requirements (maximum allowed longitudinal slope and minimal curve radiuses in plan) for road construction a huge volume of earthworks (excavation) is required as well as blasting;

- Erection of at least 20 large bridges with a minimum length 100 m over the Surhob river and side channels;
- At least 8 tunnels with an approximate total length of 16 km is also required;
- The proposed railway road is located 50 km from the south of the unique Nazaraylok coal field, which offers huge stocks and high quality coal.



GEOGRAPHICAL DESCRIPTION

From Nurabad to Tajikabad passes through the Surhob river valley. Section will not create an obstacle to laying a railway line, excluding the sections prone to landslides.

Located on the mudflow carry-over cones where the construction of drainage facilities, overpasses, bridges and retaining walls (headwalls) is required. The Railway intersects lands marked for arable farming, gardens and settlements.

The section from Tajikabad to Jirgital and further to the Kyrgyz Republic border is located in a highly mountainous area with significant altitude differences. Challenging due to the spurs of the Altay range as well as the Surhob river, which travels through a narrow canyon with rocky shores. On a separate section landslides and avalanches occur due to the existence of springs and unfavorable geological and hydro geological conditions.



TECHNICAL DESCRIPTION

Indicator Name	Unit of measure	Indicators
Railway road technical category		IV
Construction length	km	296
Including tunnels	km	16.1
Maximal longitudinal slope	%	2.7
Minimal curve radius in plan	m	200
Big bridges (more than 100m)	pcs./r.m	21/2500
Small bridges (less than 100m)	pcs./r.m	47/1410
Bridge over Rogunskaya HPS reservoir	pcs./r.m	1/800
Shore protection works	rm	6400
Overpasses	Pcs./r.m	12/8950
Headwalls	r.m./thousand m ³	59200/325.6



TECHNICAL DESCRIPTION

Culverts	pcs.	1180
Railway stations	pcs.	6
Repair points	pcs.	5
Near-by highways for the railway maintenance	km	151
Railway cross roads	pcs.	18
Private household demolition	Household	30
Arable lands alienation	ha	54
Approximate volume of earthworks (excavation)	mln. m ³	149.5
Including blasting	mln. m ³	65.8
Construction of branch road to the Nazaraylok coal field	km	50
Approximate construction cost:		3200.0
Including tunnels	mln USD	193.2



SOCIO-ECONOMIC DESCRIPTION

Expected Benefits and Impacts:

- Completion of the new railway line Vahdat–Karamyk and Karamyk–Saritash–Irkeshtam will provide reliable transport links between the Republic of Tajikistan and Kyrgyz Republic and the People's Republic of China.
- The railway line will become an important link in the transport networks that pass from China through Kyrgyz Republic, Tajikistan to Afghanistan, Pakistan, Iran and further still to the ports on the Indian Ocean.
- The project will help strengthen economical connections between 4 countries of the region through trade and cultural exchanges.
- Transportation of transit cargo and passengers will be along a shorter distance thus reducing transportation time.
- Development of industry, agriculture and tourism. Export of industrial products to neighboring countries.
- The project will create 1200 jobs for the local population.



INVESTMENT AMOUNT AND REPAYMENT

Planned Financing Models for the Project:

- The project is expected to attract foreign investment in the form of consensual loans, grants and technical assistance for the development of the feasibility study and detailed design.
- The government of the Republic of Tajikistan will also invest in this project.



OTHER SOCIO-ECONOMIC DESCRIPTIONS

- Detailed financing and economical analysis has not been conducted yet as the project is in the initial stage of development.
- In order to identify the scope of work, final cost, period of construction and affordability it is necessary to develop feasibility study and detailed design.
- In 2010 a Memorandum of Understanding was signed between the Government of the Republic of Tajikistan and the Government of Islamic Republic of Iran.
- According to the Iranian part of the MOU 1 million USD has been allocated for the implementation of project for the possible construction of a standard railway (width of the rut 1435 mm) in the territory of Tajikistan.



OTHER SOCIO-ECONOMIC DESCRIPTIONS

- With the aim of project implementation, a contract between the Ministry of Transport of Tajikistan and Engineering Consulting Company “METRO” (Iran) was also signed.
- At present the works are ongoing. The rut width of the Vahdat–Karamyk (Kyrgyz Border) railway will be accepted on the results of project implementation and will take into account the rut width of railways in China, Kyrgyz Republic, Afghanistan and Iran.
- Environmental protection and international standards of safety will be considered during the preparation of the feasibility study and throughout the detailed design stages.



THE CONDITIONS NECESSARY FOR ACHIEVING THE PROJECT

To reach the planned results in 2015-2025 the project requires:

- Support and help from international financial institutions;
- Sufficient financing;
- Highly qualified experts.

Risks and Assumptions:

- The main risks to the project are insufficient and inconsistent financing.



SUMMARY

The approximate cost of project

3200.0 mln. USD





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