

Business plan investment project: **Unitsky String Transport Strategy in UGRA** **(Khanty-Mansiysk Autonomous Okrug)**

High-speed two-line two-rail STU track Khanty-Mansiysk – Surgut

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Unitky String Transport (STU) Strategy in Ugra Region

Stage 1

**Khanty-Mansiysk – Surgut
High-speed two-line two-rail
STU track**

**1st order: local STU track
Surgut – Belyi Yar**

**2nd order: itnercity STU track
Khanty-Mansiysk - Surgut**

**Two-line city STU track
in Khanty-Mansiysk
(mono-STU or bi-STU)**

**1st order: STU track
Ugra University – Campus**

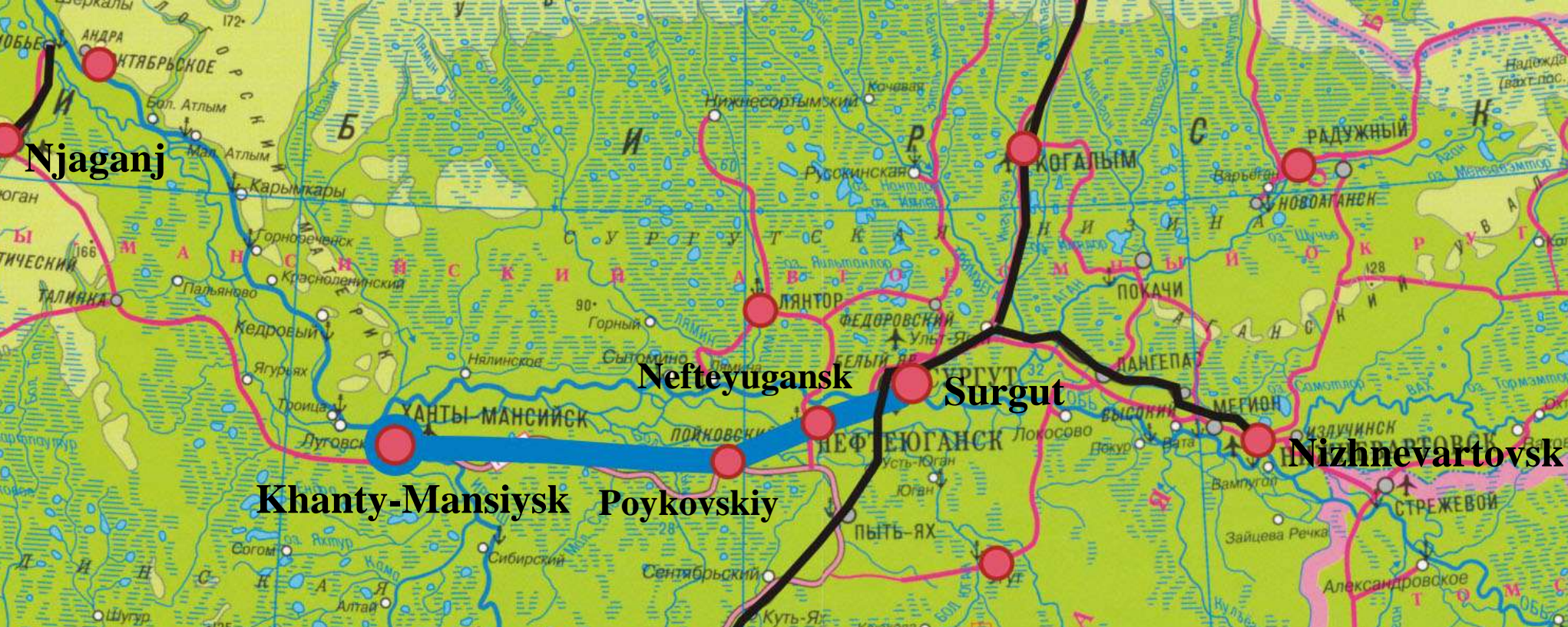
**2nd order: STU track
Airport – River Port**

Stage 2

High-speed two-line two-rail STU tracks Surgut – Nizhnevartovsk and Khanty-Mansiysk – Njaganj; cargo STU track in the Urals

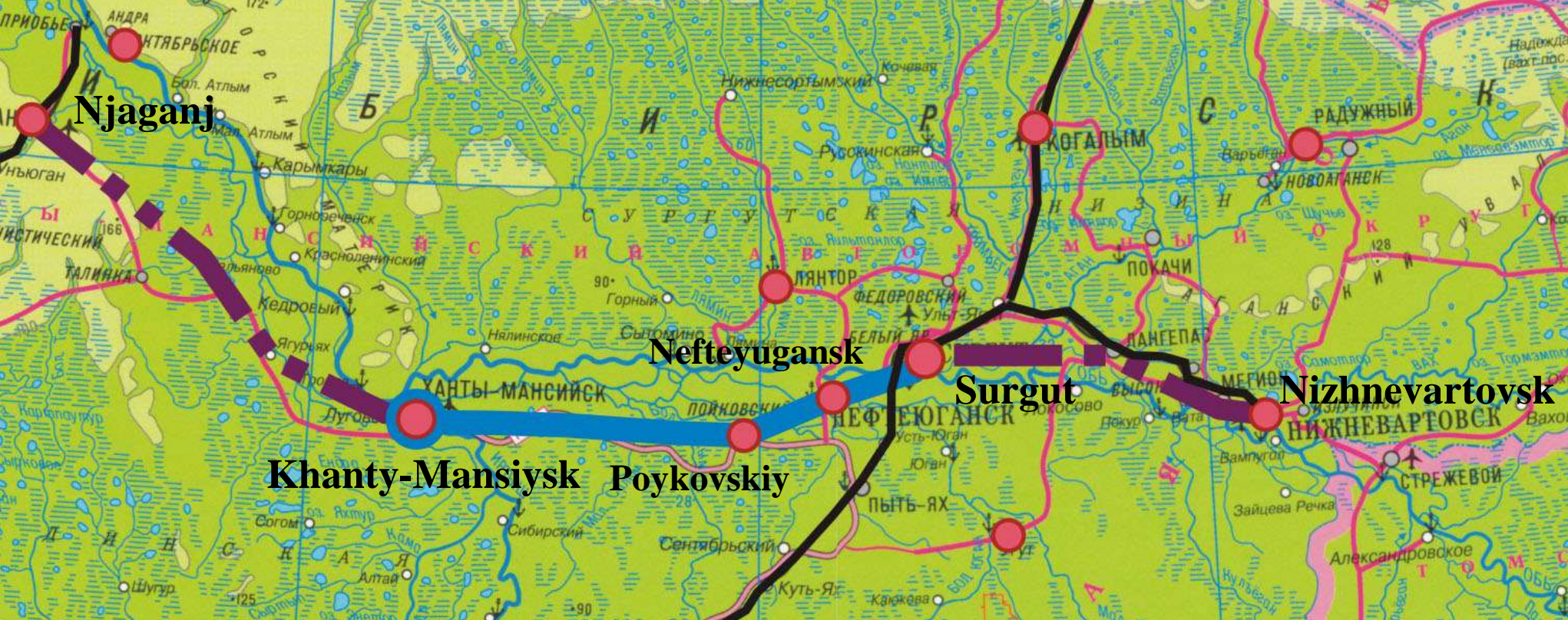
Stage 3

Creating the system of STU tracks in Khanty-Mansiysk region connecting it with Ural federal region, Industrial Urals, Yamal and other regions



STU tracks of the first phase of the strategy:

- 1. High-speed two-line two-rail cargo and passenger STU track
Khanty-Mansiysk – Surgut**
- 2. City passenger STU track in Khanty-Mansiysk**



Track projects:



1st stage (up to 4 years)

2nd stage (up to 7 years)

STU tracks of the 2nd strategy stage

High-speed two-line two-rail

STU tracks:

1. Surgut - Nizhnevartovsk
2. Khanty-Mansiysk - Nyaganj

STU strategy in Khanty-Mansiysk Autonomous Okrug (Ugra)

The contents of the cargo flow in the south direction:





Oil, liquified gas, gas condensate, oil products, wood and wood materials, agricultural products, coal, chrome and iron ores, copper, tin, boxites, etc. From Indiga: machinery, construction materials.

The contents of the cargo flow in the north-western direction:

Machinery, construction materials, oil and oil products, wood and wood materials, agricultural products.



Track projects

-  1st stage (up to 4 years)
-  2nd stage (up to 7 years)
-  3rd stage (15-20 years)
-  Railway: Polar Urals, Yamal:

International multimodal corridor

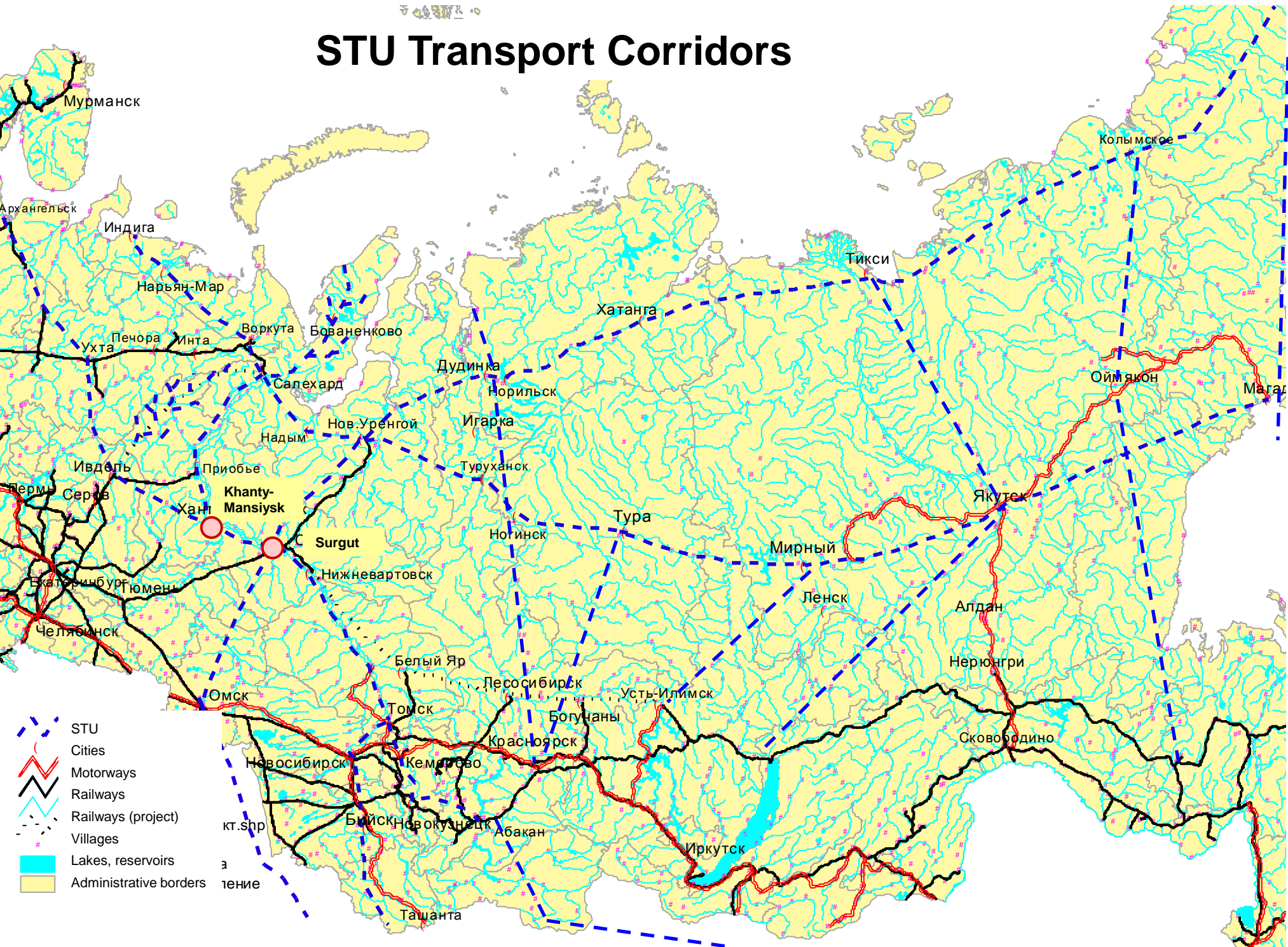
South East Asia –

China – Kazakhstan -
Russia (Omsk region,

UGRA, Yamalonenezkiy
Autonomy Region,
Arkhangelsk region (Indiga
port) - **Europe**



STU Transport Corridors



Khanty-Mansiysk – Surgut High-speed two-line two-rail STU track

General characteristics of the project

Length 250 km

(Khanty-Mansiysk – Poykovskiy: 150 km, Poykovskiy – Nefteyugansk: 45 km,
Nefteyugansk – Surgut: 55 km)

Module speed

286 kmph

Duration, inclusive of all stops

55 min

Initial capacity

5000 passengers per day, 1000 tons per day

Project STU Khanty-Mansiysk – Surgut

Mechanisms of realization

Public and private partnership

Government investment sources:

- UGRA budget
- development institutions (venture and investment funds)
- land, machinery, premises
- tax advantages, subsidies
- state guarantees, credits, etc.

Private investment sources:

- intellectual property rights of STU Ltd
- investments of large private companies (Khanty-Mansiysky private pension fund, Bank etc.)
- equity capital
- credits, leasing etc

Social, economic and budget effectiveness:

- GDP growth owing to labour efficiency
- cut-down of losses occurring through cargo and passenger delays
- GDP growth as a result of availability of additional oil products for processing
- availability of additional budget resources (transport subsidies, road repairing and maintenance)
- tax inflow from STU operator and adjacent industries (consumers, suppliers)
- reduction of negative ecological impact
- reduction of losses occurring due to road accidents, etc

Commercial effectiveness of the project as a whole and each of its participants:

- investment pay-off
- generation of profits, etc.

**Potential participants
in STU technology development, design, technological support of
construction, manufacturing elements of track and vehicles:**

Participating regions:

UGRA (Khanty-Mansiysk, Surgut, Nyaganj, Nizhnevartovsk, etc.)

**Ural Federal Region (Tyumenj, Ekaterinburg,
Tobolsk, etc.)**

**Siberian Federal Region (Omsk, Novosibirsk, Tomsk, Novokuznezsk,
Kemerovo)**

**Potential participants
in STU technology development, design, technological support of construction,
manufacturing elements of track and vehicles:**

Engo Company, Moscow (by-product gas utilisation equipment)

**Surgut State University, Ugra State University, YUNIIT and other scientific organisations
(organisational and economic back-up, technical and geographical design, personnel)**

ROPAT (Russian Patented Technology, Novosibirsk (hydraulic pile hammer)

Baranov Plant, Ltd., Omsk (gas turbine equipment generating electric energy)

Unitsky String Transport (STU) Ltd., Moscow

Supercomposit Concern, Moscow

(construction materials made of unique super-composites designed by M. Krasnov)

Irtysh and Polyot, Omsk (completion parts for vehicles and infrastructure)

**Tobolskneftehim, Tomskneftehim (oil chemistry plants, producing plastics) etc, including
foreign companies**

Megapolis «Khanty-Mansiysk – Surgut»

Duration less than 1 hour

Population c. 500 000 people

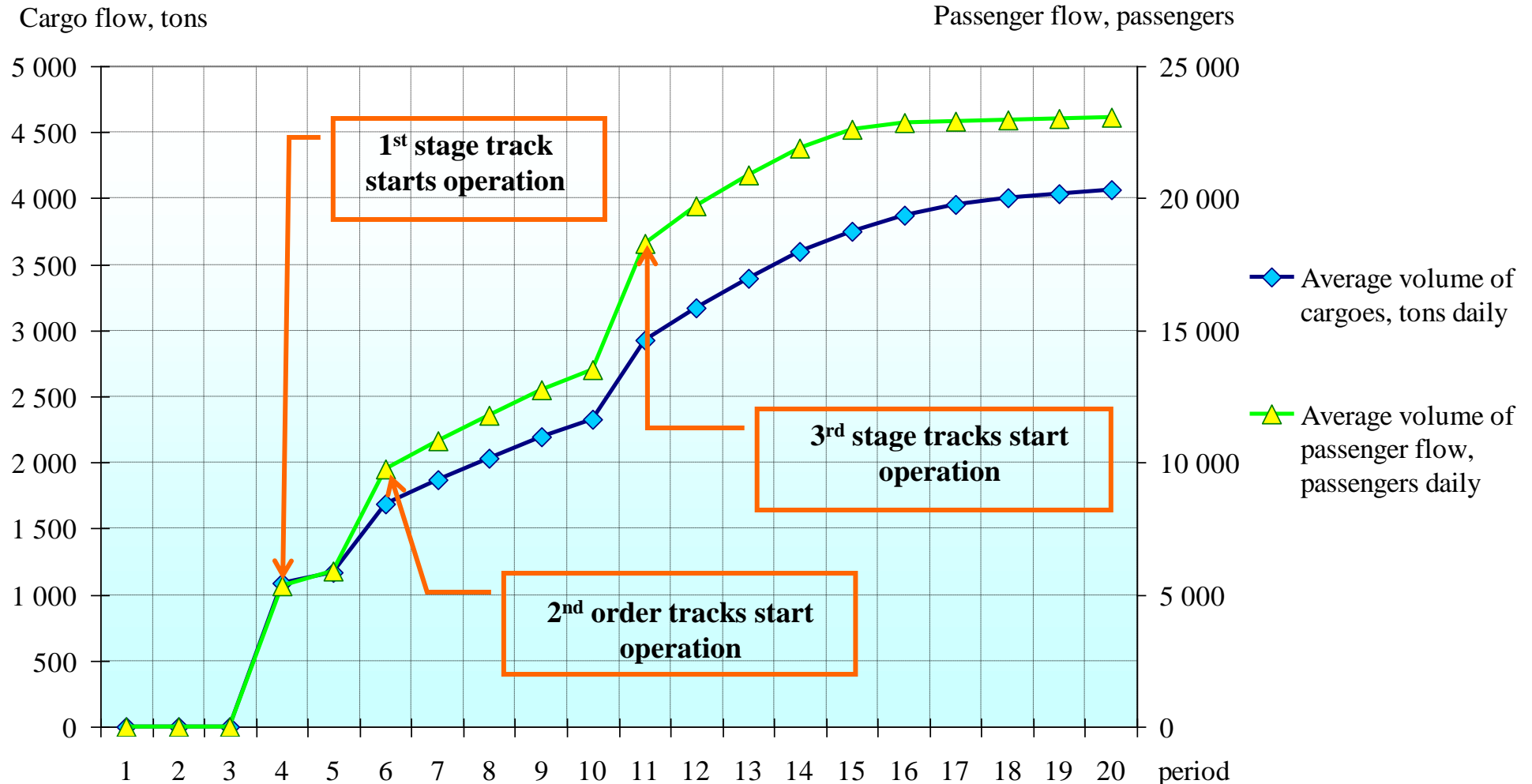
Includes Khanty-Mansiysk, Surgut, Nefteyugansk, Poykovskiy



Dynamics of passenger and cargo flow on Khanty-Mansiysk – Surgut STU track*

Indicator / year	4	9	14	19
Passenger flow, thousands of passengers per day	5.3	12.8	21.9	23.0
Cargo flow, thousands of tons per day	1.1	2.2	3.6	4.0

*Hereinafter calculations for STU project Khanty-Mansiysk – Surgut are represented in the frameworks of implementation of STU strategy in Khanty-Mansiysk Autonomous Okrug, i.e. with the prospective inclusion of the second and third-order tracks



Cost of high-speed two-way two-rail STU track, infrastructure and vehicles on the route Khanty-Mansiysk - Surgut

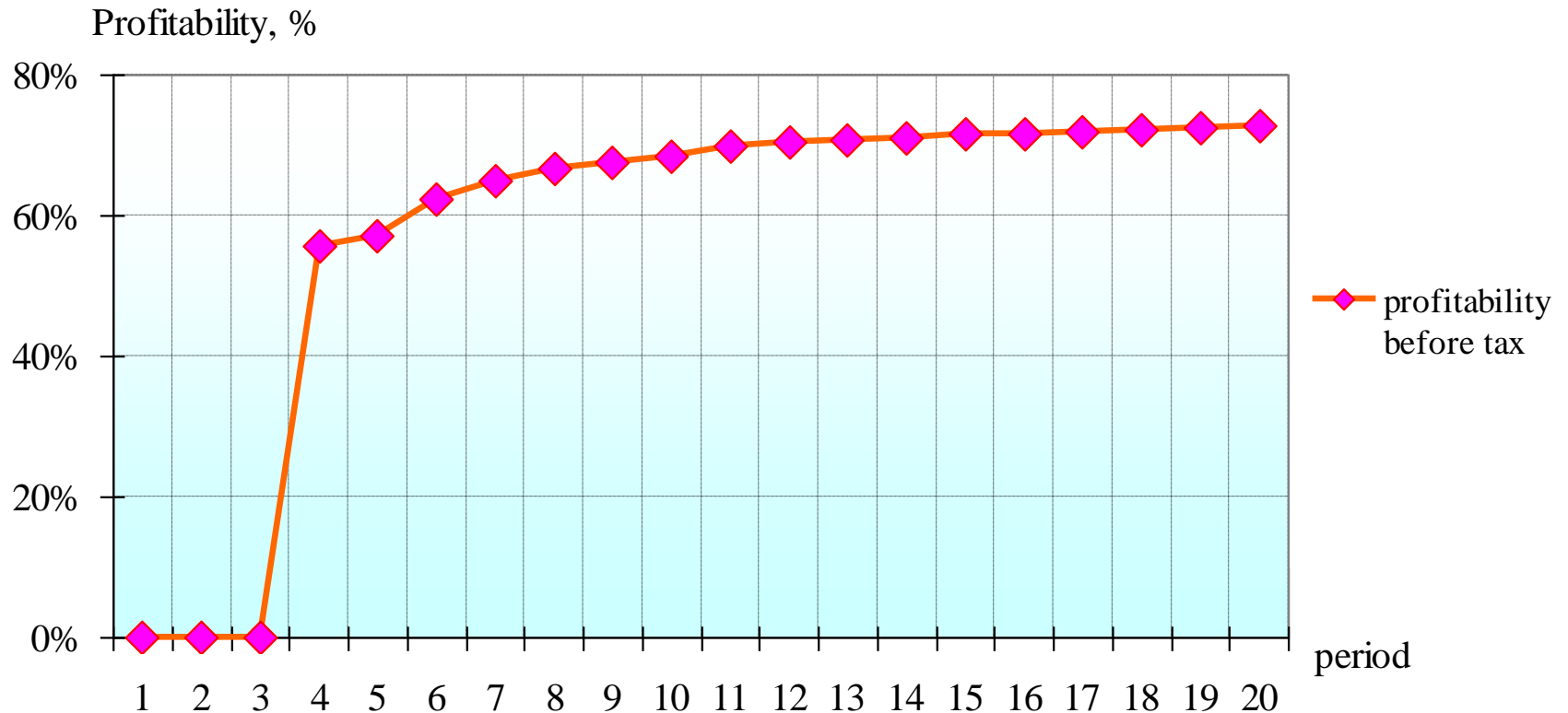
Cost components	Cost*, mln rubles	Cost of 1 km*, mln rubles
Design and development (track structure, infrastructure, unibus)	572	2
Track structure (string rail, intermediate and anchor piles)	6 196	25
Infrastructure (stations, platforms, terminals, servicing parks and garages)	497	2
Vehicles (unibuses)**	1 050	4
Total	8 315	33

* costs as of Q4 2007 prices

** costs of vehicles considering the demand of the first year of operation

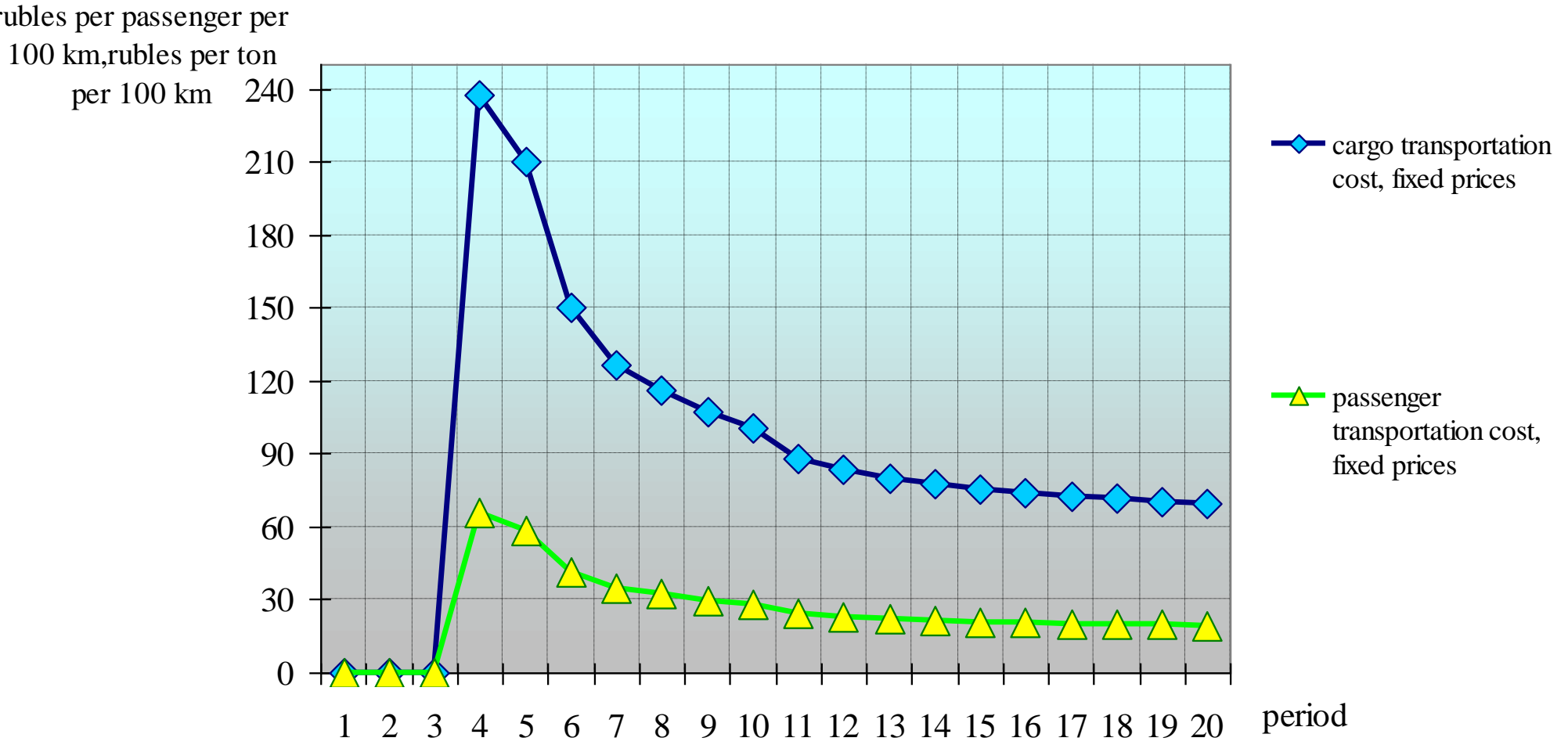
Financial results of the current activity of STU project: Khanty-Mansiysk – Surgut

Indicator, thousands of rubles / Period	1 ... 5	6 ... 10	11 ... 15	16 ... 20	Total
Inflows (income from transportation without VAT)	5 156 630	26 454 927	54 123 499	77 135 967	162 871 021
Current expenses	1 731 725	5 488 325	8 718 500	11 134 237	27 072 787
Profit before tax	3 424 905	20 966 602	45 404 999	66 001 729	135 798 235
Profit tax	842 302	5 031 984	10 897 200	15 840 415	32 611 901
Net profit/ Loss	2 582 603	15 934 617	34 507 799	50 161 314	103 186 334
Profitability (before tax) %	59%	69%	72%	73%	



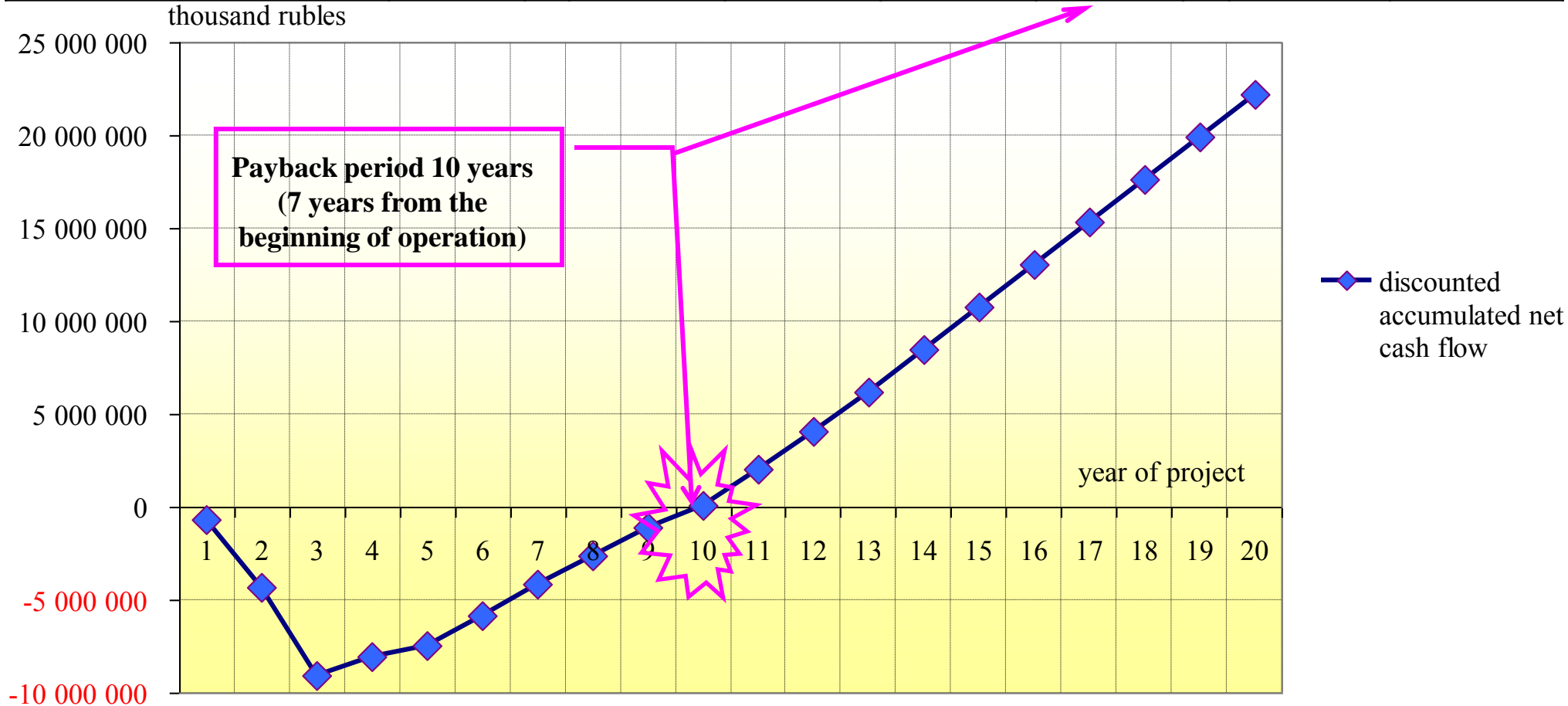
Dynamics of transportation costs on the route Khanty-Mansiysk – Surgut in fixed prices (those of the first year of operation)

Indicator / Year	5	10	15	20
Passenger trip cost on the route (fixed prices), rubles per passenger	146	70	52	48
Passenger trip cost (fixed prices), rubles per passenger per 100 km	58	28	21	19
Cargo trip cost on the route (fixed prices), rubles per ton	524	251	188	174
Cargo trip cost (fixed prices), rubles per ton per 100 km	210	101	75	70



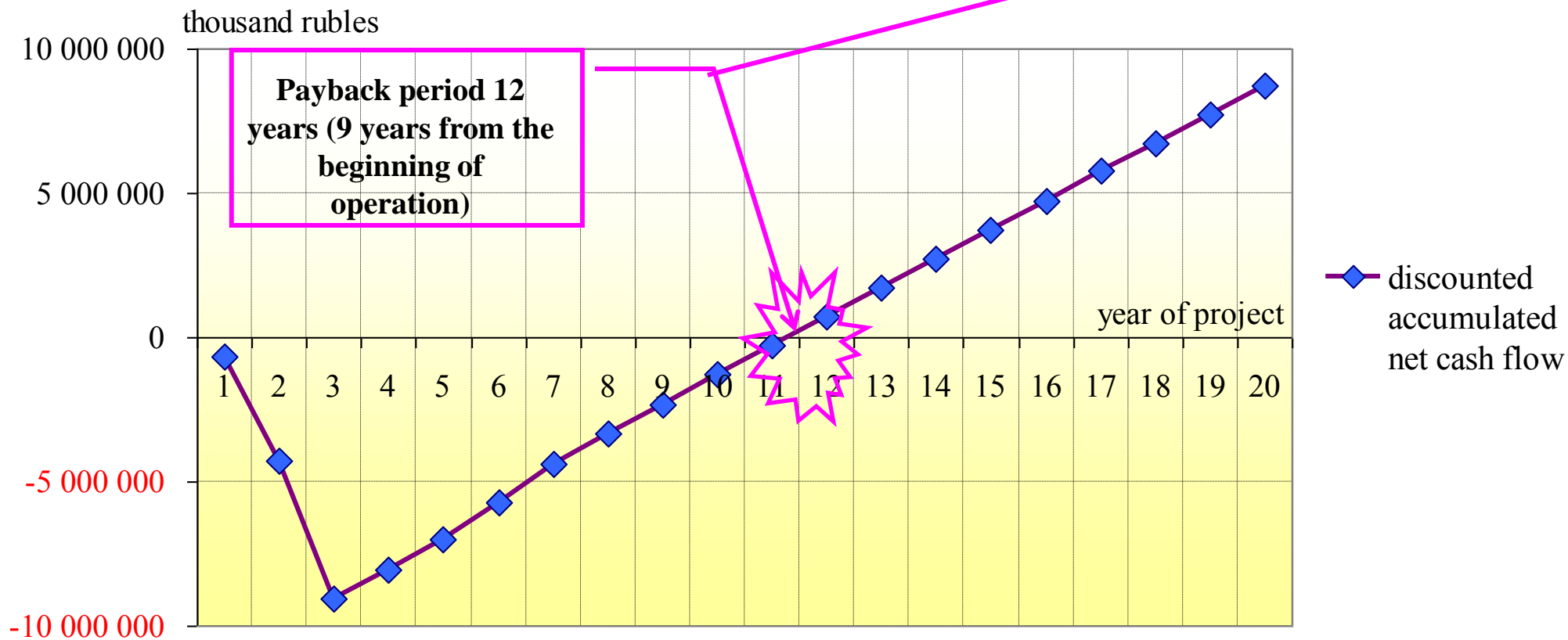
Formation of cash flow of Khanty-Mansiysk – Surgut STU project (in the frameworks of STU in Khanty-Mansiysk Autonomous Okrug strategy)

Indicator, 1000 rubles / per year	1	...	7	8	9	10	...	20	ИТОГО
Net cash flow	-667 684	...	3 352 294	3 357 727	3 680 665	3 117 404	...	11 576 334	94 842 417
Net cash flow, accumulated	-667 684	...	-2 072 490	1 285 237	4 965 903	8 083 306	...	94 842 417	
Net cash flow (discounted)	-667 684	...	1 729 116	1 560 287	1 540 857	1 208 385	...	2 281 704	22 414 584
Net cash flow, accumulated (discounted)	-667 684	...	-4 040 500	-2 480 213	-939 356	269 029	...	22 414 584	



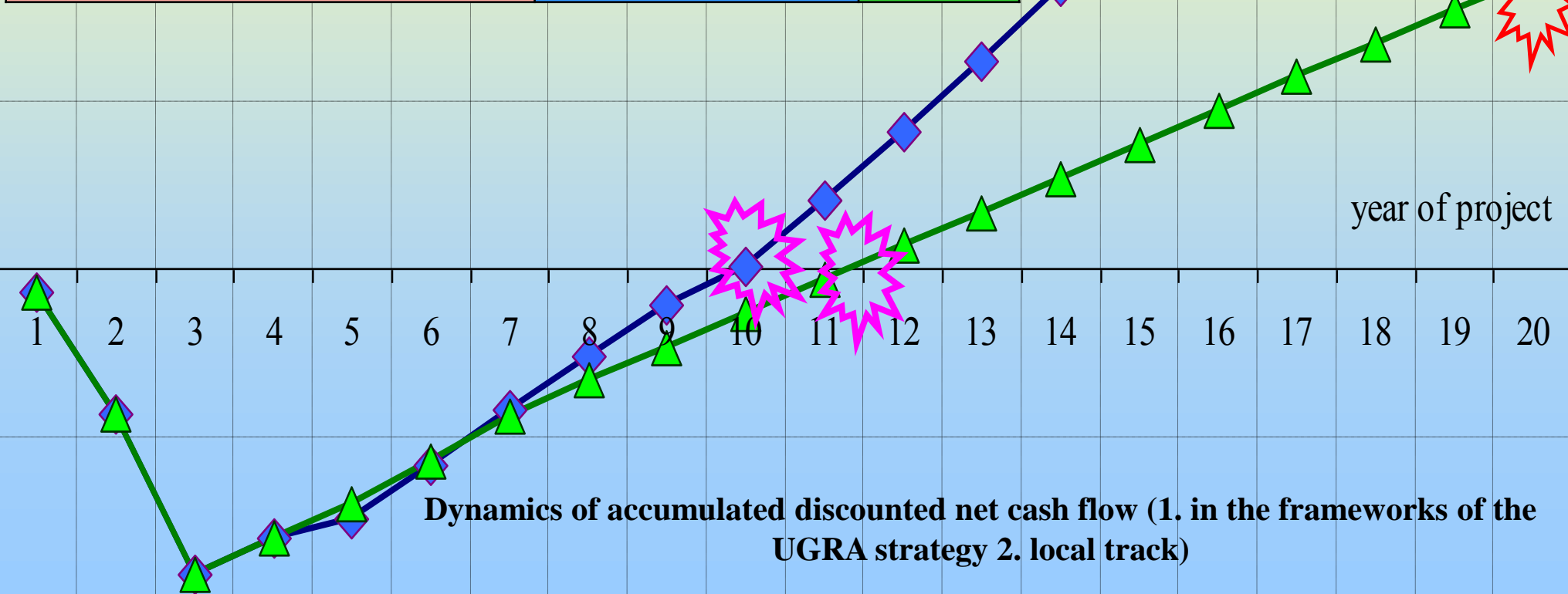
Formation of cash flow of Khanty-Mansiysk – Surgut STU project (local route)

Indicator, 1000 rubles / per year	1	...	9	10	11	12	...	20	ИТОГО
Net cash flow	-667 684	...	2 401 691	2 628 017	2 805 182	3 058 762	...	4 959 432	43 344 464
Net cash flow, accumulated	-667 684	...	1 884 346	4 512 362	7 317 544	10 376 306	...	43 344 464	
Net cash flow (discounted)	-667 684	...	1 005 433	1 018 686	1 006 814	1 016 507	...	977 508	8 711 882
Net cash flow, accumulated (discounted)	-667 684	...	-2 314 977	-1 296 291	-289 477	727 030	...	8 711 882	



Integral indicators of commercial effectiveness of the Khanty-Mansiysk – Surgut STU track project By implementation variants

Integral indicators of commercial effectiveness	Implementaion variant	
	In the frameworks of STU strategy in UGRA	Local track
Net present value, mln rubles	22 414	8 712
Internal rate of return	26.12%	19.50%
Discounted payback period, years	10.0	12.0
Discounted investment profitability index	2.96	1.92



**Effectiveness of participation in the high-speed STU project
Khanty-Mansiysk – Surgut
Investments and income of the main participants:**

Indicator, mln. rubles	STU Ltd	Government (UGRA etc)	Large private investors – founders (Khanty-Mansiysk private pension fund, Bank etc.)	Other investors (stockholders, development institutions)
Investment in equity capital	1 500,0	3 000,0	2 000,	1 000,0
Net present value	4482, 9	8965,8	5977,2	2988,6
Dividends	13380,4	26760,8	17840,5	8920,3
Commercial effect for the participant as the investor	17863,3	35726,6	23817,7	11908,9

Integral indicators of effectiveness
By implementation scenarios of STU Khanty-Mansiysk - Surgut
(according to variants of initial parameters)
Sensitivity analysis

No	Project scenario	Parameter	Parameter variant	Net present value, mln rubles.	NPV deviation	Internal rate of return	IRR deviation	Discounted investment profitability index	DPI deviation	Discounted payback period from the start of operation, years	DPP deviation
1	averse in all parameters	A	1	7 026	-69%	16.23%	-38%	1.60	-46%	12	71%
		B	1								
		C	1								
2	neutral in all parameters	A	2	22 414	0%	26.12%	0%	2.96	0%	7	0%
		B	2								
		C	2								
3	favourable in all parameters	A	3	52 893	136%	40.52%	55%	5.89	99%	4	-43%
		B	3								
		C	3								

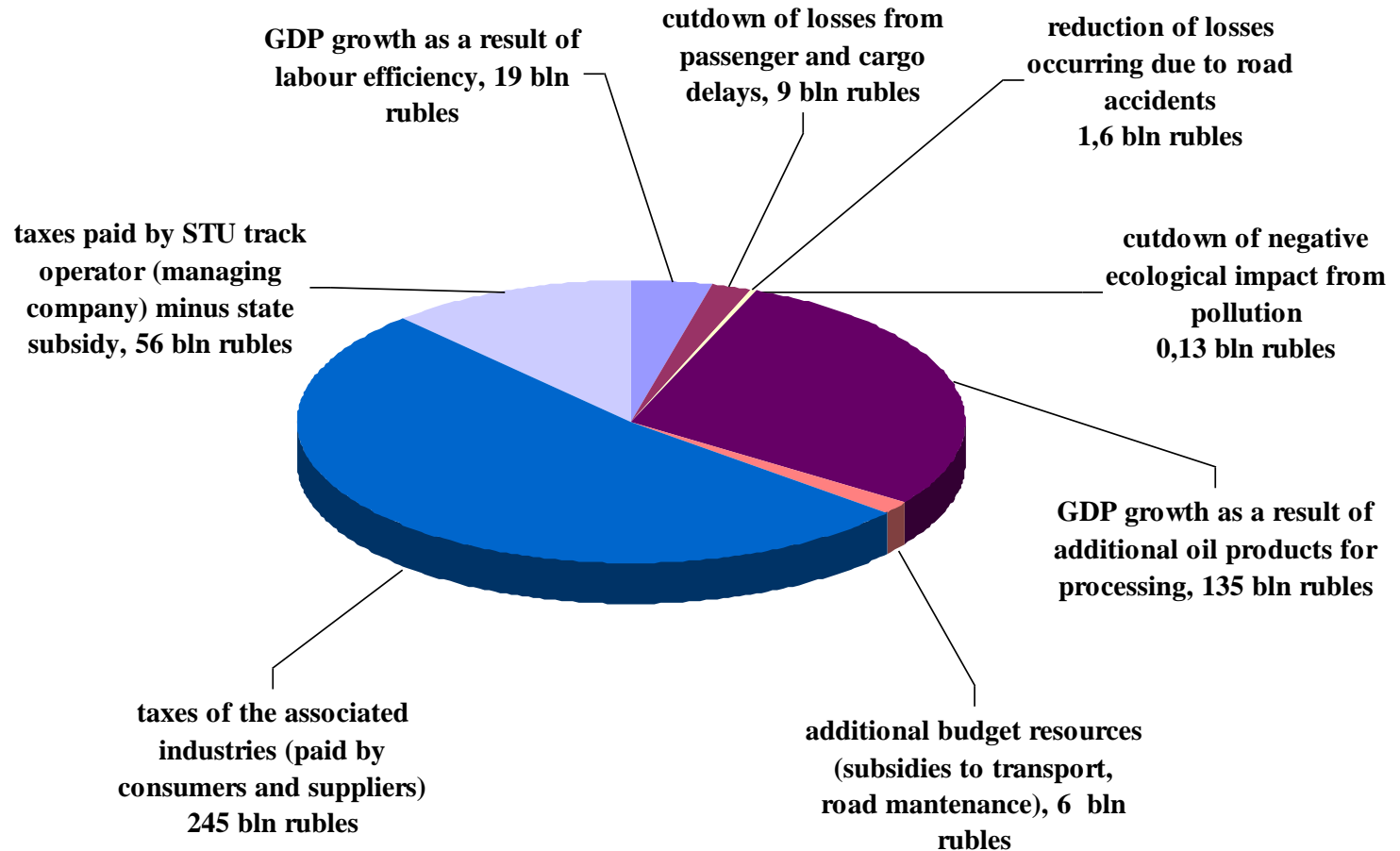
Externalized (social, economic and budget) effect of Khanty-Mansiysk – Surgut STU project*

Integral social and economic effect of the project

471 bln rubles

Budget effect of the project for UGRA

68 bln rubles



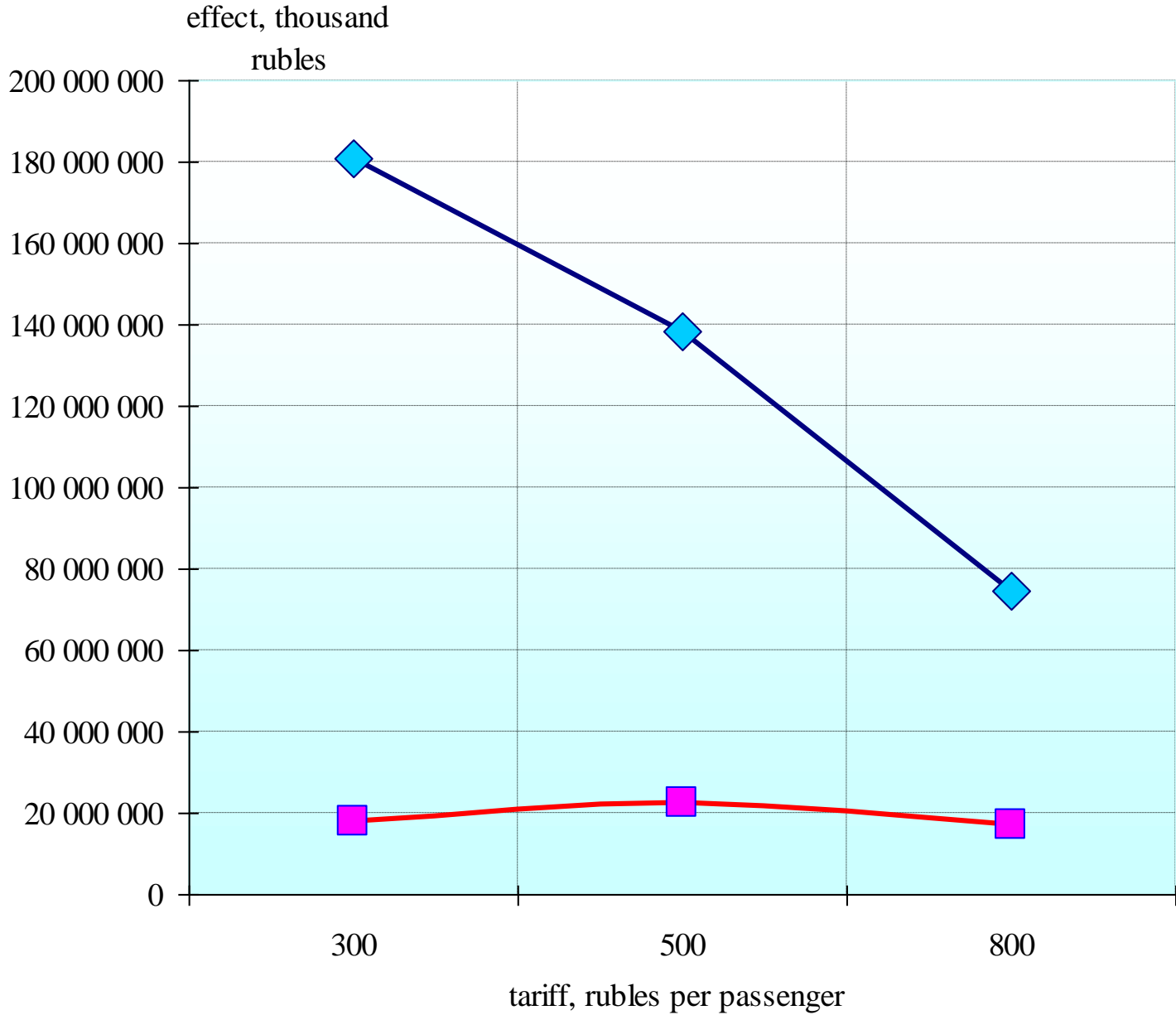
* in the frameworks of STU strategy in UGRA within 20 years of implementation

Integral indicators of commercial and social and economic effectiveness of Khanty-Mansiysk – Surgut STU project by variants of price formation*

Indicator / Price formation scenario	Adverse tariff	Neutral tariff	Favorable tariff
Internal rate of return	23.18%	26.12%	24.04%
Discounted payback period, years	11	10	11
Discounted investment profitability index	2.45	2.96	2.74
Net present value, bln rubles	17.8	22.4	17.1
Discounted social and economic effect, bln rubles	181	138	74
Discounted integral effect, bln rubles	199	161	91
Passenger tariff Khanty-Mansiysk – Surgut, rubles per passenger	300	500	800
Average passenger flow in the first year of operation, passenger per day	6 949	5 345	2 673

* - level of tariff affects social and commercial velocity

Integral indicators of commercial (NPV) and socioeconomic effectiveness of Khanty-Mansiysk – Surgut STU project regardless tariff level



■ net present value ◆ discounted socioeconomic effect, thousand rubles

**Cost comparison of transport infrastructure options
on the route Khanty-Mansiysk – Surgut:
a railroad vs. a high-speed STU track of the same capacity**

Khanty-Mansiysk – Surgut route	Average speed, kmph	Length, km	Track cost per km*, mln rubles	Track cost**, mln rubles
Railroad	70	300	75	22 500
High-speed STU track	286	250	29	7 265
STU cost advantage				15 235

* - cost of the track itself

** - as of Q4 2007 prices

Passenger tariff comparison by types of transport on the route Khanty-Mansiysk - Surgut

Indicator	Type of transport		
	STU*	Coach	Avia
Passenger tariff, rubles per passenger	71	520	1 940
Subsidy, %	0%	n/a	35%
Subsidy, rubles per passenger	0	n/a	679
Effective passenger tariff (including budget expenses), rubles per passenger**	71	520	2 619
Given tariff to STU tariff ratio	1.0	6.1	37.0

* STU tariff is taken for a profitability of current activity of STU operator equal to 20%

** tariffs as of Q4 2007

Cargo tariff comparison by types of transport on the route Khanty-Mansiysk - Surgut

Indicator	Type of transport		
	STU*	Motorway **	Avia**
Cargo tariff, rubles per ton.***	250	1 500	25 000
Given tariff to STU tariff ratio	1.0	6.0	100.2

* STU tariff is taken for a profitability of current activity of STU operator equal to 20%

** motorway and avia transportation tariffs according to ExpressAuto (www.expressauto.ru), transportation length up to 1000 km

*** tariffs as of Q4 2007