KAZAKH INVEST

NATIONAL COMPANY

INVESTMENT OPPORTUNITIES OF KAZAKHSTAN

Niche projects

CONTENT

INTRODUCTION

In order to increase investment attractiveness of the Republic of Kazakhstan and stimulate investments into the national economy, "National Company" Kazakh Invest" JSC in collaboration with Deloitte and PwC has prepared investment proposals for 73 niche projects in various priority sectors of the national economy:

- Agro-industrial complex (28)
- Mining and smelting industry (21)
- Chemistry and petrochemistry (7)
- Machinery and car parts production (2)
- Energy industry (3)
- Transport and logistics (4)
- Tourism (5)
- Public-private partnership (3).

The purpose of the investment proposals is to provide a brief description of projects having the potential to modernize and diversify the national economy and promote the export potential of Kazakhstan.

Detailed business plans and financial models have been developed for each project with more details on the project, market analysis, key financial indicators and competitive advantages. Business plans and financial models are readily available after signing a short memorandum of cooperation and information confidentiality agreement.

AGRO-INDUSTRIAL COMPLEX

Expansion of a poultry meat production complex

Project description

Alel Agro is the largest poultry producer in Kazakhstan with a production capacity of 51 thd tonnes of poultry meat p.a. (26% of the market share in Kazakhstan). It is planned to expand the capacity to 165 thd tonnes and export the output. There is a substantial export potential in China, UAE and CIS countries with the total capacity of the market of imported poultry more than 1 million tonnes p.a. At the same time, the number of exports of poultry meat to Uzbekistan increased from 57 tonnes in 2016 to 172 tonnes in 2017.

Project location

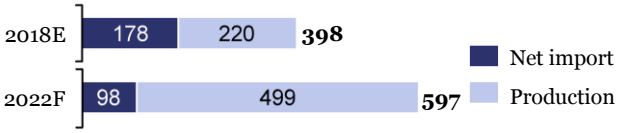
Investment highlights

Upfront investment	$329 MM
NPV	$107 MM
IRR	20%
Payback period	8 years

Market analysis

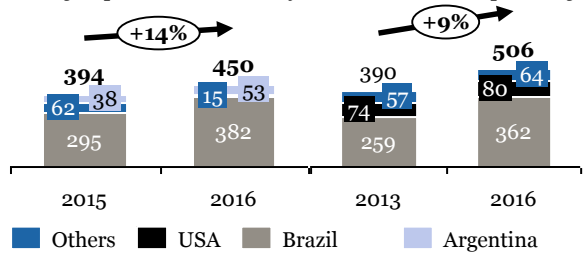
I. 50% of poultry meat consumed in Kazakhstan is imported. Also, a forecasted growth in consumption presents a case for safe-haven **hinter market**.

Poultry meat, 2018E and 2022F, thd tonnes



II. The potential realization markets - China and UAE - are currently on a growth trend. Also, bulk of the imports are from the countries with significantly higher import costs relative to Kazakhstan.

Poultry import in thd tonnes of China and UAE, respectively



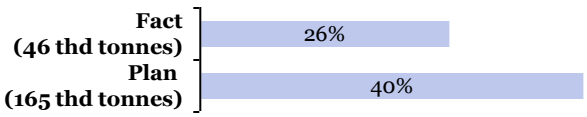
Target Investor Mandate

- Access to external markets
- Supply of broiler technologies

Competitive advantage

I. Now the business accounts for 26% of the entire inner market. The management of this enterprise already designed a comprehensive plan and arranged offtake contracts to increase the market share to 50%.

Actual and expected market share and production volumes, %



II. Proximity to potential sales markets of Uzbekistan and Kyrgyzstan.

III. Availability of own agro brands: Alel, ameral fresh, tasty chick and own parent flock, feed mill and equipment of leading technology suppliers.

Value proposition

This project will allow taking advantage **of import substitution** in the market with the further possibility of exporting products.

Sources: EU Commission, Statistics Committee of the Ministry for national economy of the RK, Union of Poultry Farmers of Kazakhstan

Expansion of a poultry meat production complex

Project description

The current production capacity of 8 thd tonnes p.a. is to be increased to 20 thd tonnes p.a. The existing company already exports its product to Kyrgyzstan. Thus, the end markets are Kazakhstan (80%) and Kyrgyzstan (20%). The project owner has a land plot of 536 hectares and the necessary infrastructure. The initiator expressed willingness to cover part of the required upfront investment.

Project location

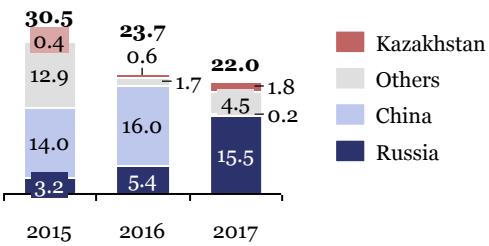
Investment highlights

Upfront investment	$34 MM
NPV	$21 MM
IRR	24%
Payback period	6 years

Market analysis

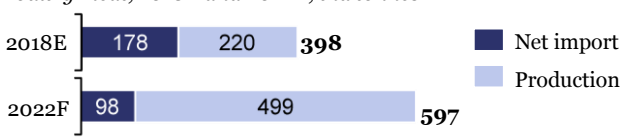
I. **Kyrgyzstan imports** >60% of poultry meat it consumes. Kazakhstan only supplied about 8% of Kyrgyzstan's total import.

Importers of poultry meat to Kyrgyzstan, thd tonnes



II. Kazakhstan imports ~50% of poultry meat consumption. This and the forecasted growth in consumption present a case for a safe-haven **hinter market**.

Poultry meat, 2018E and 2022F, thd tonnes



Target Investor Mandate

- Supply of broiler technologies
- Foreign distributor

Competitive advantage

I. The initiator has a well-established sales of products to Kyrgyzstan, which accounts for 20% of the total production.

II. Close proximity to sales markets: 270 km. To Bishkek (the capital of Kyrgyzstan).

III. Price advantage when exporting to Kyrgyzstan.

Prices by countries exporting to Kyrgyzstan in 2017, thd USD/ tonne

Value proposition

This project allows to capitalize on **existing trade relationship** with Kyrgyzstan by expanding the production volume and provide **import substitution**.

Sources: EU Commission, Statistics Committee of the Ministry for national economy of the RK, Union of Poultry Farmers of Kazakhstan

Construction of a broiler poultry farm

Project description

The project consists of a construction of a full-cycle broiler poultry farm with a floor housing and capacity of 20 000 tonnes of poultry meat p.a. At least 50% of the total production will be sold chilled and at least 50% of the output will be exported to the Eurasian Customs Union, Central Asia and Middle East countries. the Initiator of the project already owns a well-developed poultry farm with a 120 mln annual eggs production and a distribution network for poultry products.

Project location

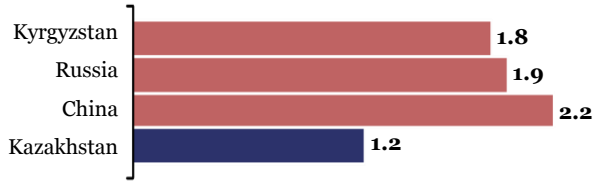
Investment highlights

Upfront investment	$34 MM
NPV	$27 MM
IRR	27%
Payback period	7 years

Market analysis

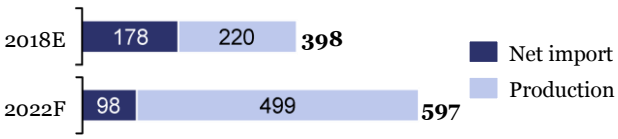
I. Export prices will be notably higher than the prices for domestic sale. This and the low export level of poultry meat (about 6 thd tonnes) favour the case of **exporting** the end product.

Prices by offtaking countries in 2017, thd USD/tonne



II. Kazakhstan imports ~50% of poultry meat consumption. This and the forecasted growth in consumption present a case for safe-haven **hinter market**.

Poultry meat in 2018E and 2022F, thd tonnes

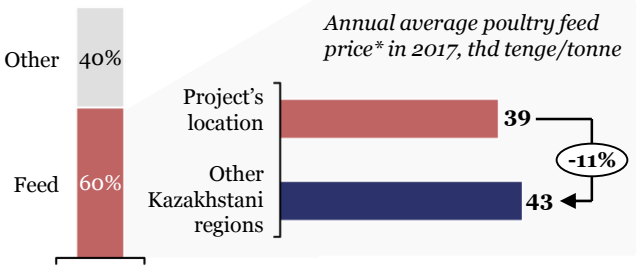


Target Investor Mandate

- Supply of broiler technologies
- Long-term growth
- Foreign distributor

Competitive advantage

Cost of feed takes up **60%** of the total production cost of poultry meat. Feed is **50%** wheat.



*wheat of class 4

Value proposition

This project allows to capitalize on existing **low cost feed** compared to the rest of the country, know-how and provides **safe marketing option**.

Sources: EU Commission, "Kazakh-Zerno" informational and analytical agency, Statistics Committee of the Ministry for national economy of the RK, Union of Poultry Farmers of Kazakhstan

Construction of a broiler poultry farm

Project description

The project plan is a construction of a very efficient and brand new full-cycle broiler poultry farm based on floor housing. The maximum capacity of the production line is 10 thd tonnes of quality and very delicious poultry meat p.a. Investing in this business is particularly lucrative at the moment and the business is an unparalled investment vehicle since the initiator of the project has designed the farm using leading edge technologies. Currently, the company plans to sell its produce to inner market and neighboring countries including Kyrgyzstan and Uzbekistan.

Project location

Investment highlights

Upfront investment	$22 MM
NPV	$10 MM
IRR	18%
Payback period	10 years

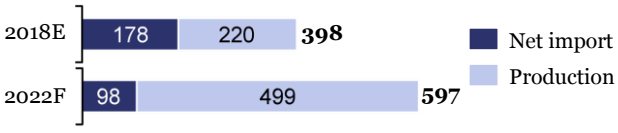
Market analysis

I. Export prices will be notably higher than the prices of domestic sales. This and the low export level of poultry meat (about 6 thd tonnes) favour the case of **exporting** the end product.

Prices by offtaking countries in 2017, thd USD/tonne

II. Kazakhstan imports ~50% of poultry meat consumption. This and the forecasted growth in consumption present a case for safe-haven **hinter market**.

Poultry meat in 2018E and 2022F, thd tonnes



Competitive advantage

Kazakhstan exports poultry meat to Kyrgyzstan in small amounts, but at a lower price than Kyrgyzstan's main supplier – Russia.

Prices by countries exporting to Kyrgyzstan in 2017, thd USD/tonne

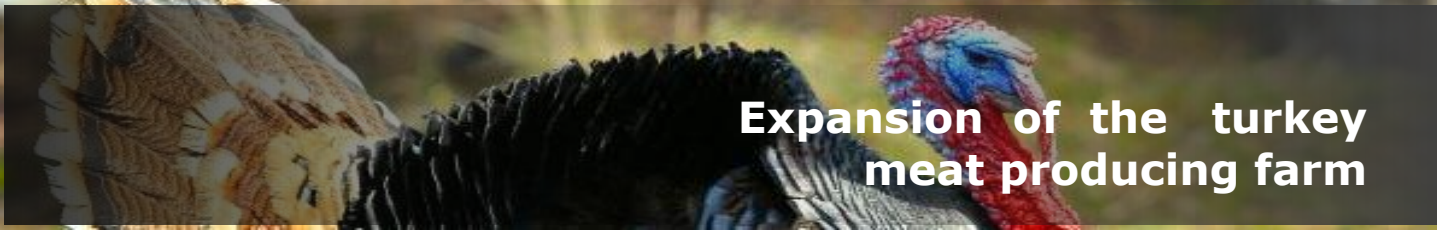
Value proposition

This project allows to capitalize on the **existing trade relationship** with Kyrgyzstan by expanding the production volume and provide **import substitution**.

Target Investor Mandate

- Supply of broiler technologies
- Long-term supply of capital
- Foreign distributor

Sources: Statistics Committee of the Ministry for national economy of the RK, Union of Poultry Farmers of Kazakhstan, International Trade Centre (ITC)



Expansion of the turkey meat producing farm

Project description

The project plans the expansion of turkey meat production plant to 20 thousand tonnes, creation of a breeding reproducer and modernization of the deep processing plant. Current production capacity is 9.5 thousand tonnes of turkey meat in live weight and 7.7 thousand tonnes in slaughter weight. The company produces more than 85 products from turkey meat: sausage, smoked and other delicacies. There is a land plot of more than 200 hectares.

Project location

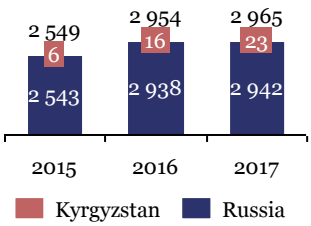
Investment highlights

Upfront investment	$44 MM
NPV	$49 MM
IRR	18%
Payback period	11 years

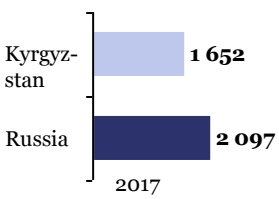
Market analysis

Kazakhstan already exports turkey meat to Russian and Kyrgyzstan. Moreover there came up a need in substitution of imports for a turkey meat.

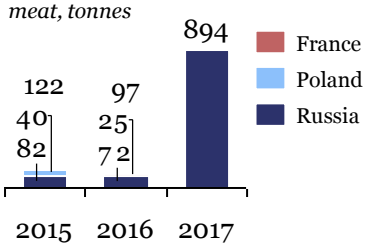
Kazakhstan's export of turkey meat, tonnes



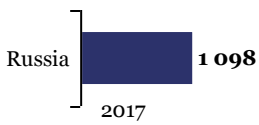
Kazakhstan's export price of turkey meat, USD/tonne



Kazakhstan's import of turkey meat, tonnes



Kazakhstan's import price of turkey meat, USD/tonne



Target Investor Mandate

- Supply of technologies
- Access to external markets

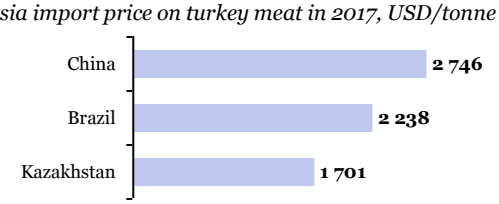
Competitive advantage

The only company in Kazakhstan that grows turkeys and manufactures products from its meat in industrial scale.

Company has long term offtake contracts with 4 wholesale buyers: 2 in Kazakhstan, 1 in Russia and 1 in Kyrgyzstan.

Kazakhstan has the lowest price on product in Russian import market

Russia import price on turkey meat in 2017, USD/tonne



Kazakhstan has the cheapest import price in Russia among importers of turkey meat

Value proposition

This project allows to **capitalize on existing industrial base** and take advantage of **expanding export volumes** in CIS countries.

Sources: Statistics Committee of the Ministry for national economy of the RK, UN Comtrade

Expansion of the duck production farm

Project description

The project plan is to expand production of ducks from 150 tonnes to 6 thousand tonnes of poultry meat per year and 3.3 million heads of poultry per year. The initiator is a large agricultural holding in the North Kazakhstan region, which produces grains, oilseeds, leguminous crops and breeds cattle. It also has 430 thousand hectares, 540 units in the machine-tractor park and a storage capacity of 550 thousand tonnes.

Project location

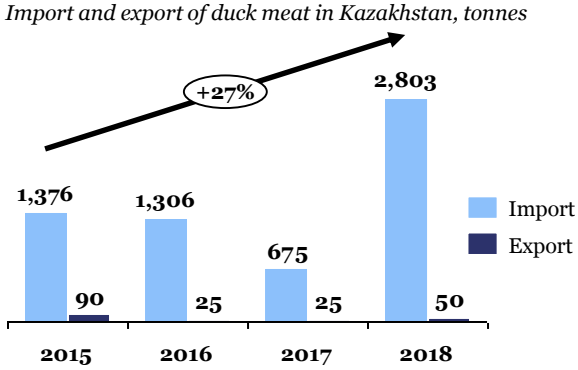
Investment highlights

Upfront investment	$26 MM
NPV	$13 MM
IRR	17%
Payback period	9 years

Market analysis

There is an increase in imports of duck meat over the past 4 years. The growth accounted for 27%, which shows an increase in demand for the product in the Kazakhstan market.

Import and export of duck meat in Kazakhstan, tonnes



During 2014-2017, main importers in Kazakhstan were the following countries: Hungary (58%), Russaia (28%) and USA (14%). At the same time, Kazakhstan exported duck meat to: Russia (28,24 tonnes) and UAE (0,01 tonnes).

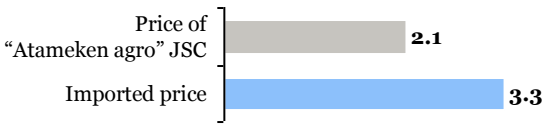
Target Investor Mandate

Competency to transfer technologies

Competitive advantage

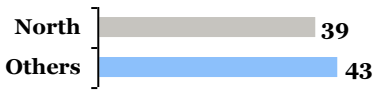
I. The sale price of duck meat, which JSC "Atameken agro" charges, is 35% lower than the price of imported duck meat.

Sale price of duck meat, thd USD/tonne



II. Average price of bird feed in North Kazakhstan region is 10% lower than the average price in other regions.

Average price of bird feed, tenge/kg



Bird feed is one of the main operating expenditures, which accounts for 60% of total operating expenditures.

Value proposition

The project allows to occupy a niche in the domestic market as the largest producer of duck meat and produce 6 000 tonnes of poultry meat per year.

Sources: Statistics Committee of the Ministry for national economy of the RK, Union of Poultry Farmers of Kazakhstan

Construction of a feed yard and a cattle meat processing plant

Project description

The project plan is to expand existing meat production and processing (steaks, sausages, offals) for export. The company exports 6 thd heads of sheep to Iran and more than 300 heads of cattle to Uzbekistan p.a. The company has already 20 ha land plot and estimates to sell 40 thd heads equivalent amount of meat p.a. The initiator was recognized as one of "100 new persons of Kazakhstan" for his business achievements and trusted relations with buyers.

Project location

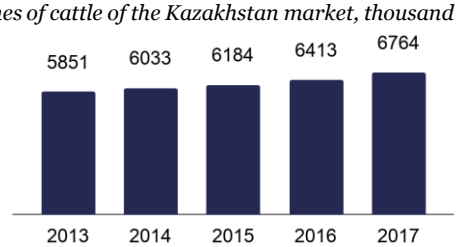
Investment highlights

Upfront investment	$16 MM
NPV	$15 MM
IRR	25%
Payback period	7 years

Market analysis

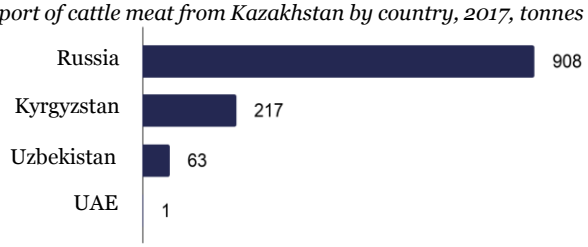
On the domestic beef market in Kazakhstan, meat is provided by more than 90%.

Volumes of cattle of the Kazakhstan market, thousand heads



The main markets for Kazakhstan meat are Russia, Kyrgyzstan and Uzbekistan.

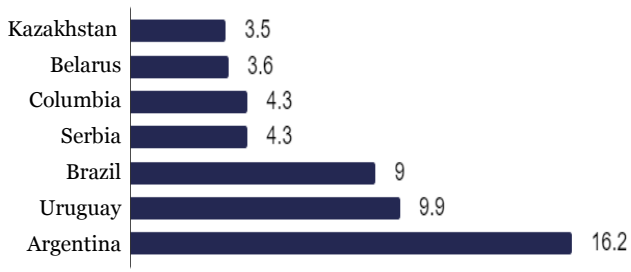
Export of cattle meat from Kazakhstan by country, 2017, tonnes



Competitive advantage

The cost of exported beef has a price advantage in the global market.

Price advantage in the Russian market in 2017, USD/kg



Value proposition

This project allows an investor to take advantage of growing export of meat to Iran and Uzbekistan. Price and quality are key potential drivers of sales.

Target Investor Mandate

- Able to provide an offtake contract
- A supplier of technologies

Source: Interntaional Trade Centre (ITC), economy.gov.kz, worldbank.org, stat.uz

Construction of a cattle feedlot

Project description

The project aim is to expand existing feedlot from 3,500 cattle to 25,000 cattle of rapid fattening, followed by the production of meat, meat products and sausages to 4,500 tonnes per year. The construction of plant was started in 2014, as well as the introduction of advanced breeding technologies, keeping and fattening livestock. It is also planned to purchase fodder crops, which will be sown on the feed area for intensive fattening of livestock.

Project location

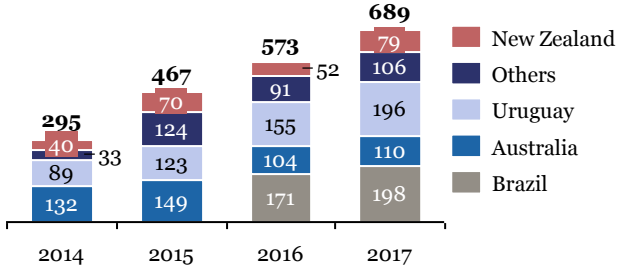
Investment highlights

Upfront investment	$19 MM
NPV	$10 MM
IRR	18%
Payback period	7 years

Market analysis

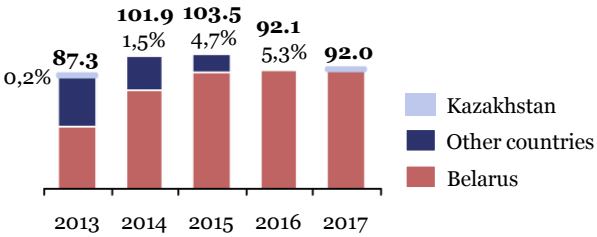
I. China is a fast-growing and lucrative market.

Import volumes of frozen meat in China 2014-2017, thd tonnes



II. Another perspective offtaker of bovine meat is Russia.

Bovine meat import in Russia, thd tonnes



Target Investor Mandate

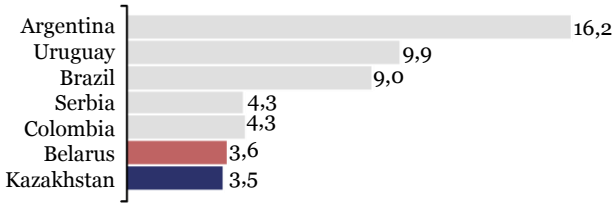
- Long cheap financial resources
- Technologies

Competitive advantage

The price of Kazakhstani bovine meat is compatible with other importers to China and Russia.

Bovine meat (frozen) import prices of China in 2017, USD/tonne

Bovine meat (fresh and chilled) import prices of Russia, 2017, thd USD/tonne



Value proposition

This project allows to take advantage of **exporting** to China while having **cost competitive advantage** within China's importer countries.

Source: International Trade Centre (ITC), Ministry for national economy of the RK, Statistics Committee of the Ministry for national economy of the RK, UN Comtrade

Construction of feedlot and meat processing plant in West Kazakhstan

Project description

The project plan is to construct a meat processing plant with a capacity of 80-120 heads per shift and feedlot for 10 thousand heads per year. The initiator has a land plot of 37.5 hectares and a building for a plant in the village of Yanaykino, Zelenovsky district in the West Kazakhstan region. It is planned to purchase equipment for the meat processing plant, create a feedlot, purchase livestock and carry out construction and installation work. The planned market for products will be Kazakhstan and China.

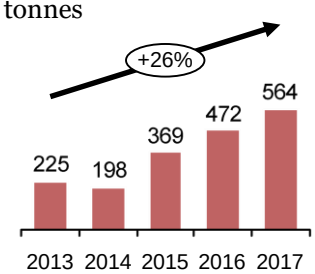
Project location

Investment highlights

Upfront investment	$17 MM
NPV	$28 MM
IRR	58%
Payback period	1 year

Market analysis

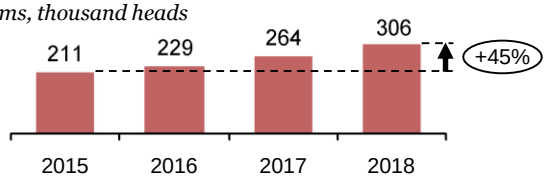
I. Import of frozen bovine (boneless) to China, thd. tonnes



Over the past 4 years Import of bovine in China grew more than 2.5 times, CAGR is 26%

II. Over the past 4 years, the average growth of the livestock population of cattle farms WK is 13%, which is a favorable condition for the project in the form of - a growing resource base.

The dynamics of the amount of cattle in West Kazakhstan farms, thousand heads



Target Investor Mandate

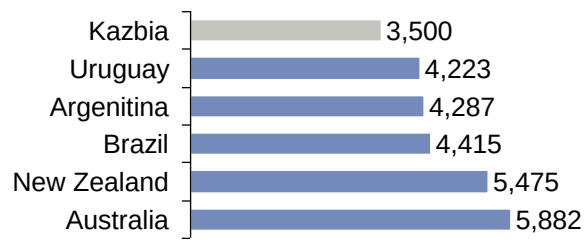
- Long cheap financial resources
- Meat Distribution Channels to China
- Ability to provide an offtake contract
- Experience in Chinese market

Competitive advantage

I. Subsidies that cover 25% of all capital expenditures and pay $ 0.55 per kg (per 1 kg increase in live weight).

II. Kazbia has a competitive advantage in price, the proposed price of products is 17% lower than that of a competitor with the lowest price.

Prices of the main importer countries in China for 2017, US dollars / tonnes



Value proposition

Participation in this project will allow investor to export frozen beef to China and monetize the growth of consumer demand for meat in China.

Sources: Statistics Committee of the Ministry for National Economy of the RK, International Trade Centre

Beef production

Project description:

Construction of a site for fattening cattle and a meat processing complex

Investment amount:
US$ 40 536 – 41 700 thousand

Production capacity:

production of 7,115 tons of beef per year

Production: beef

Project location:
Implementation of the Project on an industrial scale is possible in 11 regions of the Republic of Kazakhstan

Realization period:
24 years, including 1 year of construction

Target markets: Russia, China, Kazakhstan

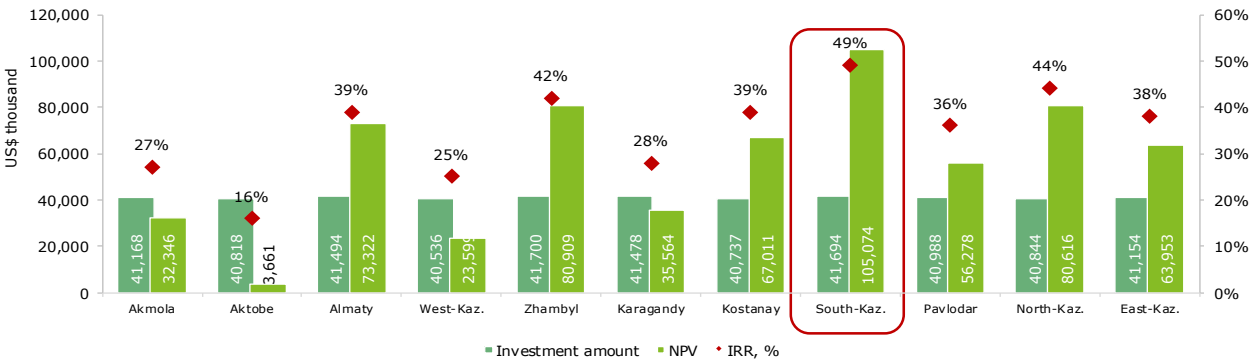
Suppliers: Kazakhstan cattle breeding farms

Consumers: the markets of China and Russia; wholesale market of Kazakhstan

Market background:

- *Export prospective* - the total volume of imports of neighboring countries exceeded 944 thousand tones of beef in 2016.
- *Competitiveness* – The fact that beef is generally US$ 4.5/kg cheaper in Kazakhstan than in neighbouring countries.
- *Low production cost* – The availability of cheap fodder and the cheapness of skilled labor.
- *Resources* – availability of pasture land in Kazakhstan more than 180 million hectares for livestock and meat production.
- *State support* is provided for the entire production chain and takes the form of investment preferences

Key investment indicators



Prospective regions

Regions with the best investment indicators

Quality indicators of the project

	Export potential	Climatic conditions	Raw material availability
Akmola	High	Suitable	Medium
Aktobe	High	Suitable	High
Almaty	High	Favorable	High
West-Kaz.	High	Suitable	High
Zhambyl	Medium	Favorable	Below average
Karagandy	Medium	Suitable	High
Kostanay	High	Acceptable	Medium
South-Kaz.	Medium	Favorable	High
Pavlodar	High	Suitable	Medium
North-Kaz.	High	Suitable	Below average
East-Kaz.	High	Favorable	High

Mutton production

Project description:

Construction of a site for fattening cattle and a meat processing complex

Investment amount:
US$ 31 669 – 33 389 thousand

Production capacity: production of 6,842 tons of marketable mutton per year

Production: mutton

Project location:
Implementation of the Project on an industrial scale is possible in 11 regions of the Republic of Kazakhstan

Implementation period:
24 years, including 1 year of construction

Target markets: Russia, China, Kazakhstan

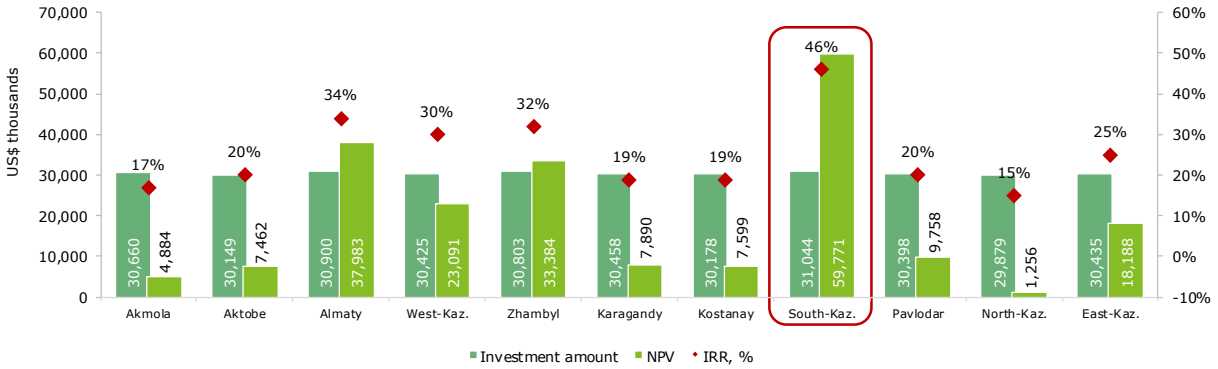
Suppliers: Kazakhstan cattle breeding farms

Consumers: the markets of China and Russia; wholesale market of Kazakhstan

Market background:

- *Demand growth* - According to the OECD, global mutton consumption grew by an average of 150,000 tones in 2012-2016.
- *Competitiveness* – Mutton is US$ 3.5/kg cheaper in Kazakhstan than in neighbouring countries.
- *Low production cost* – The availability of cheap fodder and the cheapness of skilled labor.
- *Resources* – availability of pasture land in Kazakhstan more than 180 million hectares for livestock and meat production.
- *State support* is provided for the entire production chain and takes the form of investment preferences.

Key investment indicators



Prospective regions

Regions with the best investment indicators

Quality indicators of the project

	Export potential	Climatic conditions	Raw material availability
Akmola	High	Suitable	Medium
Aktobe	High	Suitable	High
Almaty	High	Favorable	High
West-Kaz.	High	Suitable	High
Zhambyl	Medium	Favorable	Below average
Karagandy	Medium	Suitable	High
Kostanay	High	Acceptable	Medium
South-Kaz.	Medium	Favorable	High
Pavlodar	High	Suitable	Medium
North-Kaz.	High	Suitable	Below average
East-Kaz.	High	Favorable	High

Pork production

Project description:

Construction of a site for fattening pigs and meat processing complex

Production capacity: production of 11 thousand tons of commercial pork per year

Production: commercial pork

Project location:

Implementation of Project on an industrial scale is possible in 4 regions of the Republic of Kazakhstan

Implementation period:
24 years, including 1 year of construction

Target markets: Russia, China, Kazakhstan

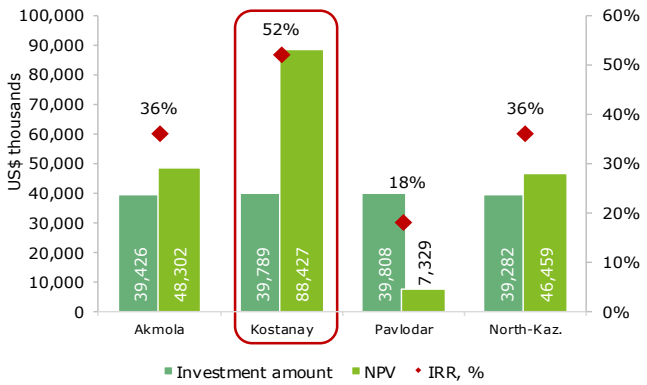
Suppliers: Kazakhstani pig farms

Consumers: the markets of China and Russia; the wholesale market of Kazakhstan

Market background:

- *Export prospects* - Total pork imports into Kazakhstan exceeded 1,875 thousand tonnes in 2016.
- *Competitiveness* – Prices for pork in Kazakhstan are approximately US$ 1.6 lower than in neighbouring countries.
- *Low production cost* – Cheap fodder and the relative low cost of skilled labor.
- *Resources* – availability of pasture land in Kazakhstan more than 180 million hectares for livestock and meat production.
- *State support* is provided for the entire production chain and takes the form of investment preferences.

Key investment indicators



Payback period

Region	Payback period, years	Discounted payback period
Akmola	3.6	4.4
Kostanay	3.0	3.4
Pavlodar	5.0	10.3
North-Kazakhstan	3.7	4.5

Prospective regions

Regions with the best investment indicators

Quality indicators of the project

	Export potential	Climatic conditions	Raw materials availability (pigs)
Akmola	High	Favorable	High
Kostanay	High	Favorable	High
Pavlodar	High	Favorable	Medium
North-Kaz.	High	Favorable	High

Dairy processing plant

Project description:

Construction of a modern dairy processing plant with a full production cycle

Investment amount:

US$ 22 026 – 22 326 thousands

Production capacity:

Number of farms - 14 with 200 heads of milk cattle, unpasteurized milk production – 17,864 tones, unpasteurized milk processing – 11,769 tones, pasteurised milk production – 4,206 tones, sour milk poduction – 2,337 tones, cheese – 88 tones, butter - 133 tones, cottage cheese – 144 tones and sour cream – 245 tones

Project location:

Implementation of Project on an industrial scale is possible in 10 regions of the Republic of Kazakhstan

Implementation period:

24 years, including 1 year of construction

Target markets: Kazakhstan

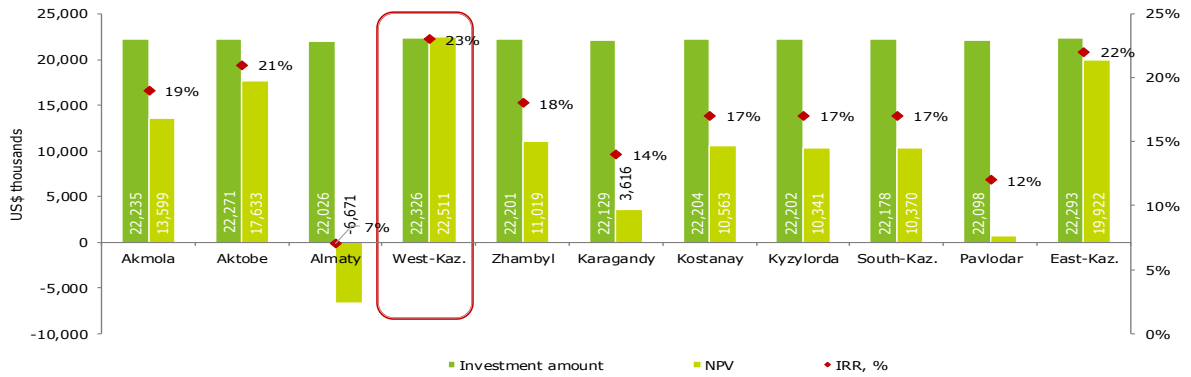
Suppliers: representatives of collective farms, farm and households

Consumers: retail food distribution networks for the population

Market background:

- *Reliance on imports* – Imports account for approximately 20% of dairy products consumed in Kazakhstan.
- *Insufficient milk processing* – Only around 18% of all unpasteurized milk was actually processed in Kazakhstan in 2016.
- *Production deficit* – The country has a shortfall of additional production capacities of 175 thousand tones of sour milk, 60 thousand tones of sour cream, 50 thousand tones of cottage cheese and other diary products.
- *Export potential* – In additional significant domestic importance, dairy products have great export potential
- *Government support* is provided along the entire production chain, and includes investment preferences, concessional loans and subsidies to investors to reduce production costs, and tax and import customs duty breaks.

Key investment indicators



Quality indicators of the project

Region	Akmola	Aktobe	Almaty	West-Kaz.	Zhambyl	Karagandy	Kostanay	Kyzylorda	South-Kaz.	Pavlodar	East-Kaz.
Domestic consumption	Medium	Medium	High	Below average	Medium	Medium	Medium	Medium	High	Medium	High
Oblast market	Below average	Medium	Below average	Medium	High	High	Below average	Medium	High	Medium	High
Milk price	Medium	High	Below average	High	Medium	Medium	High	Medium	High	Below average	Medium
Dairy products price	Medium	High	Below average	High	Medium	Medium	Medium	Medium	Below average	Medium	Medium

Regions with the best investment indicators

Construction of a trout farm

Project description

The project provides for the organization of the activities of a commercial fish breeding enterprise in the basins along the Chilik river, Almaty region, as well as in the cages at the Bartogai reservoir. The total volume of production will be 7 200 tonnes of trout fish per year. The company is the largest producer of rainbow trout in the Republic of Kyrgyzstan. The current capacity of production and processing of products is 600 tonnes of rainbow trout per year.

Project location

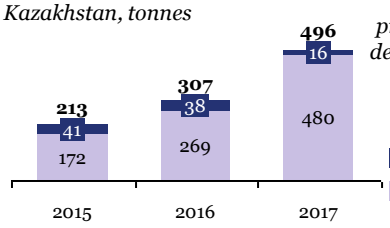
Investment highlights

Upfront investment	$16 MM
NPV	$37 MM
IRR	41%
Payback period	5 years

Market analysis

I. Main exporter of trout fish products to Kazakhstan is Russia with share ~98%.

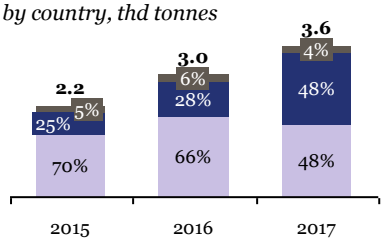
Trout fish import and production in Kazakhstan, tonnes



*Import of trout fish products to Kazakhstan declined ~**2,4** times and production increased ~**2,8** times during 2015-2017*

II. Main exporters of trout fish products to Russia are Armenia and Turkey with share ~95%.

Trout fish import to Russia by country, thd tonnes



*During 2015-2017, import of trout fish products to Russia increased **2,4** times*

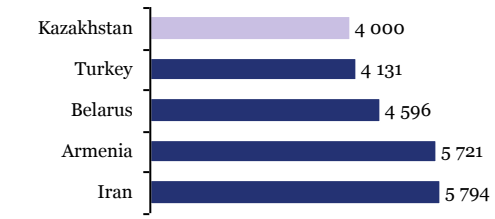
Target Investor Mandate

Long cheap financial resources

Competitive advantage

The company is the **largest producer** of rainbow trout in the Republic of Kyrgyzstan, and it has long-term **offtake contracts** with Russia for the whole amount of produced trout fish.

Trout fish import prices of Russia vs prices of producer in Kazakhstan, USD/tonne



Kazakhstan has comparative **price advantage** among other importers in Russian market.

Value proposition

The project has the benefits of location, possibility of **efficient** use of water resources for trout production, and potential for **import substitution** and increase **export volume.**

Sources: Statistics Committee of the Ministry for national economy of the RK, International Trade Centre

Sturgeon farming

Project overview:

A creation of modern farming of commercial fish in cage lines with subsequent processing and sale in domestic and foreign markets

Investment amount:
US$ 25,363 – 25,525 thousand

Capacity: 1,000 tones of frozen and chilled sturgeon (bester) per year

Location: Implementation of the Project on an industrial scale is possible in 14 regions of the Republic of Kazakhstan

Project implementation period:

24 years, including 1 year of construction

Target markets: Kazakhstan, Russia, China

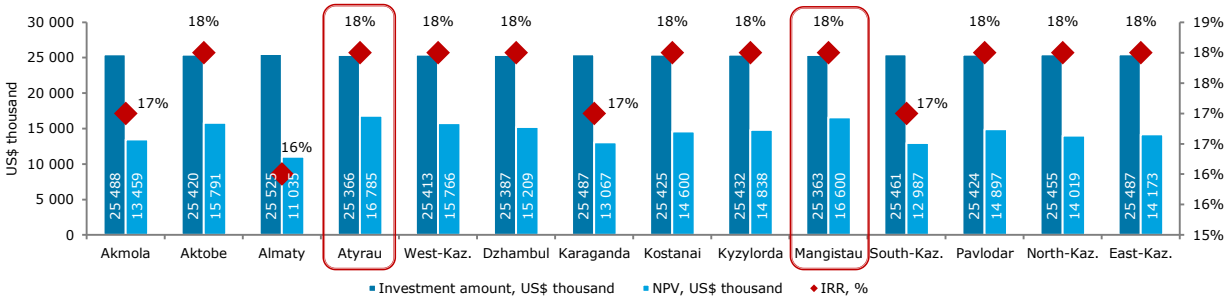
Suppliers: companies specialized in fish food and producers of fertilized roe

Consumers: representatives of main food distribution chains (supermarkets, grocery stores, restaurants, cafes, etc.)

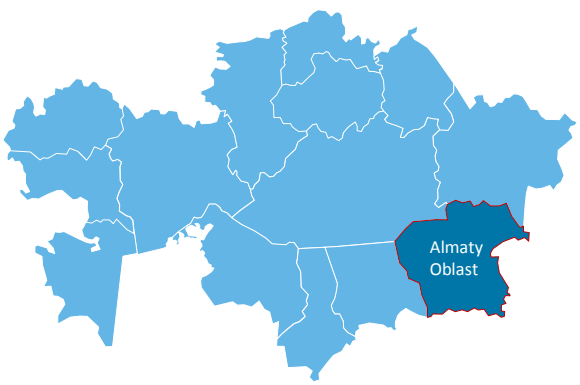
Market prerequisites:

- *Ban on industrial catches.* Due to its endangered status, a moratorium is in place for sturgeon fishing in Kazakhstan
- *Production deficit.* In 2016 farmed sturgeon reached only 312 tonnes, which does not cover domestic demand.
- *Export potential.* China is the largest importer and consumer of fish; per capita consumption of fish in China is 42 kg; According to the OECD forecasts this figure will reach 50 kg in 2026. The Russian market due to the sanctions has lost the import of products from many countries which is favorable for producers from Kazakhstan.
- *State support.* In the State Agricultural Industry Development Programme for 2017-2021 farming of valuable fish species is a priority in reducing imports.

Key investment indicators



Prospective regions



Regions with the most favorable investment indicators

Quality indicators of Project

Oblast	Water resources	Climate	Market development
Akmola	Medium	Acceptable	Medium
Aktobe	Medium	Favourable	High
Almaty	High	Favourable	High
Atyrau	Low	Acceptable	High
West-Kazakhstan	Low	Acceptable	High
Dzhambul	Medium	Favourable	Low
Karaganda	Medium	Acceptable	Medium
Kostanai	Medium	Acceptable	High
Kyzylorda	Medium	Favourable	High
Mangistau	Low	Favourable	High
South-Kazakhstan	Medium	Favourable	High
Pavlodar	Medium	Acceptable	High
North-Kazakhstan	Medium	Acceptable	High
East-Kazakhstan	Medium	Favourable	High

Trout farming

Project overview:

A full cycle of trout production, including incubation of larvae, cultivation of commercial fish in cage lines and subsequent processing of fish in the refrigeration facilities

Investment amount: US$ 22,299 thousand

Capacity: 1,450 tonnes of frozen and chilled rainbow trout per year

Location: Implementation of the Project on an industrial scale is possible in 14 regions of the Republic of Kazakhstan

Project implementation period:

24 years, including 1 year of construction

Target markets: Kazakhstan

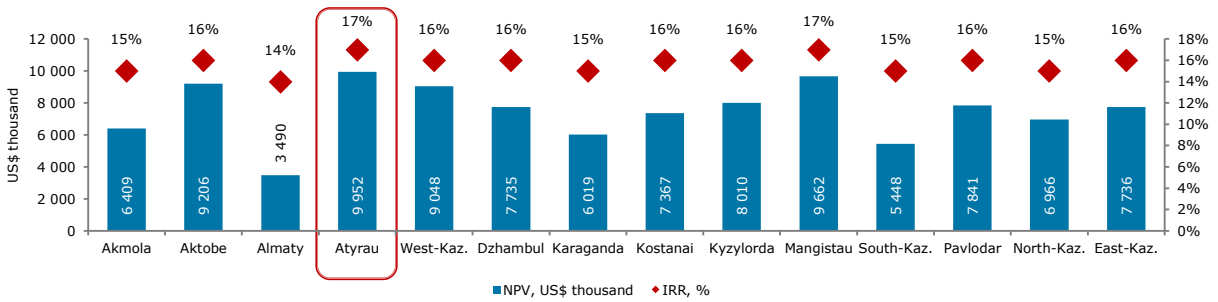
Suppliers: companies specialized in fish food and producers of fertilized roe

Consumers: representatives of main food distribution chains (supermarkets, grocery stores, restaurants, cafes, etc.)

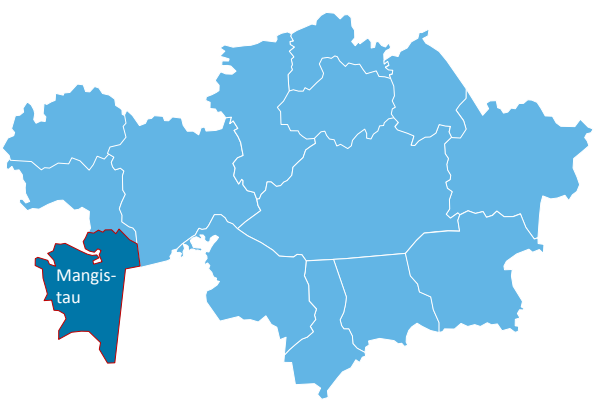
Market prerequisites:

- *Ban on industrial catches.* In Kazakhstan, trout is bred in small quantities in cool mountain lakes in the east and south of the country, which prevents it from being caught for industrial purposes.
- *Production deficit.* In 2016 farmed trout reached only 269 tonnes, which does not cover domestic demand.
- *Import replacements.* Demand for trout is mostly met by imports. In 2016, Kazakhstan imported 524 tonnes of trout, which is double the amount farmed.
- *State support.* In the State Agricultural Industry Development Programme for 2017-2021 farming of valuable fish species is a priority in reducing imports

Key investment indicators



Prospective regions



Regions with the most favorable investment indicators

Quality indicators of Project

Oblast	Water resources	Climate	Market development
Akmola	Medium	Acceptable	Medium
Aktobe	Medium	Acceptable	Medium
Almaty	High	Favourable	Medium
Atyrau	Low	Favourable	Medium
West-Kazakhstan	Low	Acceptable	Medium
Dzhambul	Medium	Favourable	Medium
Karaganda	Medium	Acceptable	Medium
Kostanai	Medium	Acceptable	Medium
Kyzylorda	Medium	Favourable	Medium
Mangistau	Low	Favourable	High
South-Kazakhstan	Medium	Favourable	Low
Pavlodar	Medium	Acceptable	Medium
North-Kazakhstan	Medium	Acceptable	Medium
East-Kazakhstan	Medium	Favourable	Medium

Production of sunflower oil

Project description

The project plan is to build a modern oil extraction plant with a capacity of 310 thousand tonnes of sunflower seeds. As raw materials, sunflower seeds will be purchased from producers of the Kostanay region, with whom preliminary supply contracts have been concluded. The sales market for this project will be 2 own factories in Almaty and Karaganda, where it is planned to supply 80% of the produced sunflower oil. The remaining 20% of the production is planned to be exported to the markets of Uzbekistan and Kyrgyzstan.

Project location

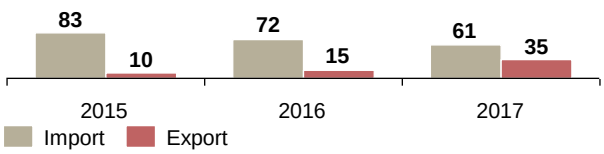
Investment highlights

Upfront investment	$114 MM
NPV	$95 MM
IRR	33%
Payback period	6 years

Market analysis

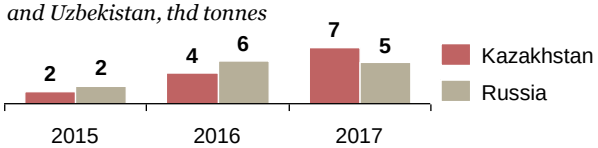
I. Russia accounts for more than 99% of total imports of sunflower oil. Eurasian Foods Corporation is a major consumer of Russian sunflower oil. But the price of exporters is much higher than the cost of production of the initiator.

Import and export volumes of sunflower oil by Kazakhstan, thd tonnes



II. There has been a steady increasing trend in import of sunflower oil by both Kyrgyzstan and Uzbekistan with the only competitor for Kazakhstan being Russia.

Compound import volume of sunflower oil by Kyrgyzstan and Uzbekistan, thd tonnes



Target Investor Mandate

An investor should:

- Have an access to foreign markets
- Be a supplier of technologies
- Be able to provide long-term investment

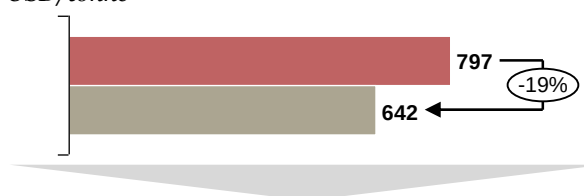
Competitive advantage

I. Guaranteed market. 80% of the production of the produced sunflower oil is planned to be used at their enterprises for the further processing of more products.

II. Successful brand. The company has successful product lines of “3 Zhelaniya”, "Shedevr", “Zlatye gory", which are sold annually in volumes of more than 120 000 tonnes of products.

III. Import substitution. At the moment, the company buys crude sunflower oil from Russian producers.

Import price and production cost of the initiator, USD/tonne



Value proposition

The project will allow the investor to fill the production deficit in Kazakhstan and to monetize the guaranteed sales market.

Sources: Statistics Committee of the Ministry for national economy of the RK

Production of flax oil

Project description

The project plan is to construct an oil plant with a capacity of 20 thousand tonnes of linseed oil per year. It is planned to install 10 acceptance points, to build a railway deadlock. The initiator of project has in his ownership necessary territory for the plant. He also land area of 16 thousand ha used for growing flax and rape seeds. It is also planned to purchase flax from small farms of the North-Kazakhstan region, that is one of the leaders in production of flax seeds in Kazakhstan.

Project location

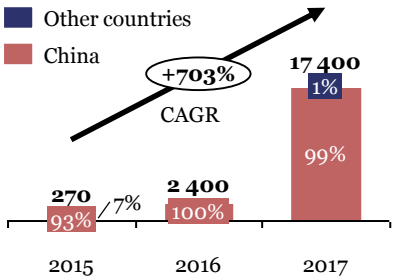
Investment highlights

Upfront investment	$20 MM
NPV	$36 MM
IRR	33%
Payback period	5 years

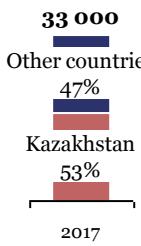
Market analysis

Kazakhstan exports most produced flax oil to China. The amount of arable land is 831 thd ha in Kazakhstan. There is a potential of exporting product to Japan.

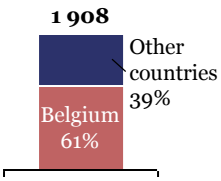
Flax oil export, tonnes



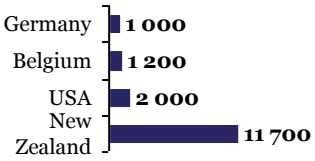
China's import volume, tonnes



Japan import, tonnes



Japan `s oil import prices, USD/tonne

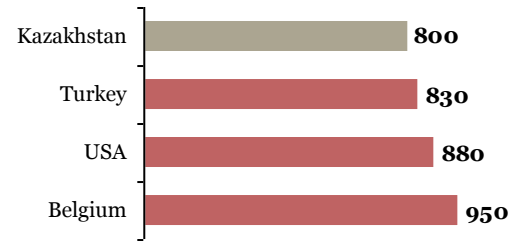


Competitive advantage

I. High average oil yield from flax seeds in North Kazakhstan Region - 50% of the total mass. Usually the standard yield is 30-40%.

II. Kazakhstan has a cost advantage among other countries in exporting product to China.

China `s oil import prices in 2017, USD/tonne



Value proposition

This project allows to take advantage of **exporting product** having a **cost advantage** compared to other importers.

Target Investor Mandate

- Offtake large volumes of oil
- Be a supplier of technologies
- Long-term investments

Sources: Statistics Committee of the Ministry for national economy of the RK, UN Comtrade

Soya beans processing

Project overview:

Construction of technologically advanced soya beans processing plant for food production

Investment amount: US$ 87,226 thousand

Capacity: 25.5 thous. tones of soybean refined oil; 1.5 thous. tones of soy lecithin; 20 thous. tones of fat-free soy flour; 10 thous. tones of soy concentrate; 20 thous. tones of soy isolate; 43.5 thous. tones of soybean meal

Location: Almaty Oblast

Project implementation period:
24 years, including 1 year of construction

Target markets: China, Russia, Kazakhstan, Uzbekistan

Suppliers: collective farms, farms, households

Consumers: producers of mixed fodders, food products, livestock farms, wholesale and retail chains, public catering

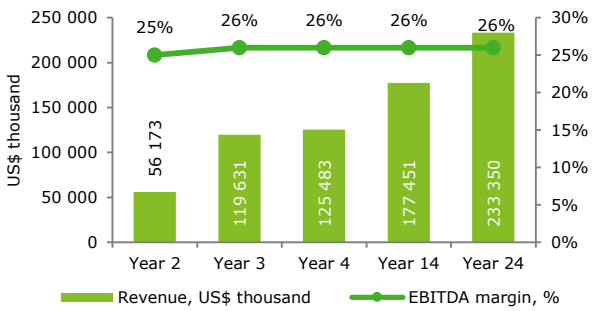
Market prerequisites:

- *Solid local demand growth.* According to Kazakhstan Ministry of Agriculture, the annual protein deficit among the local population is more than 100 thousand tonnes (based on a daily rate of 50 grams per person).
- *Export potential.* Kazakhstan exports one third of the soybean oil produced in the country. In 2016, Uzbekistan was the largest importer (4,398 tonnes) followed by China (578 tonnes). Russia has been identified as one of priority markets to export soya bean meal. China has the biggest export potential as its annual soya bean oil consumption exceeds 15 mln tonnes and is growing from year to year.
- *Availability of raw materials.* Over the past 5 years, soya bean harvest has grown by 14%. Almaty Oblast is the leader in growing soya beans.
- *State support* through the provision of investment preferences, preferential loans and subsidies, as well as tax and customs concessions on equipment imports.

Key investment indicators

Indicator	Results
Investment amount, US$ thousand	87,226
Project NPV, US$ thousand	19,630
IRR	16%
Payback period, years	8.4
Discounted payback period, years	15.2

Revenue forecast



Local partner

Assar Group LLP was established in 2005. Its major activity is the export and import of grain products and all types of fuels and lubricants.

Company has established sales distribution channels in Kazakhstan and abroad, mainly in China and Russia.

Production in Almaty region

Almaty Oblast is the leader in oil seeds production in Kazakhstan with market share 97%. In this regard, the city of Taldykorgan, Almaty Oblast was selected for Project implementation.

In 2016 Almaty Oblast produced 12 thousand tonnes of soybean oil, which accounted for 79% of total oil production in the country.

Production of tomato paste

Project description

The project plan is construction of a tomato processing plant, the final product of which will be tomato paste. The initiator of the project already has a land plot of 3 thd ha and building. The projected processing capacity is 1.5 thousand tonnes of tomato per day, which would provide 200-250 tonnes of tomato paste.

Besides import phasing, the owners target at exporting the end product to CIS countries, China, and Europe.

Project location

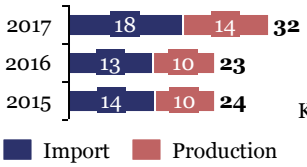
Investment highlights

Upfront investment	$23 MM
NPV	$63 MM
IRR	43%
Payback period	4 years

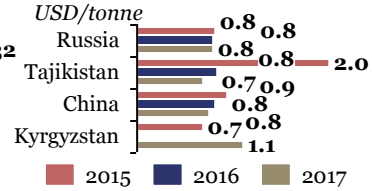
Market analysis

Kazakhstan imports more than half of its tomato paste consumption. Only 5-8% of production is exported. **The total harvest of tomatoes in Kazakhstan was** ~740 thd tonnes **in 2017**. This presents a case for safe-haven **hinter market**.

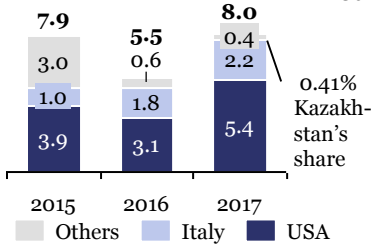
Tomato paste consumption in Kazakhstan, thd tonnes



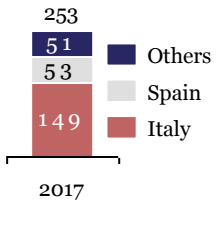
Kazakhstan's export unit value, USD/tonne



Tomato paste imports by China, thd tonnes



Tomato paste imports by Germany, thd tonnes



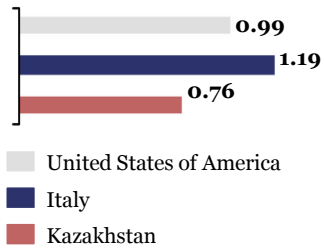
Target Investor Mandate

- Supply of production technologies
- Access to external markets

Competitive advantage

Kazakhstan exports paste to China in limited amounts, but at a lower price than China's main suppliers – USA and Italy.

Import prices of China, USD/kg



Similar situation in volumes potential is observed in Germany, so that Kazakhstan has an opportunity to engage in exports of tomato paste to Europe.

Value proposition

This project allows to take advantage of **import substitution** in Kazakhstan and **exporting potential** with cost advantage compared to other importers.

Sources: Statistics Committee of the Ministry for national economy of the RK, International Trade Centre (ITC)

Construction of a complex for the production of baby food

Project description

The project plan is the construction of a complex for the production of baby food with a capacity of 25 000 tonnes per year (20 000 tonnes of baby food on the base of milk and 5 000 tonnes on vegetables). The implementation of the project involves 3 stages: 1 - construction of a new plant for the production of baby food; 2 - construction of a dairy farm for 2,4 thousand heads; 3 - creation of an irrigation array for 5 000 ha for the development of the resource base (with expansion up to 10 000 ha).

Project location

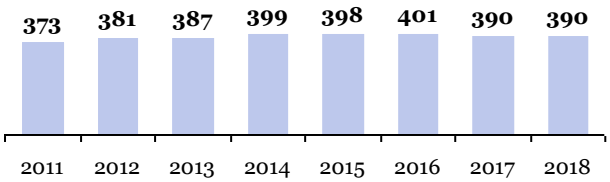
Investment highlights

Upfront investment	$17 MM
NPV	$15 MM
IRR	28%
Payback period	5 years

Market analysis

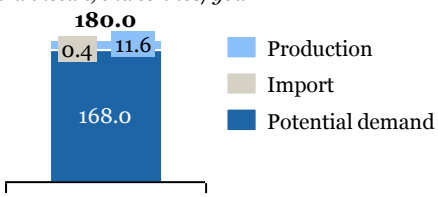
One of the factors in the demand for baby food is a steady increase in the birth rate.

Number of newborns in Kazakhstan, thd people



The demand for baby food based on milk and dairy products for children from 0 to 4 years reaches up to 180 thousand tonnes per year. Production in Kazakhstan is 11.5 thousand tonnes, which covers less than 7% of the demand.

Import, production and demand for baby food based on milk in Kazakhstan, thd tonnes/year



Target Investor Mandate

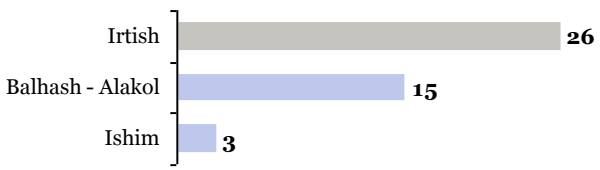
Competency to transfer technologies

Competitive advantage

I. *Own resource base*: it is planned to build a farm with 2.4 thousand heads for the production of the highest quality own milk.

II. *High water flow: Irtish river basin has substantial amount of water and has average water flow of* 9 bln m³ a year. High quality milk can be achieved due to Irtish river, which gives advantage in terms of water supply in comparison with other producers.

Indicators of water resources availability in river basins, cubic kilometers



Value proposition

The project allows to capitalize on the growing demand for milk-based baby food products and to meet unsatisfied domestic demand for products.

Sources: Committee on Statistics of the Republic of Kazakhstan, General Scheme for Integrated Use and Protection of Water Resources

Modernization of the starch plant for the production of citric acid

Project description

The project plan is to modernize facility for deep processing of maize, with final product as citric acid. The planned capacity of processing citric acid is 10 000 tonnes per year. The company owns a land of 3 000 ha and currently processes maize to produce starch and molasses. Maize is mainly purchased from agricultural enterprises in Almaty region. Currently, the company has offtakes on existing product line with main consumers as Khamle and Rakhat.

Project location

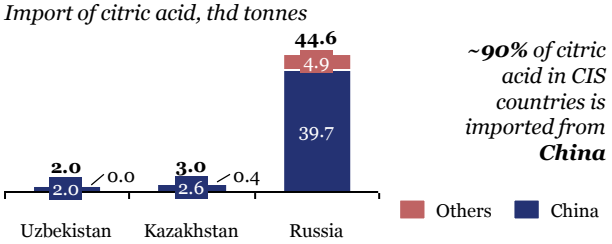
Investment highlights

Upfront investment	$22 MM
NPV	$33 MM
IRR	31%
Payback period	6 years

Market analysis

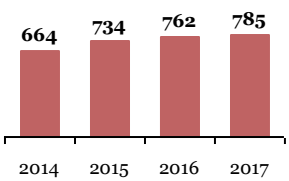
The share of import of citric acid consumption in most CIS countries is ~90%. Raw material for citric acid is maize, which has annual increase in production of ~5% in Kazakhstan.

Import of citric acid, thd tonnes

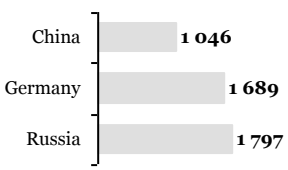


~90%** of citric acid in CIS countries is imported from **China

Production of maize in Kazakhstan, thd tonnes



Import prices in Kazakhstan in 2017, USD/tonne



Target Investor Mandate

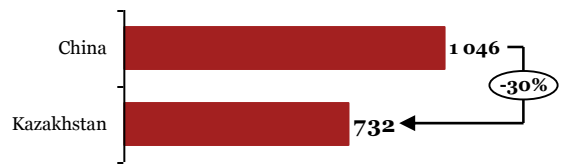
- Supply of production technologies
- Access to external markets

Competitive advantage

Domestic price of citric acid will be **30% cheaper** in comparison with import price of China, which has a status of cheapest exporter of product to CIS countries.

The company already has offtakes with large Kazakhstan confectionary companies.

Import price vs domestic price in 2017, USD/tonne



Value proposition

This project allows to take advantage of **import substitution** on a market, while having **cost competitive advantage.**

Sources: Statistics Committee of the Ministry for national economy of the RK, UN Comtrade

Deep processing of wheat grain

Project description:
Construction of a plant for processing wheat grain into valuable food and chemical products

Investment amount:
US$ 51,552 – 103,624 thousand

Capacity: Processing of 150 to 300 тыс. thousand tons of grain per year

Project location:
The Project can be implemented commercially in 6 regions of the country

Realization period:
24 years, including construction period

Target markets: Kazakhstan

Suppliers: Kazakhstan grain companies and traders

Consumers: meat processing and cattle breeding enterprises, manufacturers of textiles, medical preparations, bread, bakery and confectionery products

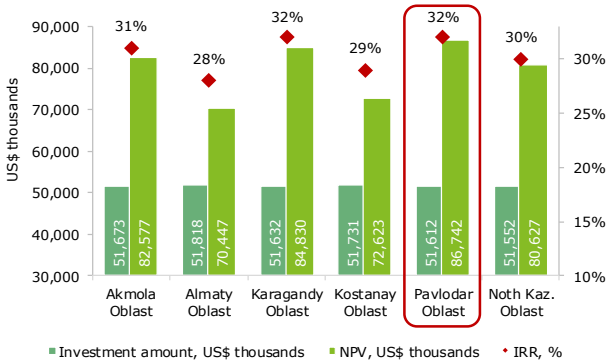
Market background:

- *Growing domestic demand* - the total nationwide consumption of these products exceeded 118,800 tones in 2016;
- *Import substitution* - the country does not have own production facilities for deep processing of wheat;
- *State support* - investment preferences, soft loans, subsidies, tax and customs privileges;
- *Low production cost* is achieved due to the availability of cheap raw materials (the annual gross wheat harvest of 14-15 million tones makes Kazakhstan one of the world's major wheat producers).

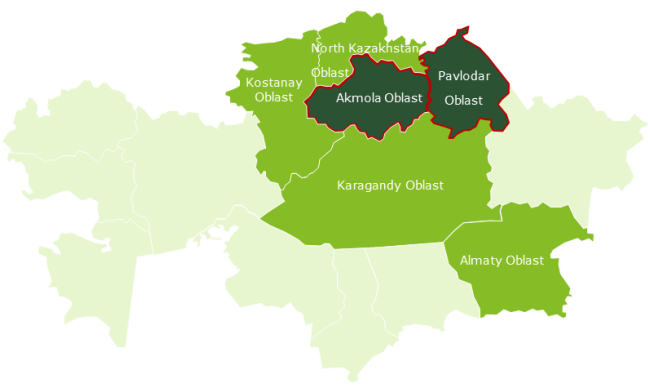
The volume of output, tons

Production	150,000 tons of wheat grain	300,000 tons of wheat grain
2nd grade flour	20,000	40,000
Gluten	10,000	20,000
Modified starch	10,000	20,000
Glucose	45,000	90,000
Starch B	15,000	30,000
Mixed feed	150,000	300,000

*Key investment indicators**



Prospective regions

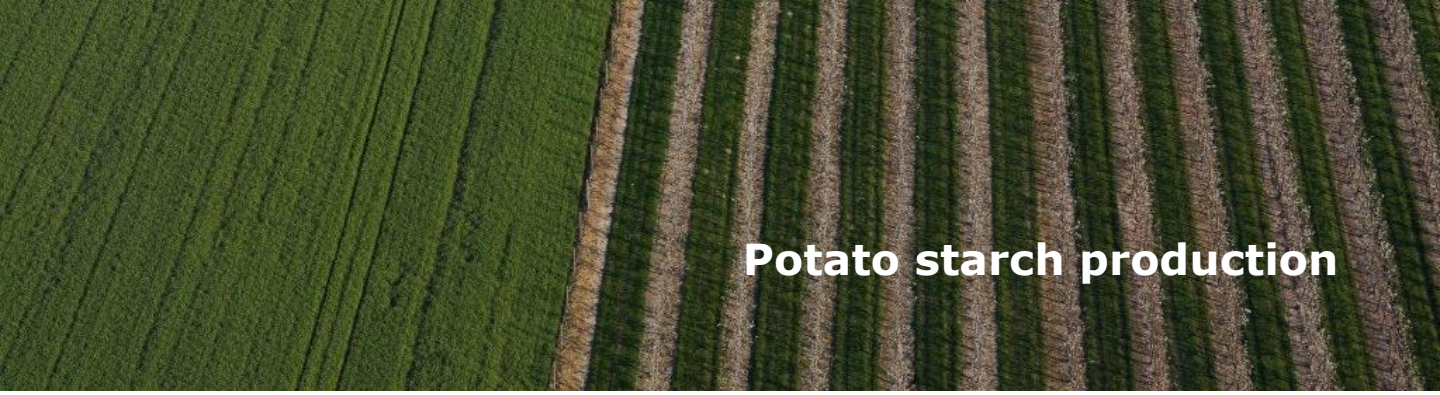


Regions with the best investment indicators

Quality indicators of the project

	Market density	The level of access to raw materials	Transportation expenses	Competitors
Akmola Oblast	High	+	Low	Absent
Almaty Oblast	High	-	High	Present
Karagandy Oblast	Average	+	Low	Absent
Kostanay Oblast	Average	+	Low	Absent
Pavlodar Oblast	Average	+	Low	Absent
Noth Kaz. Oblast	Average	+	Low	Absent

**at a plant capacity of 150,000 tons*



Potato starch production

Project description:

Construction of an industrial complex for processing potatoes and production of starch and protein, to be used as a livestock feed

Investment amount:
US$ 46,172 – 46,205 thousand

Production capacity: over 10 thousand tones of potato starch and 8.8 thousand potato protein

Project location:
implementation of Project on an industrial scale is possible in 2 regions of the Republic of Kazakhstan

Implementation period:
24 years, including 1 year of construction

Target markets: Kazakhstan, China, Russia, Uzbekistan

Suppliers: representatives of collective farms, farm and households

Consumers: food industry, pulp and paper industry, textile industry, pharmaceutical industry, chemical industry

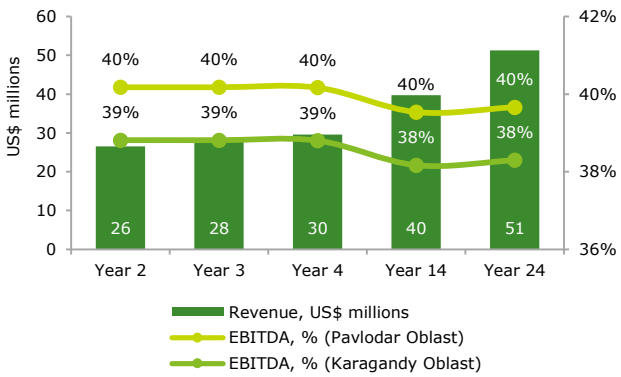
Market background:

- *Import substitution* – the starch market in Kazakhstan shows high dependence on import and growing demand. Annual consumption of starch and starch products amounts to 49 thousand tonnes;
- *No production of potato starch exists in Kazakhstan;*
- *Potential for exporting* – import growth in neighbouring countries opens up opportunities for taking over a target niche in the starch markets of China, Russia and Uzbekistan;
- *Availability of raw materials* – low production cost of products can be achieved due to existence of cheap raw materials in sufficient amounts (gross potato harvest in Kazakhstan amounted to 3,546 thousand tonnes in 2016).

Key investment indicators

Region	Investment amount, US$ thousand	NPV, US$ thousand	IRR, %	Payback period, years	Discounted payback period, years
Karagandy Oblast	46,205	19,365	23%	4.9	8.5
Pavlodar Oblast	46,172	21,986	24%	4.8	7.9

Revenue forecast



Quality indicators of the project

Indicator	Karagandy Oblast	Pavlodar Oblast
Potential for exporting	Medium	High
Climatic conditions	Favorable	Favorable
Market in a region	Medium	Medium
Availability of raw materials	High	High

- *Potential for exporting***.** High export potential of Pavlodar Oblast is determined by the proximity of export markets (Russia and China).
- *Availability of raw materials***.** By the end of 2016, the bulk of the entire potato crop was in the Pavlodar Oblast (11.5%).
- *The climatic conditions* of the Karaganda Oblast and Pavlodar Oblast are the most favorable in the RK for growing potatoes.

Sugar beet processing

Project description:

Construction of an industrial complex to process sugar beet and raw sugar, and to produce sugar

Investment amount:
US$ 216,733 – 217,030 thousand

Production capacity: 200 thousand tones of sugar per year

Project location: North Kazakhstan Oblast or Dzhambul Oblasts

Implementation period:
24 years, including 1 year of construction

Target markets: Kazakhstan, China, Russia

Suppliers: representatives of collective farms, farm and households

Consumers: food industry, pulp and paper industry, textile industry, pharmaceutical industry, chemical industry.

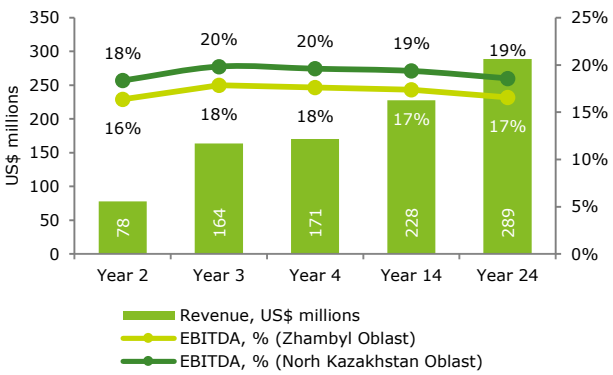
Market background:

- *Product demand*– high sugar consumption of 20.2 kg per capita.
- *Export potential* – total imports in 2016 amounted to 734 thousand tonnes
- *Raw materials base* – Abundance of high-yield beet-farming land, which reduces the cost of production and labour costs.
- *State support* is provided along the entire production chain and takes the form of investment preferences, cheap loans and investor subsidies, and tax and import customs duty exemptions.

Key investment indicators

Region	Investment amount, US$ thousand	NPV, US$ thousand	IRR, %	Payback period, years	Discounted payback period, years
Noth Kazakhstan Oblast	216,733	64,384	15%	8.9	16.6
Zhambyl Oblast	217,030	37,988	14%	9.7	20.8

Revenue forecast



Prospective regions

Indicator	North Kazakhstan Oblast	Zhambyl Oblast
Potential for exporting	High	Medium
Climatic conditions	Favorable	Favorable
Market in a region	Medium	High
Availability of raw materials	Medium	High

Regions with the best investment indicators

Zhambyl Oblast:

- Market in the region: sugar production levels (388 thousand tones in 2016) one of the highest in the country in 2016;
- Raw material base: the highest gross beet harvest after Almaty Oblast (116 thousand tonnes in 2016).

North Kazakhstan Oblast:

- Climatic conditions: beet yield with a sugar content of 15-17% could reach 50-55 tones per hectare (average yield in southern regions is 25-27 tones);
- Raw material base: the gross beet harvest amounted to 11 thousands tones in 2016.

Construction of a greenhouse complex

Project description

The project plan is construction of a greenhouse complex of 12 ha located in Uralsk, West Kazakhstan region. The complex will allow to grow up to 4 400 tonnes of cucumbers and 3 400 tonnes of tomatoes per year. At the moment the company already has a complex of 12 ha with capacity of production up to 7 200 tonnes of vegetables located in Almaty city. The greenhouse complex will be built according to the Dutch technologies of the company "Dalsem". The company is planning to export their product to Russia.

Project location

Investment highlights

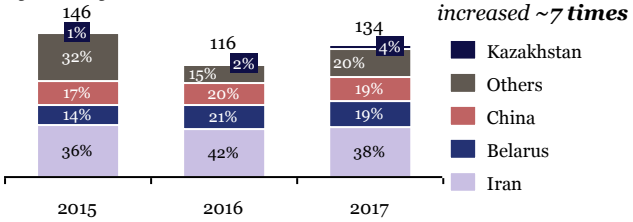
Upfront investment	$39 MM
NPV	$14 MM
IRR	16%
Payback period	8 years

Market analysis

I. Kazakhstan had ~4% of market share of Russian import of cucumbers in 2017.

Cucumbers import to Russia by country, thd tonnes

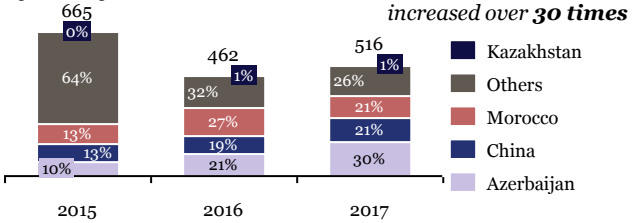
During 2015-2017, Kazakhstan's export of cucumbers to Russia increased ~7 ***times***



II. Kazakhstan had ~1% of market share of Russian import of tomatoes in 2017.

Tomatoes import to Russia by country, thd tonnes

During 2015-2017, Kazakhstan's export of tomatoes to Russia increased over ***30 times***



Target Investor Mandate

Long cheap financial resources preferably in Russia's ruble

Competitive advantage

1. Long-term offtake contracts: company has long-term offtake contracts for the whole amount of produced vegetables, which exports to Russia.

2. Price advantage: Kazakhstan has comparative price advantage among other importers in Russian market.

Import prices of vegetables to Russia, 2017, USD/tonne

Top-3 suppliers of tomatoes (share ~70%) and Kazakhstan

Top-3 suppliers of cucumbers (share ~75%) and Kazakhstan

Value proposition

This project allows to capitalize **export** of vegetables through having competitive export prices.

Sources: Statistics Committee of the Ministry for national economy of the RK, International Trade Centre

Expansion of a greenhouse complex

Project description

The project plan is construction of a greenhouse complex of 8ha, which will grow up to 5 000 tonnes of tomatoes. At the moment the company already has a complex of 12 ha with capacity of production up to 7 200 tonnes of vegetables located in Almaty city. The greenhouse complex will be built according to the Dutch technologies of the company "Dalsem". The company also has established offtakes and cooperates with companies such as "Magnum", "Lime Group" and others.

Project location

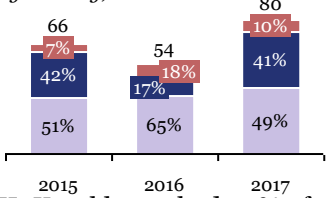
Investment highlights

Upfront investment	$26 MM
NPV	$12 MM
IRR	18%
Payback period	8 years

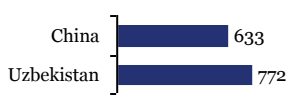
Market analysis

I. Main exporters of tomatoes to Kazakhstan are Uzbekistan and China, with aggregate volume ~90% of total import in 2017.

Tomatoes import to Kazakhstan by country, thd tonnes

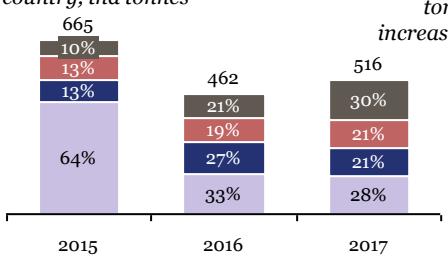


Average import prices of tomatoes, USD/tonne



II. Kazakhstan had ~1% of market share of Russian import of tomatoes in 2017.

Tomatoes import to Russia by country, thd tonnes



During 2015-2017, Kazakhstan's export of tomatoes to Russia increased more than 30 times

Target Investor Mandate

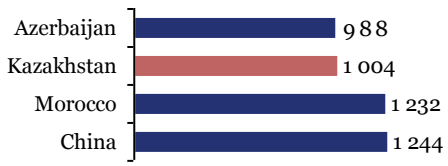
Long cheap financial resources

Competitive advantage

Company has long-term offtake contracts for the whole amount of produced vegetables, 50% of which exports to Russia and 50% goes to internal market of Kazakhstan.

Company possesses greenhouse complex of 5th generation with most developed technologies.

Imported tomatoes price in Russia vs prices of producer in Kazakhstan, USD/tonne



Kazakhstan has comparative price advantage among other importers in Russian market.

Value proposition

This project allows to capitalize on implementation of modern greenhouse complex. Also, it allows to provide **import substitution** and **export** vegetables through having competitive export prices.

Sources: Statistics Committee of the Ministry for national economy of the RK, International Trade Centre

Construction of commercial greenhouse

Project description:

Creation of an integrated business for cultivation of tomatoes and cucumbers in a closed ground

Investment amount:
US$ 25,639 – 25,779 thousands

Production capacity: 5,940 tons of cucumbers a year, 7,050 tons of tomatoes a year

Project location: implementation of Project on an industrial scale is possible in 3 regions of the Republic of Kazakhstan

Realization period:
24 years, including 1 year of construction

Target markets: Kazakhstan, Russia

Suppliers: producers of fertilizers, seeds and mineral cubes for the further cultivation of vegetable crops

Consumers: retail food distribution networks for the population

Market background:

- *Production deficit* – the climate in Kazakhstan means there is a significant off-season, which due to the lack of greenhouses, results in significant vegetable shortages.
- *Export potential* – in 2016, Russian border town tomato and cucumber imports amounted to an estimated 18,535 tones.
- *State support* is provided for the entire production chain and takes the form of investment preferences, cheap loans and investor subsidies, and tax and import customs duty exemptions.

Key investment indicators

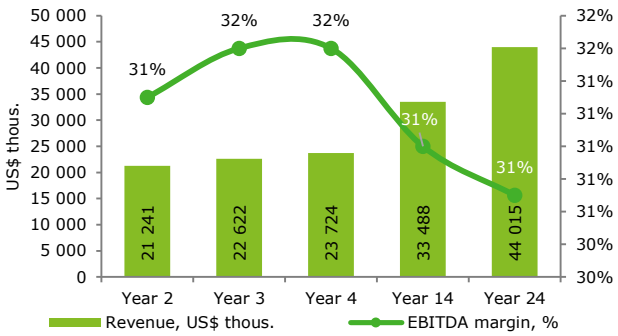
Region	Investment amount, US$ thousand	NPV, US$ thousand	IRR, %	Payback period, years	Discounted payback period, years
Aktobe Oblast	25,693	38,064	33.7%	4,0	4,8
South Kazakhstan Oblast	25,779	24,981	27.9%	4,4	5,7
Pavlodar Oblast	25,751	31,305	29.1%	4,4	5,7

Quality indicators of the project

Region	Export potential	Climate conditions	Market of tomatoes	Market of cucumbers
Aktobe Oblast	High	Suitable	High	Medium
South Kazakhstan Oblast	Low	Favorable	Low	Low
Pavlodar Oblast	High	Acceptable	High	High

Regions with the best investment indicators

Revenue forecast*



- Export potential is determined by the proximity of export markets, such as Russia market. Aktobe Oblast and Pavlodar Oblast are located in the immediate vicinity of Russia;
- The "Climate conditions" column grades each oblast's weather in terms of applicability for greenhouse construction and tomato and cucumber cultivation South-Kazakhstan Oblast has the most favorable climate.

**Aktobe Oblast*

MINING AND SMELTING INDUSTRY

Construction of the mining and metallurgical facility to mine and process tin ores

Project overview: construction of the mining and metallurgical facility to process 2 mln tonnes of ore at the Syrymbet deposit ("Project").

Processing capacity: 2 mln tonnes of ore a year

Raw materials: tin, copper and fluorite ore

Production:

Main products:

1) Tin concentrate - an average of 3,500 tons of tin in concentrate per year; 2) Tin sublimates - an average of 4,900 tons of tin in concentrate per year.

By-products:

1) Copper concentrate - an average of 2,000 tons of copper in concentrate per year; 2) Fluorite concentrate - an average of 173,000 tons of fluorite in concentrate per year

Initiator: Tin One Mining JSC is operating based on a 30-year subsoil use license in Kazakhstan dated Sept. 23, 1998 (5 yrs of exploration and 25 yrs of mining)

Location: North-Kazakhstan Oblast

Sales market: Kazakhstan, China, Russia

Market assumptions:

Available raw materials base – The Syrymbet deposit is Kazakhstan's only and world's biggest undeveloped deposit of explored and classified tin reserves, according to the 2012 JORC Code.

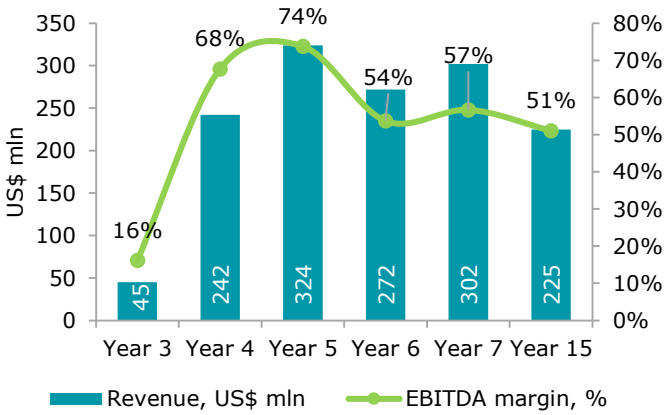
Import substitution and potential export – Tin is not produced in Kazakhstan, and the country is totally dependent on imports. Tin is imported from Indonesia, Russia, Belgium, Poland and China. The latter is the largest tin consumer and accounts for 48% of the overall import of tin products in the world.

Rise in prices and demand - The world prices for tin and tin concentrate are currently rising due to the increasing demand for this product as a result of stabilization of the world economy.

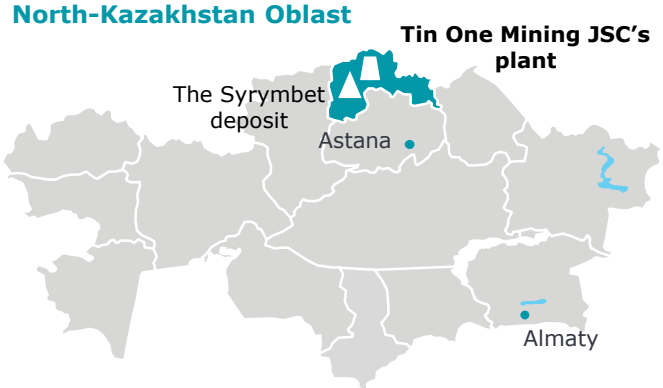
Key investment indicators

Indicator	Result
Project implementation period, years	15
incl. investment stage, years	*2*
operational stage, years	*13*
Investment, US$ thousands	285,136
Project NPV, US$ thousands	380,017
Project NPV, US$ thousands (without accounting for tax preferences)	276,642
IRR, %	41.2%
EBITDA return, %	51%
Payback period, years	4.7
Discounted payback period, years	5.3

Project profitability



Project implementation location: North-Kazakhstan Oblast



Deposit reserves

Category	Ore, thousand tonnes	Tin, %	Tin, tonnes
Measured	46,552	0.46%	214,139
Indicated	9,164	0.33%	30,241
Probable	68,945	0.37%	256,632
Total	**124,661**	**0.40%**	**501,012**

Development of bulk rare earth concentrates production facility in Akmola Oblast

Project overview: This investment project provides for the performance improvement and the increase of absolute production capacity of the bulk rare earth concentrates production facility (BREC) through the upgrade of equipment currently used for production of BRECs in Stepnogorsk.

Output capacity:

4,000 tonnes of BRECs for the entire Project duration

Commercial product: BRECs in the form of calcined oxalates

Project location: Industrial Zone No. 6, Stepnogorsk, Akmola Oblast. (Processing); industrial zone of Aktau, Mangistau Oblast (Mining)

Consumer: Irtysh Rare Earth Company LLP (agreement of intent to supply the whole volume of products to be produced)

Market assumptions:

Export potential There is still potential capacity to export the product to nearby markets – Russia and China. For the last 5 years, annual import of rare earth compounds averaged 1,243 tonnes in Russia and 12,221 tonnes in China.

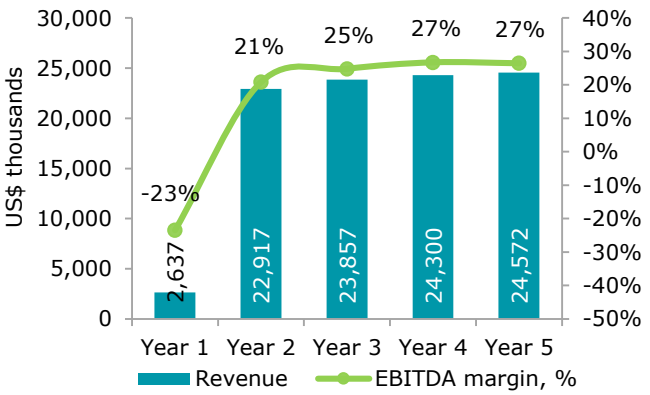
Available sales channels in Kazakhstan BRECs will be purchased by Irtysh Rare Earth Company LLP, which produces the following rare earth products: various compounds of lanthanum, cerium, praseodymium, neodymium, samarium, gadolinium, polishing powders based on pure cerium oxide.

Further growth of demand for rare earth metals According to experts, the Cumulative Annual Growth Rate (CAGR) of the world REM market will reach 9.35% until 2021.

Key investment data

Index	Results
Project implementation period, years	5
incl. investment stage, years	*1*
operational stage, years	*4*
Investment amount, US$ thousands	11,118
Project NPV, US$ thousands	14,161
IRR, %	116.1%
EBITDA returns, %	15%
Payback period, years	1.6
Discounted payback period, years	1.7

Project profitability



Project location: Stepnogorsk, Akmola Oblast

Product characteristics

Index	REO/TREO*, %
TREO, %	**100**
Lanthanum oxide	7.7
Cerium oxide	18.2
Praseodymium oxide	3.5
Neodymium oxide	12.5
Samarium oxide	3.2
Europium oxide	0.9
Gadolinium oxide	4.8
Terbium oxide	0.9
Dysprosium oxide	5.3
Holmium oxide	1.1
Erbium oxide	2.8
Thulium oxide	0.4
Ytterbium oxide	2.3
Yttrium oxide	36.1
Lutetium oxide	0.4

Production and processing of rare-metal ore at the Drozhilov field

Project overview:

Produce and process rare-metal ore at the Drozhilov field in Kostanai Oblast

Commercial product and production output for the entire Project period:

- lithium concentrate – 2,490 thousand tonnes (lithium – 149 thousand tonnes)
- molybdenum trioxide – 176.6 thousand tonnes (molybdenum – 118.3 thousand tonnes)
- artificial scheelite – 62.26 thousand tonnes (tungsten trioxide – 48.6 thousand tonnes)

Initiator: JV Kazakhstan-Russian Ore Company LLP has a contract in place to explore and produce molybdenum and tungsten at the Drozhilov field

Project implementation location: Kostanai Oblast, Denisov District

Potential markets: Russia, China

Market assumptions:

Growing demand for rare metals. Over the next decade, global demand for tungsten is predicted to increase as its use is strongly linked to the development of the processing industry and vehicle production. Lithium consumption in battery production has increased significantly in recent years as rechargeable lithium batteries are being used more and more often in portable electronic devices and electric car batteries.

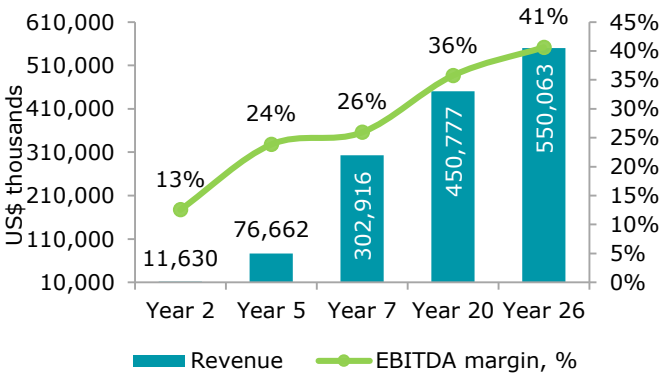
Rising metal prices. In the last three years, the lithium oxide price has increased 2.5 times due to growing demand. Average prices for molybdenum trioxide grew 20% in the same period. Prices for tungsten derivatives are currently growing. The lack of available financing and low metal content in ore limit supply and act a stimulus for further rare-metal price rises.

Raw materials base. Kazakhstan has the highest tungsten reserves in the world (63% of global reserves). It also has significant molybdenum and lithium reserves.

Key investment data

Index	Results
Project implementation period, years	26
including the investment stage, years	1
operational stage, years	25
Investment, US$ thousands	88,556
Project NPV, US$ thousands	332,269
IRR, %	46.6%
EBITDA returns, %	30%
Payback period, years	6.6
Discounted payback period, years	7.0

Project economics



Project location: Kostanai Oblast

Drozhilov field reserves

	Reserves, mln tonnes	Metals, thousand tonnes			Content, %		
		Mo	W	Li	Mo	W	Li
Proven	140	263	64.3		0.19	0.05	
Calculated	131	78	88.3	121	0.06	0.03	0.45
Estimated	300	150	150		0.05	0.05	

Construction of Tymlai Mining, Chemical and Metallurgical Complex

Project overview:

Construction of a mining, chemical and metallurgical complex for the production of derivative products from processing of titanium magnetite ores. The complex consists of two production facilities: a mining and processing plant at the Tymlai ore field and a chemical and metallurgical plant in the SEZ Pavlodar.

Production volume:

1) Titanium dioxide – 601 thousand tonnes per year; 2) Special steel – 1956 thousand tonnes per year; 3) Silicon dioxide – 76 thousand tonnes per year.

Products: 1) titanium dioxide pigment; 2) special steel grades; 3) silicon dioxide;

Initiator: TENIR-Logistic LLP

Location: Zhambyl Region, Kordai District; SEZ Pavlodar

Potential customers: Kazakhstan, nearby countries

Market prerequisites:

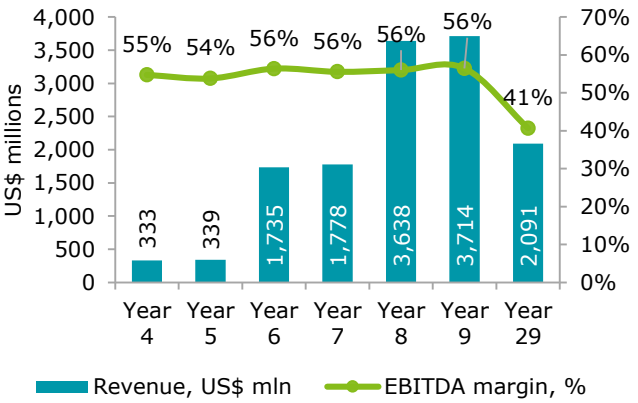
Stable demand. High historical production growth rates and strategic importance for the further development of industries using steel and titanium dioxide as raw materials create a steady demand for the products produced within the Project.

Import substitution and export. The lack of production of titanium dioxide in Kazakhstan, and a small amount of production in the CIS, creates prospects for sales. Regarding alloyed types of steel, the volume of imports for the last 5 years were in average 828 thousand tonnes in the Russian Federation and 2,627 thousand tonnes per year in the PRC. Moreover, currently there are forward contracts for the supply of special types of steels being already signed.

Key investment indicators

Indicator	Result
Project implementation period, years	29
incl. investment stage, years	*7*
operating stage, years	*26*
Investment amount, $US thousands	2,585,904
Project NPV, $US thousands	5,465,840
IRR, %	46.4%
EBITDA margin, %	57%
Payback period, years	7.5
Discounted payback period, years	8.1

Project profitability



Location of project implementation: Kordai district of Zhambyl region; SEZ Pavlodar

Ore field reserves

Name of the ore deposit	Industrial reserves (mln tonnes)		Prognosed resources (mln tonnes)	
	C1	C2	P1	P2
Tymlai	226			
Sarysai	100	60	44	
Akdala (South)	70	40	20	
Akdala (North)	-	-	30	229
Akterek	-	-	10	47
Total:	**396**	**100**	**104**	**276**
Total C1+C2+ +P1+P2	**876**			

Development of Batalinskoye and Krasnoarmeyskoye copper ore deposits

Project description:

The Project involves construction of copper ore beneficiation industrial plant at Batalinskoye and Krasnoarmeyskoye deposits that are located in Kostanay Oblast.

Product: copper concentrate (incl. subsequent processing at Kazzinc LLP's plant in Ust-Kamenogorsk Oblast, which will then be sold to end customers).

Initiator: Mystau LLP.

Location: Denisovsky district, Kostanay Oblast.

Potential markets: non-ferrous metal processing plants in CIS, China and Europe.

Market conditions:

Large copper reserves. Kazakhstan holds the 6th place in the world for its copper reserves of 36.6 million tonnes, which accounts for 4.7% of global reserves.

High demand. It is expected that refined copper demand will have a constant growth for the following years because copper is the major factor in economic activity and modern technological society. The expected demand growth for the refined copper will reach 2.99% in 2018 and 2.15% in 2019.

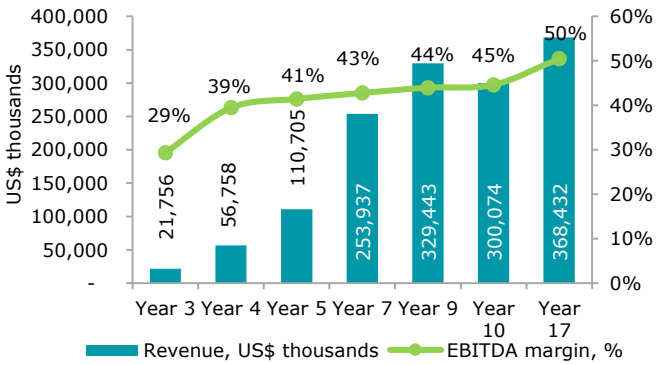
Price growth. Global market prices for refined copper demonstrate increasing dynamics related to increased demand for that product as a result of global economic stabilization. According to the forecasts, a moderate increase in copper prices is expected during the following years: 2020 – US$ 6833, 2021 – US$ 6849 per tonne.

Export potential. The trade deficit in products such as copper sheets, strips and tapes indicates the import substitution potential. Also, Kazakhstan has an opportunity to increase its exports to China and neighbor countries.

Key investment indicators of the Project

Indicator	Results
Project implementation period, years	17
incl. investment stage, years	*2*
operational stage, years	*15*
Investment amount, US$ thousands	298,600
Project NPV, US$ thousands	163,693
IRR, %	22.5%
EBITDA margin, %	31-53%
Payback period, years	7.9
Discounted payback period, years	10.3

Project profitability



Project location: Denisovsky district, Kostanay Oblast

Deposit reserves

Indicator	Unit	Balance reserves by C2 category
Batalinskoye		
Copper	thous. Tonnes	561.7
Ore	thous. Tonnes	130,899.7
Content	%	0.43-0.45
Krasnoarmeyskoye		
Copper	thous. Tonnes	203.9
Ore	thous. tonnes	85,050.20
Content	%	0.24

Development of iron ore deposits in Chumekskaya field in the East Kazakhstan Oblast

Project description:

The project involves completion of exploration works at the Chumekskaya iron ore field in East Kazakhstan Oblast, with subsequent extraction and sale of iron-bearing ores.

Commercial product and annual volume of production:

iron ore – 5,691 thousands tonnes

Based on preliminary research data, the given ore deposits stand out for the high quality and compliance with the most stringent technological requirements of metallurgical enterprises. This means that there is no need for additional technological processing. After extraction and ore-preparation, the ore will be ready for sale.

Initiator: Lacus Mining LLP

Location: Kurchumsky district, East Kazakhstan Oblast

Consumer market: ferrous metal processing plants of China and Kazakhstan.

Market assumptions:

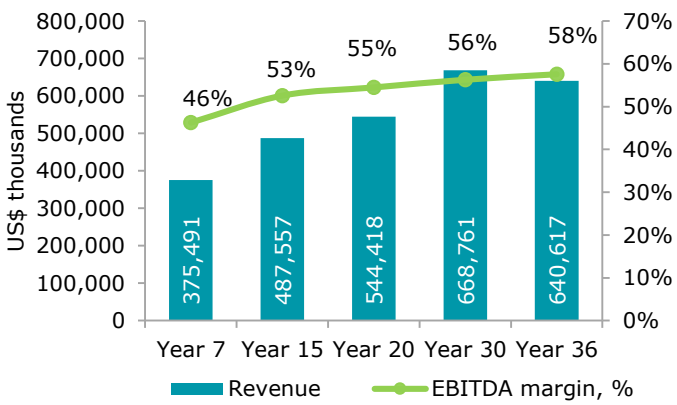
***High demand*.** Demand for iron ore, primarily due to the demand for steel, directly reflects the development trends of the world economy. According to estimates from The Economist Intelligence Unit («EIU»), in the foreseeable future, steel production will grow by 4% in 2019 amounting to 1692 million tonnes.

***Export potential*.** Since the production of iron ore in the country fully provides domestic demand for this product, the main share of pellets and concentrate, produced in the republic, is supplied beyond its limits. At the same time, the key sales markets (90%-99% are in Russia and China. Being the largest producers of iron ore, China and Russia are also considered as the world's largest consumers and imports, since these countries occupy a leading position in the production of steel all over the world. In 2017 total annual imports of iron ore of China and Russia amounted to 1084 million tonnes.

Key investment indicators

Index	Results
Project implementation period, years	36
Including the investment stage, years	6
Operational stage, years	30
Investment, US$ thousands	816,792
Project NPV, US$ thousands	242,629
IRR, %	19.2%
EBITDA returns, %	54%
Payback period, years	9.9
Discounted payback period, years	14.0

Project Profitability



Project location: Kurchumsky district, East Kazakhstan Oblast

Proprietary estimation of field reserves

Type of reserves	Ore, million tonnes	Iron content, %
Martite, magnetite ores	179	62.5
Disseminated mineralization	317	62.5

Reserves were estimated according to National Recourses Committee standards on the basis of geophysical works carried out in 2017 and historical exploration data from 1965. A report on geophysical works at Chumekskoye field was prepared by ITSETI LLP (ТОО ИЦЭТИ) in November 2017.

Construction of hydrometallurgical plant for cathode copper production

Project description:

The Project considers the construction of copper ore processing industrial plant which will be targeted towards cathode copper production with a capacity of 5000 tonnes per year.

Product: cathode copper (pure copper of no less than 99,99%).

Capacity: 5000 tonnes of cathode copper per year.

Production process:
extraction – open-pit;

processing – flotation and heap leaching, and SX-EW.

Initiator: AK Minerals LLP – the owner of the exclusive copper processing right at Ai-Karaaul.

Location: East-Kazakhstan Oblast. The Plant will be located in Urjar District, 40 km. away from Ayagoz town, and relatively close to the Ai-Karaaul deposit.

Potential markets: Kazakhstan, Russia and China.

Market conditions:

Large copper reserves. Kazakhstan holds the 6th place in the world for its copper reserves of 36,6 million tonnes, which accounts for 4,7% of global reserves.

High demand. It is expected that refined copper demand will have a constant growth for the following years because copper is the major factor in economic activity and modern technological society. The expected demand growth for the refined copper will reach 2.99% in 2018 and 2.15% in 2019.

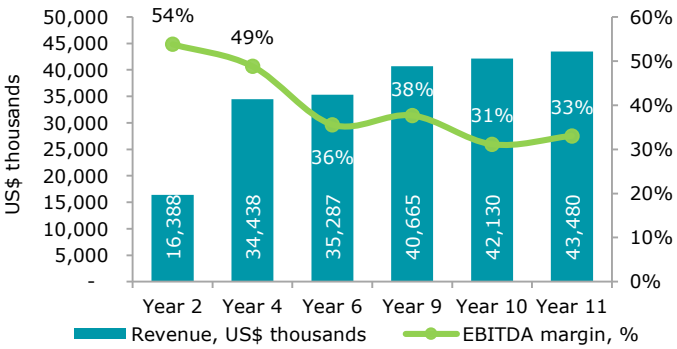
Price growth. Global market prices for refined copper demonstrate increasing dynamics related to increased demand for that product as a result of global economic stabilization. According to the forecasts, a moderate increase in copper prices is expected during the following years: 2020 – US$ 6997, 2021 – US$ 7250 per tonne.

Export potential. The trade deficit in products such as copper sheets, strips and tapes indicates the import substitution potential. Also, Kazakhstan has an opportunity to increase its exports to China and neighbor countries.

Key investment indicators of the Project

Indicator	Results
Project implementation period, years	11
Incl. Investment stage, years	*1*
Operational stage, years	*10*
Investment, US$ thousands	25,643
Project NPV, US$ thousands	24,396
IRR, %	45,6%
EBITDA returns, %	41%
Payback period, years	3.9
Discounted payback period, years	4.4

Project profitability



Project location: East-Kazakhstan Oblast

Ai-Karaaul deposit reserves (The Report of Interregional Commission on reserves "Vostkazedra"

Indicator	Open-pit mining		Under-ground mining
	Oxide ore	Sulphide ores	Sulphide ores
Copper, thousand tonnes	17.79	23.75	16.92
Copper content, %	1.48	1.89	1.56
Silver, tonnes	2.6	8.8	6.9
Content, g/tonne	2.21	7.01	6.42

Production and processing of gold and silver ores at Kumysti deposits area

Project description:

Extraction and processing of gold and silver ores at Kumysti filed (the "Project")

Commercial products: gold and silver concentrates

Output capacity:

640 kg of gold and 3.9 tonnes of silver per annum

Project implementation period: 11 years

Initiator: Central Asia Mining Co LLP. The company explores alluvial gold in Kumysti area.

Project implementation location: Turkestan Oblast, Suzaksky district

Potential markets: The concentrate will be processed at production facilities of KazTsink LLP and Tau-Ken Altyn LLP with subsequent sale of the final product to these companies or to other consumers.

Market assumptions:

Raw materials availability – Low COGS is achieved due to the availability of own cheap raw materials base. Kazakhstan holds the 6th place in the world for the amount of its explored gold reserves. Silver reserves in Kazakhstan are discovered in more than 100 ore fieds.

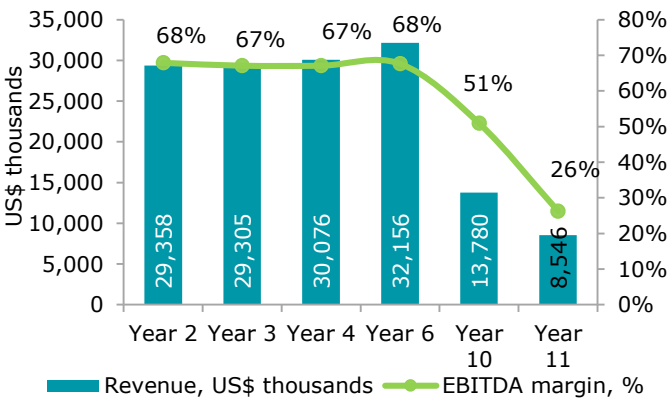
Export potential – Taking into account the fact that 24% of the global demand for gold comes from China, Kazakhstan has a huge export potential. Kazakhstan has exported 4,500 tonnes of gold-bearing ore to China in 2017. Also, one of the other main importers of Kazakhstan gold is Russia, which has imported 7,349 tonnes of gold-bearing ore in 2017.

In addition, China and Russia are among the top 10 silver importing countries as of 2017.

Key investment indicators

Index	Results
Project implementation period, years	11
incl. investment stage, years	1
operational stage, years	10
Investment, US$ thousands	41,775
Project NPV, US$ thousands	34,852
IRR, %	41.7%
EBITDA returns, %	60.1%
Payback period, years	3.6
Discounted payback period, years	4.2

Project profitability



Project location: Turkestan Oblast, Suzaksky district

Kumysti field reserves

Name of the deposit (ore occurrence)	Gold reserves, kg.	Silver reserves, kg.	Category
Mynshukur (aaluvial)	309.8	619.6	C1
Altyntau (hard-rock)	320	960	P1
Terbakty (hard-rock)	770	2,310	P2
Aktobe (hard-rock)	2,000	6,000	P2
Shovan (hard-rock)	359	2,154	C1+C2
Zholbarysty (hard-rock)	835	5,010	C1+C2
Kelinshektau (hard-rock)	2,205	13,230	C1+C2
Verhne-Kumysti (hard-rock)	879.4	5,276.4	C1+C2
Nizhne-Kumysti (hard-rock)	875.3	5,251.8	C1+C2

Development of South Zhaur tungsten ore deposit

Project description:

Mining and processing of rare-metal ores from South Zhaur deposit in Karaganda Oblast.

Products:

- 57% concentrate of tungsten trioxide
- 50% concentrate of molybdenum

Production process:

- Open-pit
- Sulphide-scheelite flotation, including grinding in one stage, sulphide flotation and scheelite flotation.

Maximum processing capacity:

4,000 thousand tonnes of commodity ore per annum.

Initiator: JV Saryarka Tungsten LLP.

Location: Karaganda Oblast, Shetsky district

Project implementation period: 35 years

Market conditions:

Raw material base – Kazakhstan holds the 6th place in the world for its tungsten reserves of 2 million tonnes, which accounts for 63% of global reserves. Availability of significant molybdenum reserves (160 thousand tonnes) in Kazakhstan opens up a potential for reviving the molybdenum mining industry in the future.

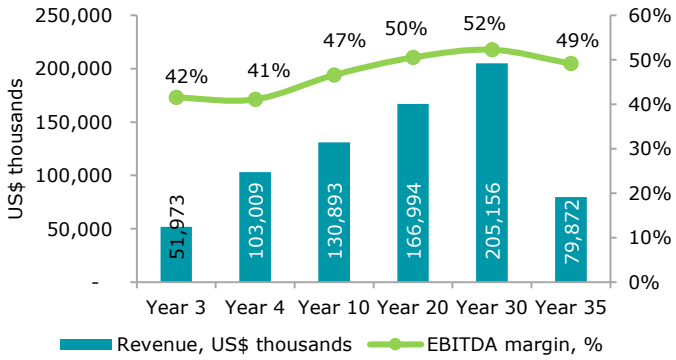
Metal price growth – The lack of readily available financing and low metal content in the ore deposits are the main reasons for the limited supply of metal in the market, which in the future, may serve as an incentive for further price increases for tungsten and molybdenum.

Growing demand– According to the forecasts, over the next 10 years, global demand for tungsten will increase from 72,552 to 121,679 tonnes (5.3% CAGR). The development of the steel industry affects the growing demand for molybdenum. In the long term it is expected that the growth rate of demand for this metal will be equal to 3.6% per annum until 2024.

Key investment indicators of the Project

Indicator	Results
Project implementation period, years	35
Incl. Investment stage, years	*2*
Operational stage, years	*33*
Investment, US$ thousands	70,942
Project NPV, US$ thousands	173,323
IRR, %	32.7%
EBITDA returns, %	49%
Payback period, years	5.4
Discounted payback period, years	6.7

Project profitability



Project location: Karaganda Oblast

South Zhaur deposit reserves (JORC)

Indicator	Balance reserves by C2 category	
	Quantity, tonnes	Composition, %
Ore	122,189,700	
Tungsten trioxide	198,953	0.163
Molybdenum	13,062	0.010
Bismuth	6,408	0.005

Development of gold and lead deposits at the Mayatas field in Karaganda Oblast

Project overview:

The project considers additional exploration and construction of an industrial plant for extraction and beneficiation of gold and polymetallic ores at Mayatas ore field in Kostanay Oblast.

Commercial products and average annual output:

Processing of 700 thousand tonnes of ore per year (containing gold and lead). Concentrates are planned to be processed at the production facilities of Kazzinc LLP (and at other plants) with subsequent sale of the final product in the domestic and foreign markets.

Initiator: Mayatas LLP (100% subsidiary organization of KazLead LLP).

Project implementation location: Arkalyk district, Kostanay region

Market assumptions:

High and stable demand. Global gold consumption level remains stable and high. It is widely used in various technologies and jewelry, and it is used as a currency back-up. Also, according to industry forecasts, global lead consumption will exceed production volumes by 10,000 tonnes in 2019 because of constant supply cuts.

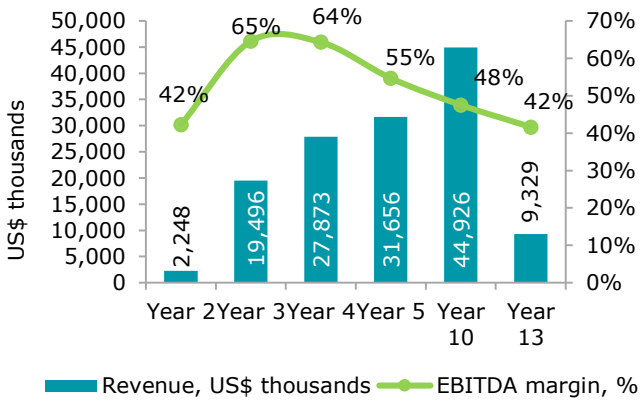
***Import substitution*.** Industry analysis shows that the production capacity in Kazakhstan does not cover the domestic demand for gold. Average annual growth in imports of gold ore in the period from 2010 to 2014 was equal to 93%. Also, despite the observed stable growth in the volumes of lead and lead ore production over the past few years in Kazakhstan, the level of market demand covered by domestic production was only equal to 46%.

***Export potential*.** Today, China is the main importer of lead ores and concentrates from Kazakhstan. In 2016, China has imported a record amount of metal from Kazakhstan – 51,595 tonnes.

Key investment indicators

Index	Results
Project implementation period, years	13
incl. the investment stage, years	*3*
operational stage, years	*10*
Investment, US$ thousands	21,581
Project NPV, US$ thousands	57,910
IRR, %	93.9%
EBITDA returns, %	52%
Payback period, years	3.8
Discounted payback period, years	3.9

Project economics



Project location: Arkalyk district, Kostanay region

Mayatas field reserves

Fields	Ore	Content	Metal quantity
Gold			
Uvalnoye	6,800 thousand tonnes	1.18 g./tonne	8,024 kg.
Yuzhnoye			
Daykovskoye			
Other			
Lead			
Zarechnoye	5,426 thousand tonnes	1.8%	97,770 tonnes

Development of the Berkarinskoye deposit in the East Kazakhstan Oblast

Project description:

This investment project (the "Project") involves development of the Berkarinskoye field in East Kazakhstan Oblast, which includes additional exploration, extraction, and processing of ore containing copper and silver.

Product: Refined copper, refined silver

Project initiator: Nouvelle Mining LLP

Location: The Berkara site is located on the territory, which is a part of Semey city administration in East Kazakhstan Oblast

Consumer market:

Copper - plants processing non-ferrous metals in CIS, China and Europe.

Silver - refining plants of Kazakhstan, Russia and China

Market prerequisites

High demand. The expected demand growth for the refined copper will reach 2.99% in 2018 and 2.15% in 2019.

According to data by the Silver Institute, over the last five years, there was a worldwide silver deficit (in 2017, the deficit was 35 million ounces [810 tonnes]). At the same time, annual metal production is declining (a decrease of 4% in 2017).

Price growth. According to forecasts, a moderate increase in copper prices is expected in medium-term time perspective.

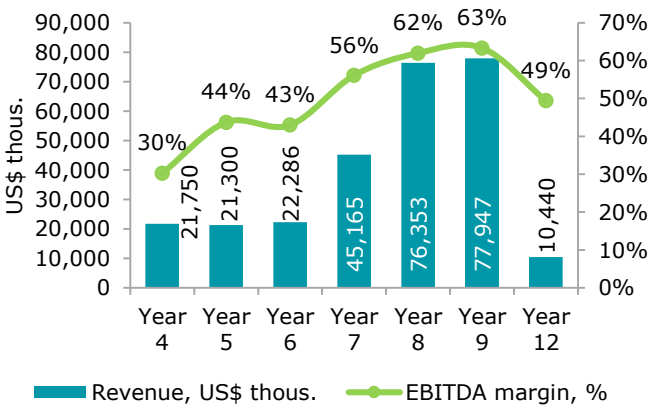
Export potential. The trade deficit in products such as copper sheets, strips and tapes indicates the import substitution potential. Also, Kazakhstan has an opportunity to increase its exports to China and neighbor countries.

Also, there is a potential for exporting silver to China and to Russia. According to the results of 2017, these countries are among the top 10 largest world silver importers.

Key investment indicators

Indicator	Result
Project implementation period, years	12
incl. investment stage, years	*3*
Operating stage, years	*9*
Investment amount, US$ thous.	24,091
Project NPV, US$ thous.	60,155
IRR, %	51.2%
EBITDA margin, %	62%
Payback period, years	6.0
Discounted payback period, years	6.5

Project profitability



Location: The Berkara site is located on the territory, which is a part of Semey city administration in East Kazakhstan Oblast

Proprietary calculation of Eastern Berkara reserves, 2018

Ore type	Cut-off grade, %	Ore, tonnes	Copper content, %	Silver content, g/tonne
Oxidized ores	0.5	1,896,900	1.29	-
Mixed ores	0.5	1,384,801	2.03	19.3

The presented data is the result of preliminary estimates of reserves for East Berkara site, performed in Micromine based on the drilling results of 2016-2017.

Expansion of mining and processing of copper-nickel ores of the Maksut deposit

Project description

expansion of mining and processing plant of copper-nickel ores of the Maksut deposit in the East Kazakhstan oblast (Project).

Project goal

increase in mining and processing of copper-nickel ores of the Maksut deposit beneficiation plant from 400 thousand tonnes **to 1.4 million tonnes of ore per year**

Project initiator

mining company BAST JSC, developing the copper-nickel ores of the Maksut deposit.

Products and average annual production after expansion:

- 21% copper concentrate - 24.3 thousand tonnes
- 4% nickel concentrate - 57.8 thousand tonnes

Processing capacity after expansion:

1.4 million tonnes of ore per year

Project location:

Abay district, East Kazakhstan oblast

Market prerequisites:

Availability of raw materials – The estimated reserves of the Maksut deposit according to the JORC 2012 Code are 26.8 million tonnes of ore with a copper content of 0.44% and nickel of 0.35%

Growing demand – Demand for refined copper is expected to grow by 2.99% in 2018 and by 2.15% in 2019. According to the World Bureau of Metal Statistics in 2017, the shortage of refined nickel on the world market amounted to about 96 thousand tonnes.

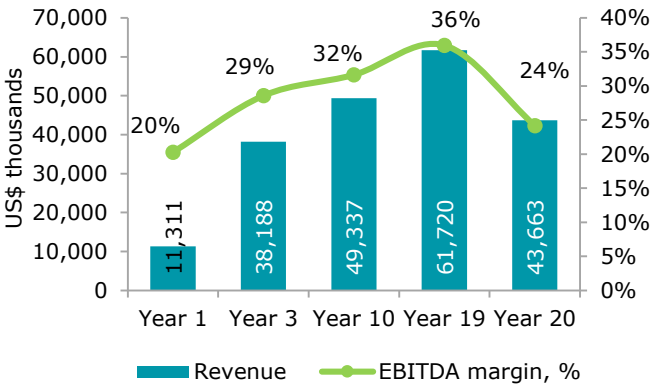
Rising metal prices – According to the forecast data of the World Bank, it is expected of rising of the price of copper (2018 – US$ 6,800; 2021 - US$ 6,849). As of from 2018 to 2022 the average nickel price per year will increase by 3%.

Availability of customers – The mining and processing complex Maksut is an operating enterprise which produces copper and nickel concentrates. Concentrates are successfully in great demand in China, Russia, Uzbekistan. The company has long-term contracts for the sale of concentrates.

Key investment indicators of the Project

Indicator	Results
Project implementation period, years	20
incl. investment stage, years	2
operational stage, years	18
Investment amount, US$ thousands	24,979
Project NPV, US$ thousands	43,749
IRR, %	41.3%
EBITDA margin, %	30%
Payback period, years	4.0
Discounted payback period, years	4.8

Project Profitability



Project Location: Abay District, East Kazakhstan oblast

Mineral Resource Report of the Maksut deposit in accordance with the JORC Code as of July 27, 2017

Resource category	Tonnage	Avg. Cu content, %	Avg. Ni content, %
Indicated	26.8 mln	0.44	0.35
Probable	16.7 mln	0.38	0.28
Всего	**43.5 mln**	**0.41**	**0.33**

Extraction and processing of coking coal from Samarskoye deposit

Project description

This investment project (the "Project") involves construction of a complex for extracting and processing of coking coal from Samarskoye deposit in Karaganda Oblast.

Project initiator

Valdisere Mining LLP

Production and average annual output:

- concentrate of "gas fat" and "fat" types of coking coals (semi-soft coking coals) - 2686 thousand tonnes
- concentrate of grade "coking fat" and "coking" coking coals (hard coking coal) - 1133 thousand tons
- energy coal - 955 thousand tons
- By-product (low quality coal) - 637 thousand tons

Project location: Nurinsky district, Karaganda Oblast

Consumer markets: Kazakhstan, China, Russia

Market prerequisites:

Potential for exporting – In Russia there is a shortage of "K" type high quality coal (20% of the planned output at Samarsroye deposit). In China, a policy is being implemented to reduce coal production. These factors suggest an existence of opportunity for exporting to those markets.

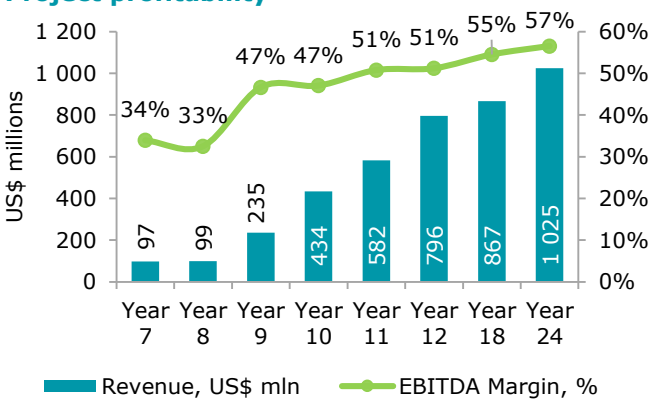
Constantly growing prices. Recently, the market has seen an increase in prices for both coal and products processed from it (namely a coal coke as a result of higher prices for coking coal). In the period of 2013-2017, the average increase in producer prices for coal and brown coal was 12% and 5%, respectively.

High market demand. Constantly developing industrial sector dictates the need for ever-increasing supply of quality raw materials for the production of coke.

Key investment indicators

Indicator	Result
Investment amount, US$ thous.	438,276
Project NPV, US$ thous.	590,665
IRR, %	31.08%
EBITDA margin, %	55%
Payback period, years	6.32
Discounted payback period, years	7.51

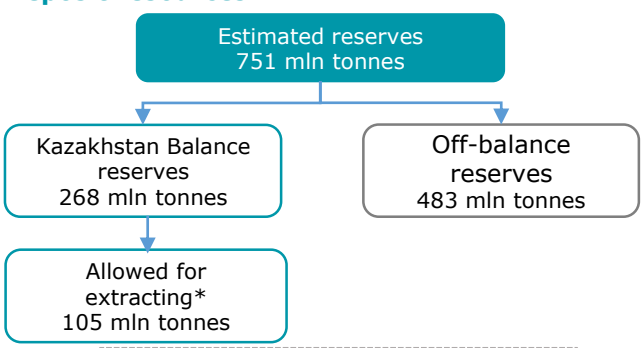
Project profitability



Project location: Nurinsky district, Karaganda Oblast

**permission for extracting the rest of balance reserves can be obtained without difficulties*

Deposit resources



- *Volatile – 34-40%*
  Sulfur – 1,8-2,2%
- *Phosphorus – 0,03-0,06%*
- *A, % - 9%*
- *Y, mm - 22*

Steel production at the Velikhovskoye deposit in Aktobe Oblast

Project Description:

The project provides for the construction of a complex for the production of steel, through the beneficiation and processing of iron-bearing ores at the Velikhovskoye Yuzhnoye deposit in the Aktobe region.

Raw materials:

Low alloy construction steel, carbon construction steel, quality carbon construction steel

Initiator: Aktobe-Temir-VS Subsidiary, JSC

Location: Kargalinsky district, Aktobe oblast

Potential markets: Kazakhstan, Russia, China

Market assumptions:

***Steady demand for steel*.** High rates of historical production growth and the strategic importance of further development of industries using steel as raw materials create a stable demand for the products that the project is going to produce.

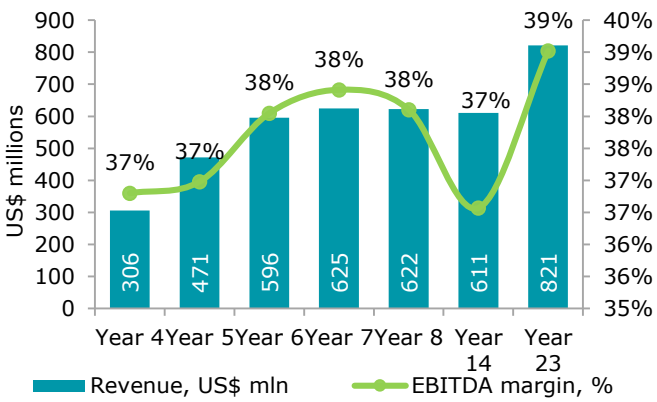
***Further growth in demand for steel*.** According to the forecasts of the International Steel Association, the global volume of demand for steel and steel products will increase by 1.8% and 0.7% in 2018 and 2019 respectively.

***Potential for import substitution and export of steel*.** The existence of the trade deficit over the past few years shows a good potential for import substitution and the availability of stable demand for steel on the domestic market of Kazakhstan. Also, due to the geographical proximity of large world steel consumers such as Russia and China, there is good export potential for the supply of products to these countries.

Key investment indicators

Index	Results
Investment, US$ thousands	550,727
Project NPV, US$ thousands	421,198
IRR, %	25.9%
EBITDA returns, %	38%
Payback period, years	6.8
Discounted payback period, years	8.8

Project Profitability



Project location: Kargalinsky district, Aktobe Oblast

Estimation of resources according to JORC

Type	Category	Cut-off grade	tonnage	Average Content Fe (%)
Magnetite resources, ore body – I	Measured	16	112,851,680	20.91
Martite resources <30% Fe	Measured	16	4,455,263	20.86
Magnetite resources, ore body – I	Inferred	16	344,762,786	20.02
Magnetite resources, ore body – II	Inferred	16	9,829,786	20.18
Martite resources <30% Fe	Inferred	16	17,570,097	19.59
Martite resources >30% Fe	Inferred	20	4,991,815	41.00
Total	**-**	**-**	**494,461,430**	**20.43**

Report on the Mineral Resources of the Velikhovskoye South deposit in accordance with the JORC Code for February 2, 2012

Extraction and processing of gold-bearing ores at Shokpar and Gagarin deposits

Project overview:

Extraction and processing of gold-bearing ores of the Shokpar and Gagarin deposits (the "Project")

Commercial product: bulk concentrates of gold and silver.

Output capacity: 17,531 kg of gold and 90,764 kg of silver over the whole project operating period.

Production process: *Mining* – open-pit and underground; *Processing* – direct collective flotation

Project implementation period: 14 years, incl. the development of deposits in the meantime.

Initiator:

Tau-Ken Samruk National Mining Company LLP – national operator of mining assets in Kazakhstan, which has a priority right to acquire a license for exploration and extraction of mineral resources.

Project implementation location: Zhambyl Oblast

Potential markets: Kazakhstan

Market assumptions:

Raw materials availability – Low COGS is achieved due to the availability of own cheap raw materials base. Kazakhstan holds the 6th place in the world for the amount of its explored gold reserves. Silver reserves in Kazakhstan are discovered in more than 100 ore fieds.

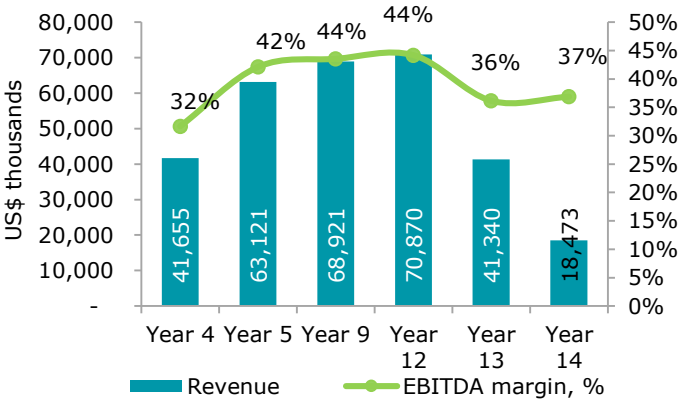
Export potential – Taking into account the fact that 24% of the global demand for gold comes from China, Kazakhstan has a huge export potential. Kazakhstan has exported 4,500 tonnes of gold-bearing ore to China in 2017. Also, one of the other main importers of Kazakhstan gold is Russia, which has imported 7,349 tonnes of gold-bearing ore in 2017.

In addition, China and Russia are among the top 10 silver importing countries as of 2017.

Key investment data

Index	Results
Project implementation period, years	14
incl. investment stage, years	*2*
operational stage, years	*12*
Investment amount, US$ thousands	63,346
Project NPV, US$ thousands	37,391
IRR, %	21.1%
EBITDA margin, %	42%
Payback period, years	6.1
Discounted payback period, years	7.6

Project profitability



Project location: Zhambyl Oblast

Shokpar field reserves and resources

	Reserves	Resources
	C2	P1
Ore	2,105 thous. tonnes	2,121.8 thous. tonnes
Gold	15,151.8 kg (7.2 g/tonne)	15,600 kg (7.4 g/tonne)
Silver	89.7 tonnes (42.6 g/tonne)	78.6 tonnes (37 g/tonne)

Gagarin field reserves and resources

	Reserves
	C2
Ore	1,659.6 thous. tonnes
Gold	9,430.3 kg (5.7 g/tonne)
Silver	85.4 tonnes (51.5 g/tonne)

Development of Zhezdybassay copper deposits in Mangistau Oblast

Project overview:

This investment project (the "Project") involves construction of an industrial complex for the extraction and beneficiation of copper ores at Zhezdybassay deposit and at nearby located deposits in the Mangystau region. Copper concentrate is planned to be processed into cathode copper at the copper plant KazZink, with its subsequent sale as a final product.

Commercial product: cathode copper (in sheets)

Project initiator: Tekhnogran Aktobe LLP

Project implementation location: Mangistau district, Mangistau Oblast

Potential market: Non-ferrous metals processing plants of neighbouring countries, China and Europe

Market assumptions:

Large copper reserves. Kazakhstan is ranked 6th in the world for copper reserves, which is 4.7% of world reserves or 36.6 million tonnes in volume terms.

High demand. Demand for the refined copper is forecasted to increase by 2.99% and 2.15% in 2018 and 2019, respectively.

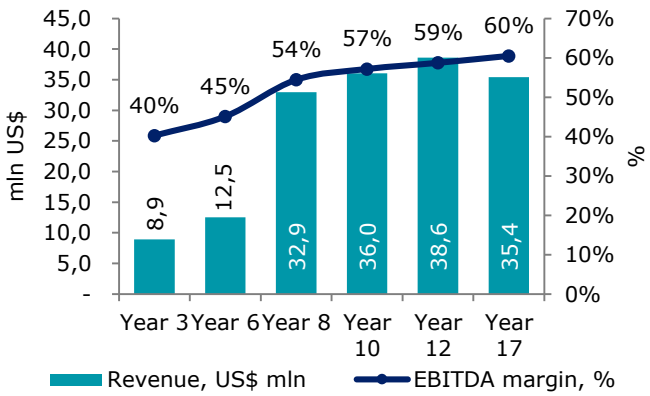
Rise in prices. According to the World Bank's forecast, the moderate rise in prices for copper is expected.

Export potential. Trade deficit in considered copper products indicates potential for import substitution. Moreover, Kazakhstan has the opportunity to boost export to the People's Republic of China and neighbouring countries.

Key investment data

Index	Results
Project implementation period, years	17
including the investment stage, years	*4*
Operational stage, years	*13*
Investment, US$ thousands	23,000
Project NPV, US$ thousands	29,435
IRR, %	29.5%
EBITDA returns, %	39-61%
Payback period, years	7.4
Discounted payback period, years	8.7

Project economics



Project implementation location: Mangistau district, Mangistau Oblast

Reserves of Project's deposits

Deposits/ Mineral occurrences	Reserves, resources category	Ore, mln tons	Copper grade, %	Amount of copper, thous. tonnes
Zhezdybassay	C2+P1	6.7	0.58	39.2
Dolnapinskoye	C2+P1	1.8	0.6	10.8
Sarshasaiskoye	P1	2.4	0.6	14.0
East- Shairskoye	P1	1.1	0.8	8.8
Kyzyltanskoye	C2+P1	0.8	0.6	4.8
Shaniyazskoye	P1	0.09	1.1	1.0
Koktas	P1	0.36	0.4	0.9
Other occurrences and areas	P1	2.1	0.5	10.5
Total:	**C2+P1**	**15.3**		**90.0**

Development of the zinc-copper Alexanderovskoye deposit in East Kazakhstan Oblast

Project Description:

The project involves construction of an industrial complex for the extraction and beneficiation of zinc-copper ores at the Alexanderovskoye deposit in East Kazakhstan Oblast.

Product and average annual production:

Copper concentrate - 6,881 tonnes (963 tonnes of copper)

Zinc concentrate – 22,696 tonnes (10,213 tonnes of zinc)

Processing power:

360 thousand tonnes of ore

Initiator:

"Varsa Mining" LLC

Location:

Kurshim district, East Kazakhstan Oblast

Consumer markets:

Processing plants of non-ferrous metals in the CIS countries, China and Europe

Market assumptions:

Growing demand.

The demand for refined copper is expected to grow by 2.99% in 2018 and by 2.15% in 2019.

Demand for refined zinc, will reach 14,389 thousand tonnes in 2020, increasing by 1.8% in 2019 and by 1.9% in 2020.

***Potential for exporting*.**

Kazakhstan has a geographical advantage which allows an increase of exporting of the product to China. Kazakhstan, being the main exporter of copper products to the Russian Federation, can increase the volumes of supplies of copper concentrates.

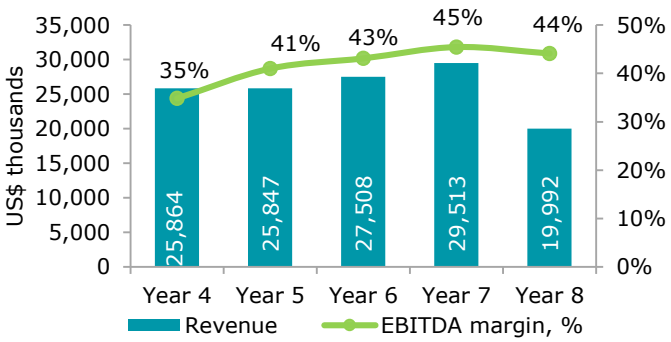
In China (the largest consumer of zinc), the demand for refined zinc is expected to grow from 6,596 thousand tonnes in 2018 to 7,257 thousand tonnes in 2020. Kazakhstan, unlike Peru and Australia, has a convenient geographical location for exporting products to China.

Kazakhstan is also the main exporter of zinc concentrates to Russia.

Key investment indicators

Indicator	Result
Project implementation period, years	8
incl. investment stage, years	*3*
operational stage, years	*5*
Investment, US$ thousands	15,620
Project NPV, US$ thousands	11,997
IRR, %	49.1%
EBITDA returns, %	42%
Payback period, years	4.7
Discounted payback period, years	5.1

Project Profitability



Project location: Kurshim district, East Kazakhstan Oblast

Alexanderovskoye deposit reserves

Indicators	Category	Ед. изм.	Calculation of reserves
Sulphide zinc-copper ore	C_1–C_2	thousand tonnes	13,000
Zinc content		%	3.83
Copper content		%	0.34
Calculation of zinc reserves		tonnes	49,799
Calculation of copper reserves		tonnes	4,394

** Initiator's proprietary calculations in 2018, based on drilling results*

Development of tungsten ores of the Koktenkol deposit

Project Description

Development of tungsten ores at the Intermediate section of the Koktenkol deposit (Project)

Project Initiator

Dala Mining LLP is a private Kazakhstani company that is the copyright holder of the Contract for the development of tungsten and tungsten-molybdenum ores of the Koktenkol deposit.

Output and average annual capacity:

- ammonium paratungstate (APT) – 3,000 tonnes
- molybdenum oxide - 600 tonnes
- copper hydroxide - 300 tonnes

Manufacturing process: well in-situ leaching (ISL) using oxalic and hydrochloric acids.

Location: Karaganda oblast, Shetsky district

Sales market: Germany, Japan

Market prerequisites:

Availability of raw materials – The spatial isolation of the tungsten and molybdenum mineralization of the Koktenkol deposit allows you to organize the primary mining of shallow-lying tungsten ores of the Intermediate section.

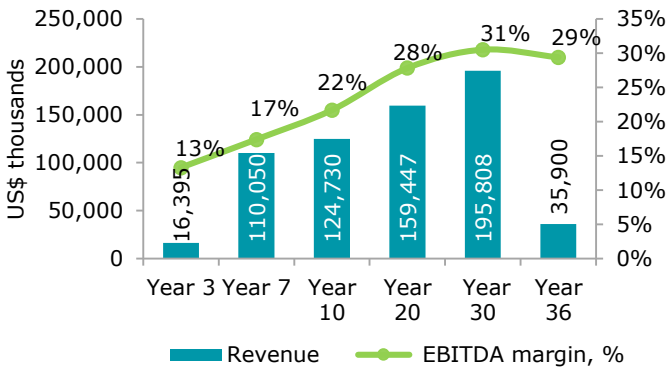
Export potential – In 2017, world imports of tungstates amounted to 11,049 tonnes. The main buyers of ammonium paratungstate in the international market are the USA, Germany and Japan. The development of the automotive and mining industries in these countries opens up prospects for the supply of products.

Growing demand – Over the next 10 years, global demand for tungsten is projected to increase from 72,552 tonnes to 121,679 tonnes (CAGR 5.3%). The growth in demand for tungsten is closely related to the development of the manufacturing industry and the production of automobiles.

Key investment indicators

Indicator	Result
Project implementation period, years	36
incl. investment stage, years	*2*
operational stage, years	*34*
Investment, US$ thousands	77,769
Project NPV, US$ thousands	89,425
IRR, %	26.5%
EBITDA returns, %	25%
Payback period, years	7.9
Discounted payback period, years	9.3

Project profitability



Project location: Karaganda Oblast

Reserves of the Intermediate site

Ore, thous. tonnes	W gen, %	W gen, tonnes	Cu gen, %	Cu gen, tonnes
87,340	0.315	274,798	0.222	95,000

Kokbulak iron ore deposit

Project overview:

Development of Kokbulak iron ore deposit and build concentrate enrichment plant

Investment amount: US$ 418,986 thousand

Capacity: 8-million tonne/year

Product:

Concentrate with an iron content of at least 60% to produce steel

Location:

Aktobe Oblast, Aktobe-Steel Production LLP

Project implementation period:

24 years, including construction period

Selling market:

Domestic market, Russia and China

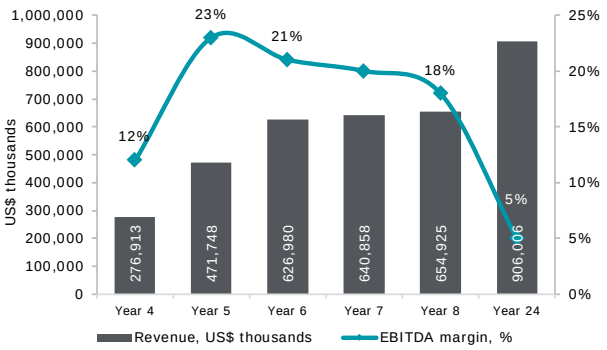
Market prerequisites:

- *Large iron ore reserves* – Kazakhstan ranks 11th in the world in terms of iron ore reserves with a 2% share of global reserves.
- *High demand* - Iron ore demand is, first of all, conditioned by the demand for steel, which, in turn, directly reflects global economic development trends.
- *Export potential* – Since the volume of iron ore produced in Kazakhstan meets domestic demand in full, the bulk of pellets and concentrate produced is exported, predominantly to Russia and China (90-99%).

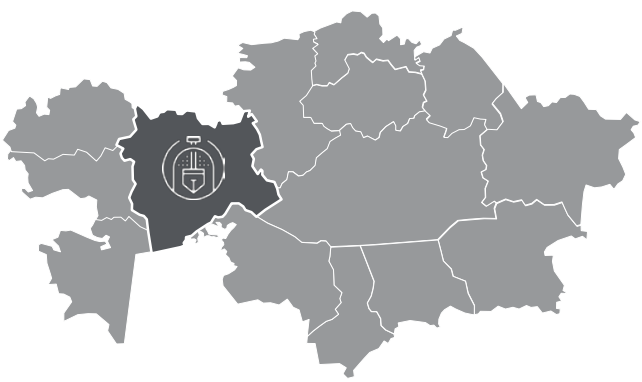
Key investment indicators

Indicator	Result
Investment amount, US$ thousands	418,986
Project NPV, US$ thousands	36,668
IRR	14.9%
EBITDA margin	24%
Payback period, years	9.4
Discounted payback period, years	16.3

Project profitability



Project location: Aktobe Oblast, Shalkar district



Kokbulak deposit reserves

Class	Reserves, million tonnes	Fe, %	P_2O_5, %	Sulphur, %
Central zone				
B	163.1	41.3	1.67	0.06
C1	198.1	37.8	1.48	0.09
Total:	361.2	39.4	1.57	0.08
North zone				
C1	561.9	42.1	1.46	0.06
C2	49.3	37.9	1.36	0.06
Total:	611.2	38.1	1.39	0.06
South zone				
C2	295.9	35.2	1.38	0.09
Total:	295.9	35.2	1.38	0.09
Off-balance				
C1	410.7	26.6	0.99	0.11
C2	238.1	28.3	1.09	0.1
Total:	648.8	27.2	1.03	0.11

Production of metal powder

Project overview:

Setting up a metal powder production with the use of water atomization method on JSC Excavator base

Investment amount: US$ 23,308 thousand

Products:

PZhR Iron powder

Location:
South Kazakhstan Oblast

Project implementation period:
24 years, including 1 year of construction

Target markets: Kazakhstan, Russia and China

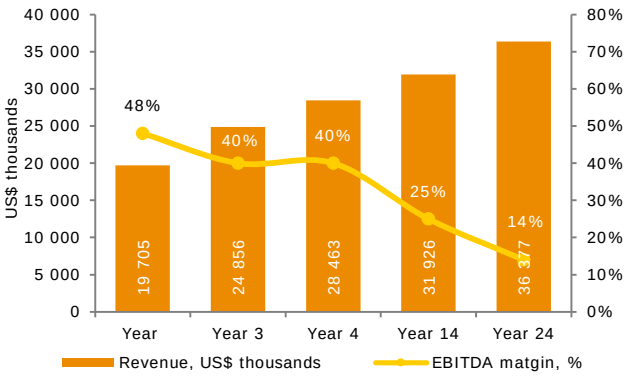
Suppliers: local metallurgical enterprises and scrap buyers

Consumers: production sites

Market prerequisites:

- *Lack of competition* - the plant of the present project will be the first plant in its field in Kazakhstan.
- *Export potential.* Currently, the largest consumer of metal powders is China, which imported about 116 thousand tons in 2016.
- *Low production cost.* Kazakhstan produces industrial steel scrap in excess amounts, therefore, it can be used as the main raw material in the production of metal powders, which will significantly reduce the cost of production.

Project profitability



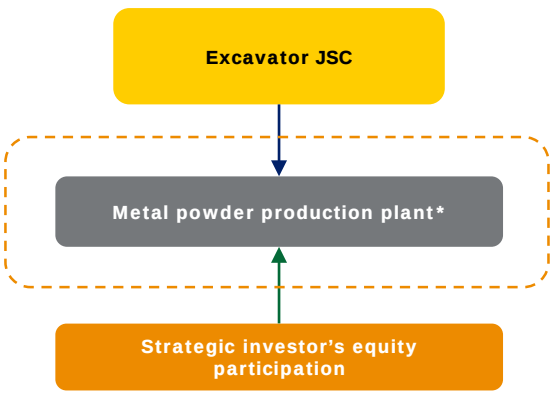
Key investment indicators

Indicator	Result
Investment amount, US$ thousands	23,308
Project NPV, US$ thousands	6,795
IRR, %	23.3%
EBITDA margin, %	27%
Payback period, years	5.1
Discounted payback period, years	7.7

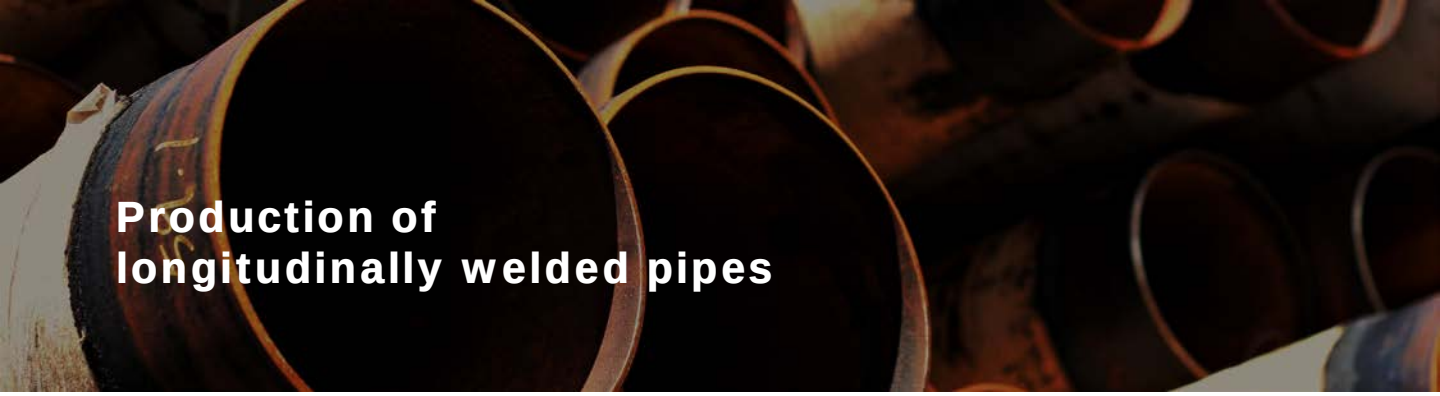
Initiator of the project

The initiator and executor of the project, Excavator JSC, was founded in 1958.

The Company provides a plot (divisible) with existing factory buildings for plant construction



**New LLP will be established to implement this project and to obtain investment preferences.*



Production of longitudinally welded pipes

Project overview:

Construction of a plant for the production of longitudinally welded steel pipes

Investment amount: US$ 24,215 thousand

Products:

Steel longitudinally welded steel pipes with diameters from 273 to 630 mm.

Location:

Special Economic Zone Saryarka,

Karaganda city

Project implementation period:

24 years, including 1-2 years of construction

Target markets: Kazakhstan

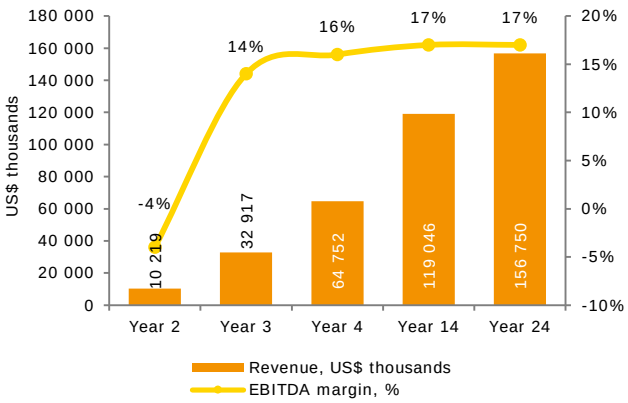
Suppliers: local and Russian suppliers of raw materials

Consumers: own dealer network of metal traders and a network of metal warehouses

Market prerequisites:

- *Local demand* – niche market for steel pipes with diameters from 273 to 630 mm does exist.
- *Competition.* Steel pipes categorized as commodity product and its main competitive advantage is price. Given the low production costs peculiar to longitudinally welded pipes production, the price of the produced steel pipes will be significantly lower than that of its substitutes.
- *Import substitution.* The project is being created to replace imported products with domestic pipes.

Project profitability



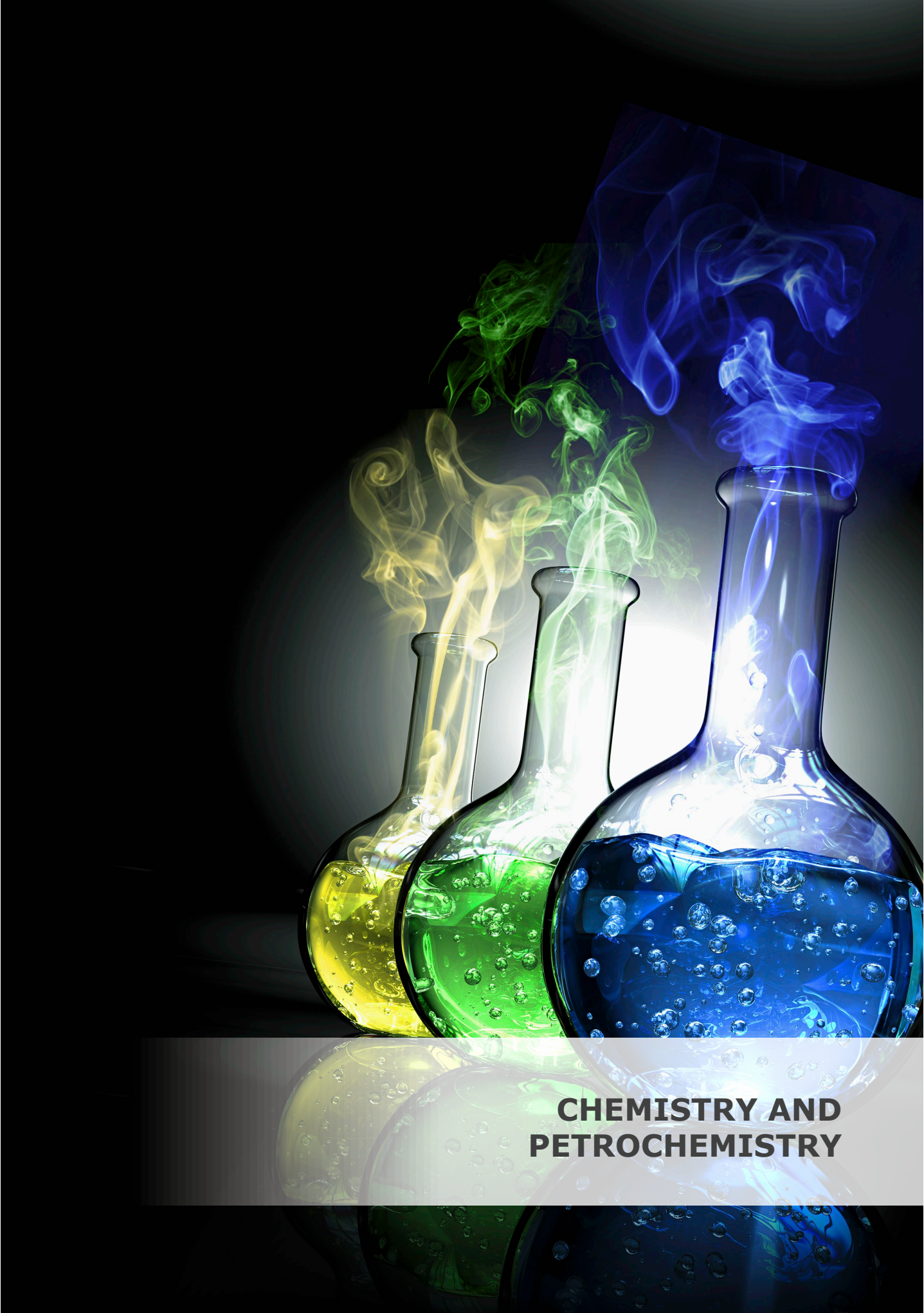
Key investment indicators

Index	Results
Investment amount, US$ thousands	24,215
Project NPV, US$ thousands	20,292
IRR, %	25.9%
EBITDA margin, %	16%
Payback period, years	7.1
Discounted payback period, years	9.5

The total potential steel pipe market* was ~ 94 billion tenge in 2016

Sector		Summary	Potential market volume in Kazakhstan (2016) (thousand km)	Potential market volume in Kazakhstan (2016) (billion tenge)
Housing and public utilities	Heating mains	Steel pipes are used in house construction and infrastructure projects. They are used in communication systems, overpasses, water and gas pipelines etc.	6.7	~87
	Water pipelines		14	
	Gas pipelines		16.2	~7
Total			36.9	~111

**Gas and oil trunk lines are not considered, since their diameter exceeds the diameter of the produced pipes*



CHEMISTRY AND PETROCHEMISTRY

Construction of the base oil production plant in Turkestan Oblast

Project overview:

Construction of Group I, II and III base oil production plant in Turkestan oblast

Raw materials:

Straight-run fuel oil from "PetroKazakhstan Oil Products" (PKOP) oil refinery.

Commercial products:

high-quality base oils of Group I (1200SN), Group II (60N, 150N, 350N), and Group III (650N)

Output capacity:

255 thousand tonnes of base oils per annum

Initiator:

HILL Corporation Group, the only major producer of lubricating oils in Kazakhstan.

Project location:

Turkestan Oblast, Shymkent city industrial zone

Consumer markets:

Kazakhstan, China

Market assumptions:

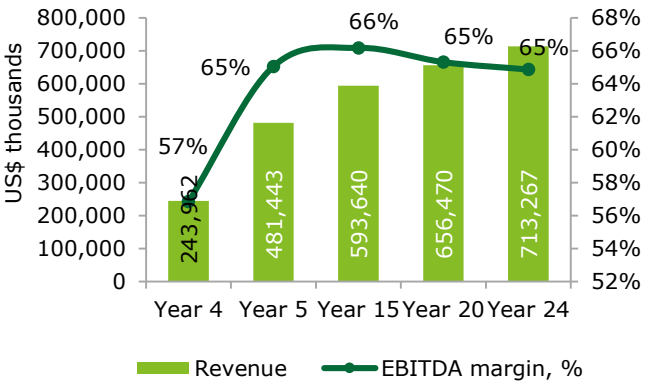
Availability of customers and raw materials - There is a need to supply raw materials to HILL Corporation's operating plant for compounding lubricating oils. Straight-run fuel oil is the main raw material for the Project, which will be supplied by PetroKazakhstan Oil Products LLP ("PKOP"), an oil refinery in Shymkent located 350 m from the future plant.

Import substitution and export potential – Kazakhstan doesn't produce base oils, which are used by local enterprises as a basis for creating lubricants and motor oils. The foreign market (China) is attractive for exporting due to the existence of high demand. Preliminary agreements for selling products in Kazakhstan and in China have already been concluded. Volume of oil exports is expected to reach 183 thousand tonnes per year.

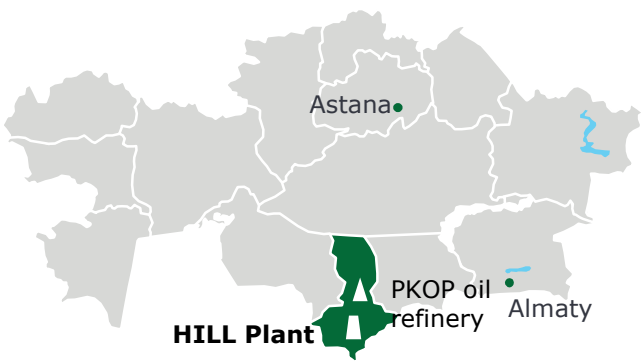
Key investment data

Index	Results
Project implementation period, years	24
incl. the investment stage, years	*4*
operational stage, years	*20*
Investment, US$ thousands	729,238
Project NPV, US$ thousands	770,807
IRR, %	26.3%
EBITDA returns, %	65%
Payback period, years	6.5
Discounted payback period, years	8.5

Project profitability



Project location: Turkestan Oblast, Shymkent city industrial zone



Planned output capacity

Product	Volume, tonnes	Share
Base oils	**254,738**	**100%**
Base oil 60N	20,000	8%
Base oil 350N	36,044	14%
Base oil SN1200	40,470	16%
Base oil 650N	60,950	24%
Base oil 150N	97,274	38%
Secondary products	**240,000**	**100%**
Drilling fluid	18,000	8%
Naphtha	50,542	21%
Deasphaltizate	75,074	31%
Diesel fuel	96,026	40%

Construction of a motor fuel and petrochemicals production plant

Project overview: Project involves building a "Standard Petroleum" oil refinery for producing motor fuel and petrochemicals in Turkestan Oblast.

Refining capacity: 1.85 million tonnes per year.

Raw materials used: oil, gas condensate and their mixtures from the Kenlyk field.

Product: 1) eco-class 5 Ai-95 gasoline; 2) eco-class 5 winter and arctic diesel; 3) gas-motor propane-butane fuel (LPG); 4) oil coke (preliminary stage – M150 fuel oil); 5) petrochemicals: a mixture of aromatic compounds (benzol, toluene and xylene - BTX), isopropyl alcohol, naphthalene, polymers and carbamide; 6) electricity

Initiator: Standard Petroleum & Co LLP (a part of a major integrated holding company, which includes a hydrocarbon exploration, drilling, production, and trading operations).

Location: Turkestan Oblast.

Sales market: Kazakhstan, China and Russia.

Market assumptions:

Availability of raw materials. Total recoverable hydrocarbon resources in Kazakhstan are estimated to amount to 15 bi llion tonnes. Proven reserves amount to 5.5 billion tonnes. Kazakhstan is a global leader in terms of proven oil reserves.

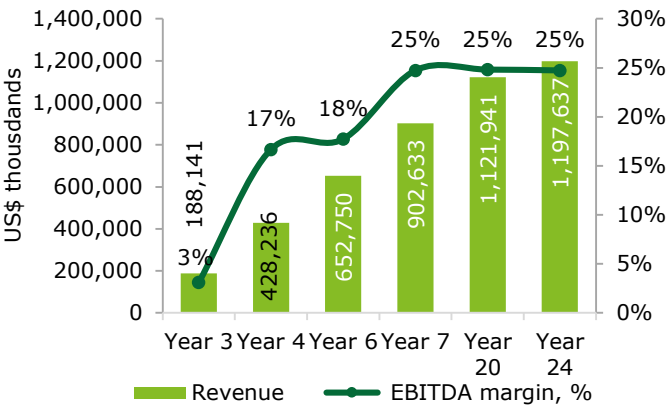
Import substitution. As of now, Kazakhstan oil refineries only meet 70% of domestic demand for motor fuel. Demand for light petroleum products is met through imports from Russia. In Russia and China, there is a growing demand for petrochemicals, specifically for polymers, naphthalene and benzol.

Growing polymer demand. According to AS Marketing and METI, polymer demand has grown on average by nearly 20% over the last five years. Packaging industry development is the key driver of the growing global demand for polymers.

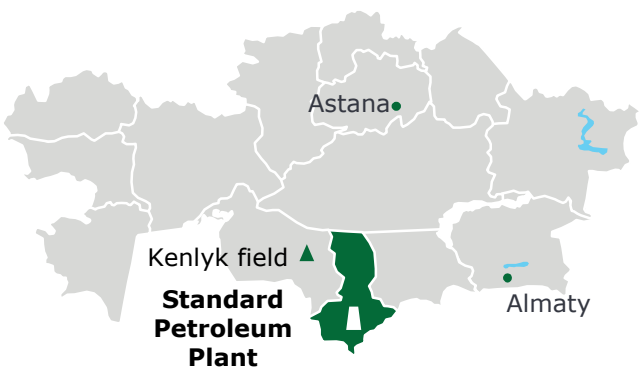
Key investment indicators

Index	Results
Project implementation period, years	24
incl. investment phase, years	*2*
operating phase, years	*22*
Investment amount, US$ thousands	300,000
Project NPV, US$ thousands	460,711
IRR, %	31.2%
EBITDA margin, %	22.8%
Payback period, years	5.9
Discounted payback period, years	7.2

Project profitability



Project location: Turkestan Oblast



Maximum plant output (on the final commissioning phase), thous. tonnes per year

Product	Volume
Vehicle fuel	430 - 440
Diesel	280 - 290
Low pressure polyethylene	172 - 180
Naphthalene	160 - 180
BTX	152 - 160
Oil coke	88 - 92
Polypropylene	65 - 70
Isopropyl alcohol	60 – 76
Carbamide	60 – 65
LPG	36 - 40
Electricity	up to 80 MW/hour

Construction of a liquefied natural gas producing plant

Project overview:

The project involves construction of a plant for the production of liquefied natural gas (LNG) in Zhambyl Oblast.

Output capacity: 47,520 tonnes of LNG per year.

Commercial product: Liquefied natural gas

Initiator: Astana-Trans-Oil LLP

Project implementation location: Sholdala village, suburbs of the city of Taraz, Zhambyl Oblast

Main consumers:

1) Household consumers. Gasification of inhabited areas (Akmola, North Kazakhstan, Pavlodar, Karaganda, East-Kazakhstan Oblasts);
2) Vehicles and agricultural machinery;
3) Small energy facilities;
4) Low-mobility and stationary heavy equipment.
5) Enterprises

Market assumptions:

Availability of resources. Kazakhstan, with its plentiful natural gas reserves, has a potential to take a leading position among the CIS countries in the realm of liquefied gas production.

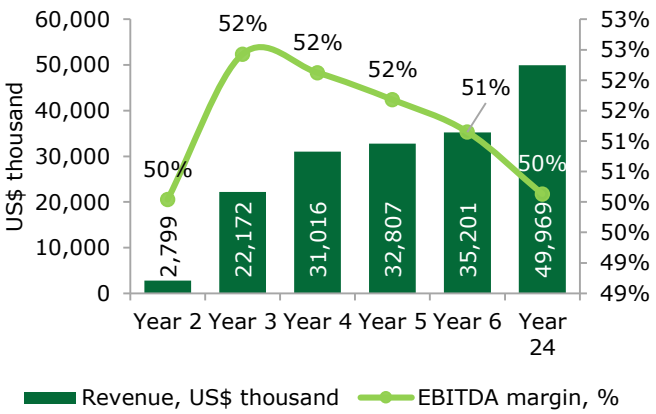
Low level of gasification in Kazakhstan. According to Oblast Akimats (local authorities), gasification level in Kazakhstan was equal to 47.38% by the end of 2017. According to the General gasification scheme, gasification coverage of the country will reach 56% by 2030. This statistics shows a presence of an excellent potential for the development of the LNG industry in Kazakhstan.

Other beneficial factors. There is no LNG production in Kazakhstan at the time of compiling this analysis. Thus, given the lack of competition, insufficient level of gasification in Kazakhstan and a number of advantages of LNG compared to other types of fuel (cost efficiency, energy efficiency, environmental benefits, safety), there is a good potential for the development of LNG industry in Kazakhstan.

Key investment data

Index	Results
Investment, US$ thousands	48,588
Project NPV, US$ thousands	64,629
IRR, %	23.3%
EBITDA returns, %	51%
Payback period, years	6.0
Discounted payback period, years	7.9

Project economics

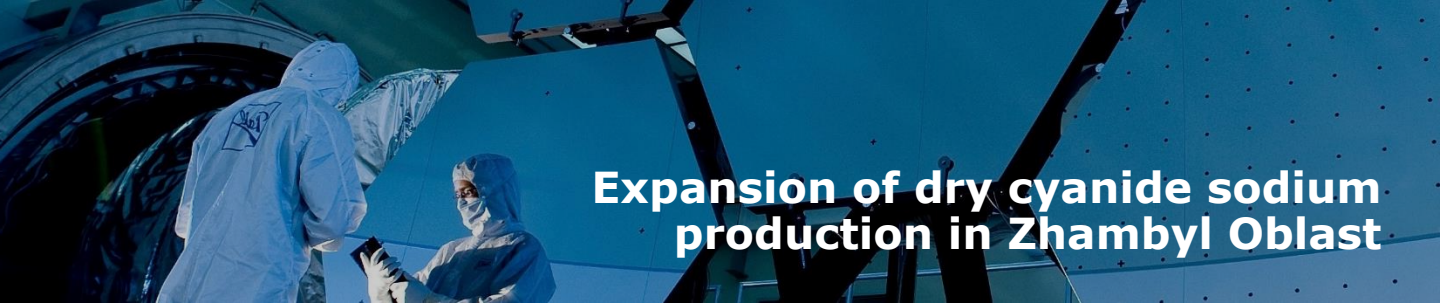


Project location: Sholdala village, suburb of Taraz town, Zhambyl Oblast

Product sales provision

At this moment memorandums on LNG supply have been signed with the following companies:

- Kokshetau Trans Gas LLP
- MCPS Horgos
- KazTransGas Onimderi JSC
- Shchuchinsko-Borovskaya resort area
- Regionstroy LLP, Astana Oblast
- Arys depot, Arys Kazakhstan railway station



Expansion of dry cyanide sodium production in Zhambyl Oblast

Project overview: expansion of production capacity of the dry sodium cyanide plant up to 30 thousand tonnes per year

Production output for the entire Project period: 30 thousand tonnes of sodium cyanide

Raw materials: ammonia, caustic soda, natural gas and air

Commerical products: *basic product* - sodium cyanide, *by-product* - ammonium sulfate

Initiator: Talas Investment Company LLP, which is a part of Ontustik Financial, Trade and Industrial Corporation Group

Project implementation Location: Industrial zone of Karatau, Zhambyl Oblast

Potential markets: Kazakhstan, Russia, China, other near-abroad countries

Market assumptions:

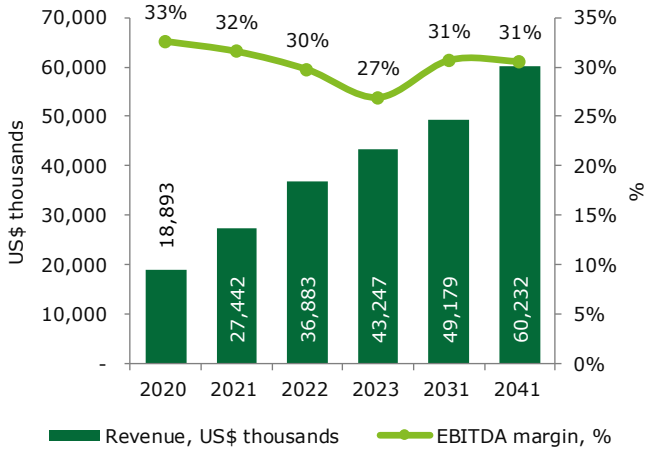
Growing demand – 85 tonnes of gold produced in 2017 by domestic gold mining companies required more than 40 thousand tonnes of reagents, which is 3 times higher than production output of sodium cyanide in Kazakhstan.

Import substitution and export – Kazakhstan's domestic need for sodium cyanide is mainly met by imports from Russia and China. About 90% of sodium cyanide in the world is used to process gold. Imports of sodium cyanide to Russia and China increased in 2014-2017 amid the increasing gold production as their domestic enterprises couldn't fully meet demand for this reagent. Neighbouring countries Kyrgyzstan and Tajikistan are completely dependent on imports of sodium cyanide.

Key investment data

Index	Results
Project implementation period, years	24
including the investment stage, years	*3*
Operational stage, years	*21*
Investment, US$ thousands	21,051
Project NPV, US$ thousands	41,013
IRR, %	36%
EBITDA returns, %	22-33%
Payback period, years	5.1
Discounted payback period, years	5.9

Project economics



Project location: industrial zone of Karatau, Zhambyl Oblast

Talas Investment Company LLP

Planned capacity of the plant

Index	2017	2018F-2019F*	2020F	2021F	2022F
Load, %	100%	100%	50-60%	70-80%	100%
Capacity, tonnes	15,000	15,000	7,500-9,000	10,500-12,000	13,500-15,000
	Current capacity		*+Future capacity*		

Butadiene and synthetic rubber production

Project overview:

Construction of butadiene production plant with a production cycle that includes the production of butadiene (phase 1) and synthetic rubber (phase 2).

Investment amount: US$ 1,487,699 thousand

Capacity: production of 250 thousand tons per year

Location: Atyrau Oblast (NIPT SEZ)

Project implementation period: 25 years, including 1 year of construction

Target markets: Turkey, Poland, China, Tajikistan, Romania, Afghanistan, Moldova

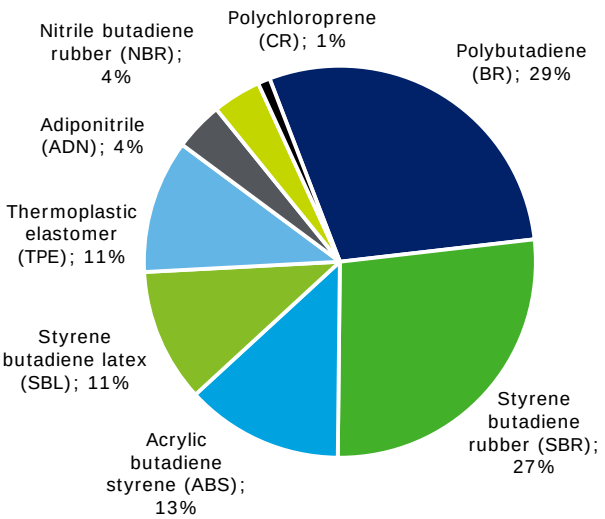
Raw materials base: Kashagan and Tengis oilfields

Consumers: Project realisation helps meet the demands of the Kazakhstan processing industry and the consumers of key butadiene export sales markets.

Market prerequisites:

- *High dependence on import* - analysis of the chemical industry trade balance shows that domestic production capacity can not cover the demand for chemical products and their derivatives.
- *High demand* - synthetic rubber and rubber items are used commonly in machine building, the production of industrial rubber articles, ABS resin, pipes, textiles, clothing and building materials and etc.
- *Effective utilization of associated petroleum gas* - due to the growth in oil production, the issue of recycling ever-increasing volumes of associated gas through its use in the domestic economy is becoming a topic for discussion. Project implementation will introduce an alternative method for the effective domestic application of associated gas.

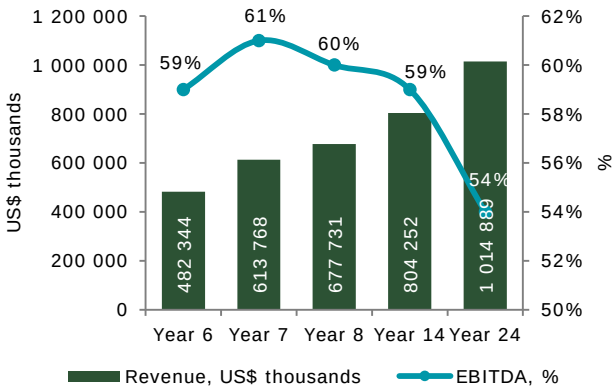
Structure of global demand for butadiene processing products



Key investment indicators

Indicator	Results
Investment amount, US$ thousands	1,487,699
Project NPV, US$ thousands	1,312,037
IRR	22%
EBITDA margin	58%
Payback period, years	9.08
Discounted payback period, years	10.97

Revenue forecast



Barite manufacturing

Project overview:

Construction of barite enrichment plant to produce barite concentrate

Investment amount: US$ 53,997 thousand

Capacity: 75,000 tons per year, with a full production cycle from extraction to beneficiation of barite ores.

Location:
Zhambyl Oblast, “Taraz Chemical Park” Special Economic Zone

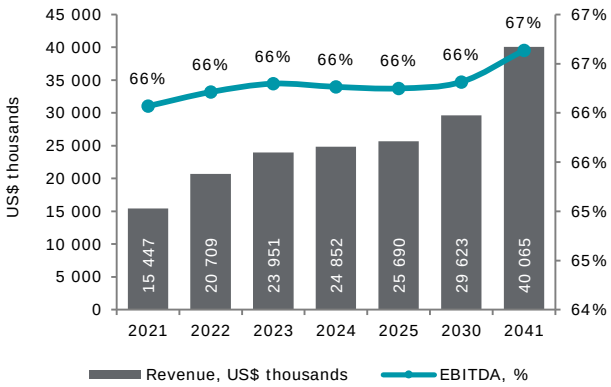
Project implementation period:
24 years, including 1 year of construction

Target markets: Turkmenistan, Azerbaijan, Russia, Kuwait, Saudi Arabia, Oman, USA, Norway, Netherlands, Germany

Suppliers: raw material – Narkyzil and Oijaylau, equipment - USA

Consumers: oil and gas producers

Revenue forecast



Project implementation stages:

- *The first stage (3 years)* - the construction period, which involves the acquisition, installation and construction of necessary equipment and structures.
- *Second stage* – the production period at which barite ore will be mined.
- *Third stage* - planned to commence ore beneficiation and selling the final product in full capacity.

Market prerequisites

- *Demand growth* – domestic consumption in Kazakhstan has increased by 33%, reaching 311 thousand tons in 2017. Moreover a gradual increase in oil production is expected due to the implementation of large-scale projects at Kashagan, Tengiz and Karachaganak (oilfields).
- *Low GoGS* – low production cost can be achieved due to the availability of own cheap raw materials (in the COGS structure, raw materials costs take up 31%).
- *Resources* – according to the US Geological Survey, Kazakhstan has the world's leading position in the availability of barite resources.
- *State support* – provision of tax, customs and other preferences.

Key investment indicators

Indicator	Results
Investment amount, US$ thousands	53,997
Project NPV, US$ thousands	23,271
IRR	22%
EBITDA margin	66-67%
Payback period, years	7.38
Discounted payback period, years	10.99

Project implementation location: Zhambyl Oblast, “Taraz Chemical Park” Special Economic Zone

Potassium sulphate production

Project overview:

Construction of a high-capacity potassium sulphate production plant

Investment amount: US$ 535,756 thousand

Capacity: production of 300 thousand tons of potassium sulphate

Location:
Zhambyl Oblast (Taraz SEZ) or Atyrau Oblast (NIPT SEZ)

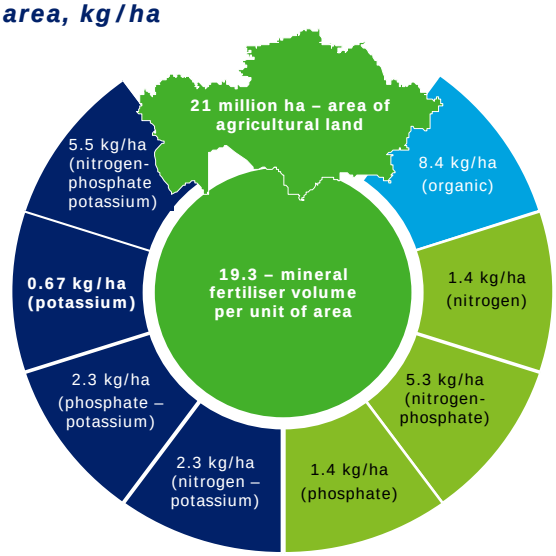
Project implementation period:
24 years, including 1 year of construction

Target markets: The main sales markets for potassium sulfate in the Caspian region, the Transcaucasus and the Middle East are Azerbaijan, Iran, Turkey

Raw materials base: the nearest potash mines of Western Kazakhstan

Consumers: markets of Kazakhstan, Transcaucasia and the Middle East

Application of mineral fertilisers per unit of area, kg/ha



Market prerequisites:

- *High import volumes* - local production capacity will not meet demand for chemical products and derivatives, and this is true for mineral fertilisers.
- *Competitiveness* - Surplus sulphur, which is extracted together with oil and gas, and the existence of commercial sulphur dioxide will facilitate value-added competitive production.
- *High demand* – State guaranteed demand contributes to the gradual increase in the demand for mineral fertilisers, maintaining the growth of organic fertilisers.
- *State support* along the entire production chain by providing investment preferences.

Key investment indicators

Indicator	Results	
	Zhambyl Oblast	Atyrau Oblast
Investment amount, US$ thousands	537,808	535,756
Project NPV, US$ thousands	11,351	84,942
IRR	15%	21%
EBITDA margin	44%	52%
Payback period, years	10.40	8.90
Discounted payback period, years	20.80	12.80

Oblast	Export potential	Infrastructure development	Raw materials base – proximity to main sulphuric acid sales channels	Available qualified human resources	Raw materials base – proximity to potassium ore
Atyrau Oblast	Medium	Appropriate	-	-	High
Zhambyl Oblast	High	Favorable	+	+	Medium

Regions with the most favorable investment indicators

MACHINERY CONSTRUCTION AND METALLURGY

Production of agricultural machinery

Project overview:

Construction of a plant for the production of agricultural machinery

Investment amount:
US$ 19,950 – 64,454 thousand

Products: combine harvesters, tractors

Location:
Implementation of the project on an industrial scale is possible in 3 regions of the Republic of Kazakhstan (North Kazakhstan, East Kazakhstan, Kostanai oblast)

Project implementation period:
24 years, including 2 years of construction

Target markets: CIS countries

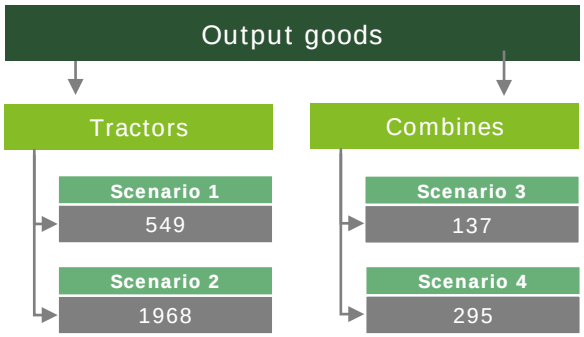
Suppliers: local and foreign suppliers of equipment and components

Consumers: agricultural producers, farm holdings and farms

Market prerequisites:

- *Import substitution* – the volume of imports of tractors and combine harvesters is more than 3 times higher than the production of this agricultural machinery in the country.
- *High level of deterioration of agricultural machinery in the country.* According to official data, more than 93% of tractors and 71% of combine harvesters in Kazakhstan are to be written off.
- *Low cost of production.* Construction of knocked down machine-building enterprises with an initial 49% level of localisation of production level, followed by an increase to 90% by 2041, is beneficial in terms of costs and import substitution.

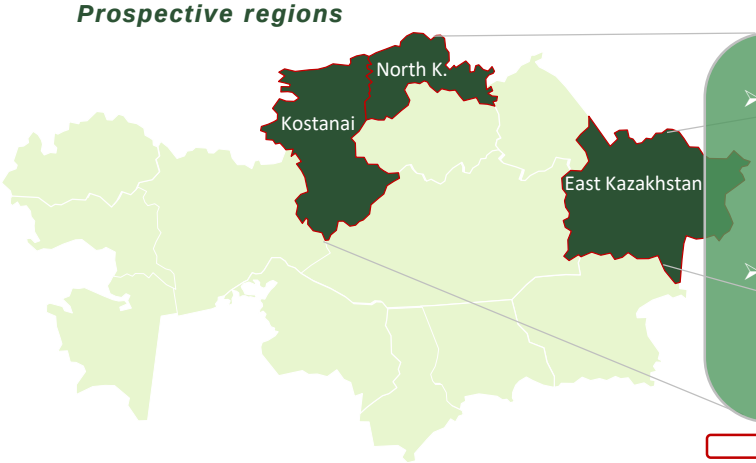
Plant power, units



Key investment indicators

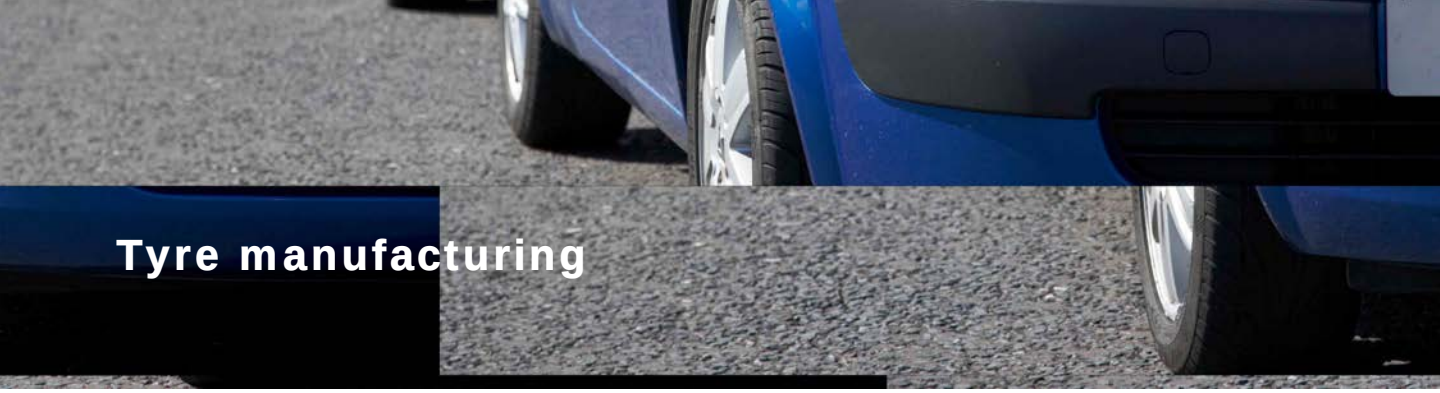
Indicator	Results	Indicator	Results
Scenario 1		**Scenario 3**	
Investment amount	20,871	Investment amount	19,950
Project NPV	11,988	Project NPV	2,064
IRR	26%	IRR	17%
EBITDA margin	8%-12%	EBITDA margin	9%-12%
Payback period, years	6.40	Payback period, years	8.00
Indicator	**Results**	**Indicator**	**Results**
Scenario 2		**Scenario 4**	
Investment amount	64,454	Investment amount	19,950
Project NPV	10,214	Project NPV	19,060
IRR	18%	IRR	32%
EBITDA margin	3%-7%	EBITDA margin	11%-13%
Payback period, years	8.10	Payback period, years	5.60

Prospective regions



- **Geographical advantages**
  Convenient area in terms of logistics due to the proximity to suppliers of equipment and components, as China and Russia
- **Arable land (sales market)**
  These oblasts, and in particular Kostanay oblast has the largest arable land in the country

Scenario with the best investment indicators



Tyre manufacturing

Project overview:

Construction and modernization of an industrial complex with existing infrastructure to produce tyres for passenger cars

Investment amount: US$ 68,539 thousand

Products:

low-cost summer tyres with a radius of R14, R15 and R15

Location:

South-Kazakhstan oblast

Project implementation period:

24 years, including 1 year of construction

Target markets: CIS countries

Suppliers:

foreign suppliers of raw materials

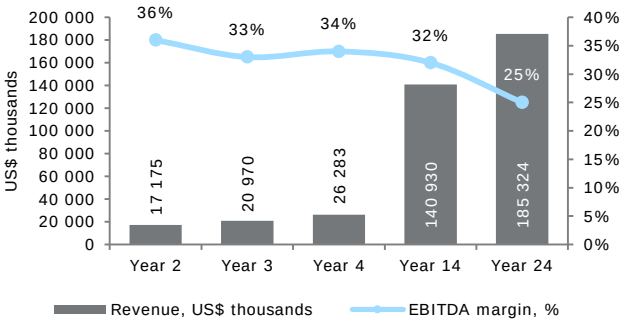
Consumers:

dealers and the public

Market prerequisites:

- *Import substitution* – in Kazakhstan there are no existing tyre production plants.
- *Demand* – Due to slow economy growth, significant demand for budget tyres can be observed in the last 5 years.
- *Export potential* – Neighbouring countries, such as Azerbaijan, Kyrgyzstan and Tajikistan, do not have tyre production plants, whereas other CIS countries have a constant demand for new tyres. Many CIS countries have no import tariffs.

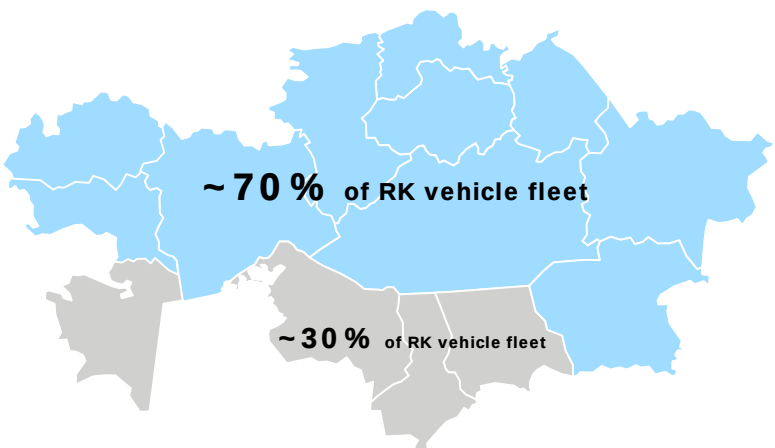
Revenue forecast

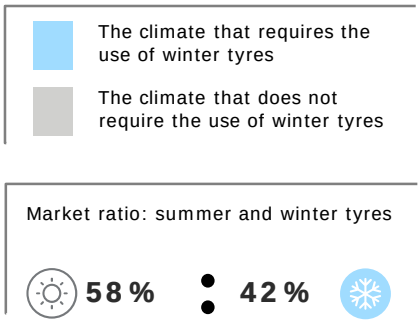


Key investment indicators

Indicator	Result
Investment amount, US$ thousands	68,539
Project NPV, US$ thousands	6,546
IRR, %	14.50%
EBITDA margin, %	25-37%
Payback period, years	10.1
Discounted payback period, years	18.7

Target market





ENERGY SECTOR

Expansion of gas turbine power station GTES-200 Uralsk

Project description:
Expansion of the existing gas turbine power station (GTES-200 Uralsk) by modifying it into a combined-cycle system (operated through gas and steam).

Power capacity: 300 MW

Location: Kazakhstan, West-Kazakhstan Oblast, Zelenovsky District, Beles village

Project initiator: Batys Power LLP

Existing debt obligations of the Initiator:
about US$ 100 million (the possibility of refinancing a foreign currency loan into KZT (tenge) denominated loan is being considered)

Key investment indicators

Indicator	Results
Project implementation period, years	24
incl. investment stage, years	*6*
operating stage, years	*18*
Investment amount, US$ thous.	340,000
Project NPV, US$ thous.	217,018
IRR, %	17.5%
EBITDA margin, %	47-60%
Payback period, years	11.4
Discounted payback period, years	15.5

Project scheme

Existing power station (100 MW)

- GE MS 9001E gas turbine

Expansion (300 MW)

- 2 GE MS 9001E gas turbines
- Expansion of an operational cycle of gas turbines by modifying it into a combined-cycle system, through addition of:
  - Waste heat recovery units
  - K-60-7,4 type steam turbine

All of the infrastructure required for the expansion of the power plant has already been built

Market prerequisites:

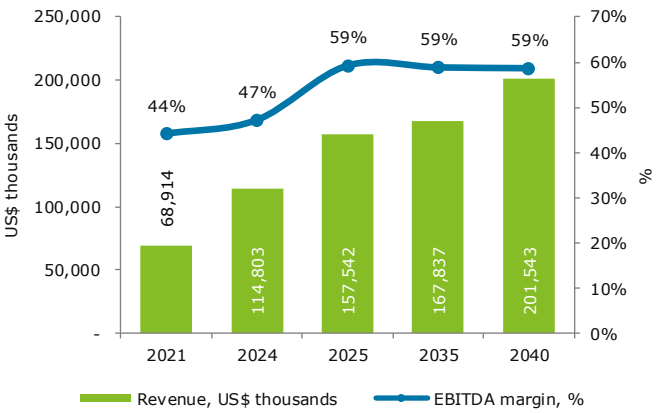
High electricity prices in the region
The Western energy zone is isolated from the country's energy system and does not have an access to cheap electricity from the Northern Energy Zone. Electricity prices for industrial enterprises (main consumers) in Atyrau Oblast are the highest in the country, while in West Kazakhstan Oblast - they rank among the highest across the country.

Increase in energy consumption Almost the entire oil and gas industry is concentrated in Atyrau Oblast and West Kazakhstan Oblast. These regions house enterprises that are carrying out or have already completed major modernization projects (e.g. enterprises such as Atyrau Refinery, Karachaganak Petroleum Operating, Tengiz, CPC), which leads to an increase in electricity consumption.

Proximity to raw material resources GTES-200 Uralsk has an underwater pipeline connected to the major pipeline "Soyuz", which ensures provision of an uninterrupted supply of natural gas. In addition, West-Kazakhstan Oblast is one of the leading oblasts in the Republic of Kazakhstan in terms of gas reserves and gas production. This ensures stability and diversification potential for supplying gas for the operation of the power plant.

Establishing electricity exports The creation of a unified electricity market within the framework of the Eurasian Economic Union will enable the Project to set up exports of electricity to Russia and Belarus, where electricity prices will be set by market conditions. GTES-200 Uralsk is connected to the power system of Russia through the Stepnaya electrical substation and has sufficient transmission capacities for large-scale export deliveries.

Project profitability



Construction of a hydroelectric power plant

Project description

The project plan is to build a hydroelectric power plant on the Koksu river in the Almaty oblast. The design capacity is 82 MW. The area of the plant on the Koksu riverfront amounts to 100 hectares that meets the requirements for the sufficient power generation. The government has already approved the blueprints for the construction of the power plant. The initiator of the project has a Power Purchasing Agreement with Financial settlement centre of renewable energy for 15 years.

Project location

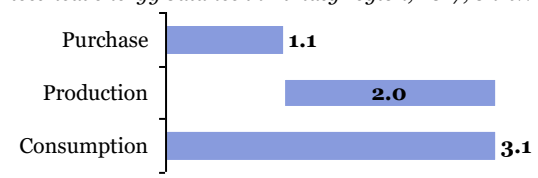
Investment highlights

Upfront investment	$38 MM
NPV	$12 MM
IRR	21%
Payback period	7 years

Market analysis

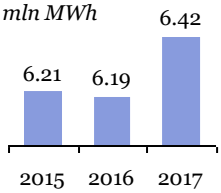
Currently 35% of electricity consumed in the oblast is purchased outside of the oblast.
Oblast's economy is forecasted to grow at a CAGR of 6% till 2022 which will drive the demand for energy.

Electrical energy balance in Almaty region, 2017, bn kWh

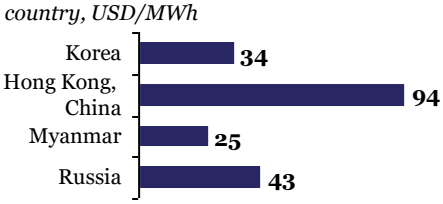


The initiator is also negotiating with Chinese offtakers.

China `s imports of electrical energy, mln MWh



Prices of electrical energy by exporting country, USD/MWh



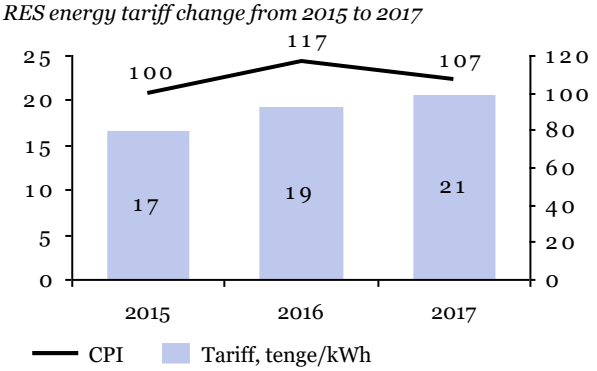
Target Investor Mandate

- Long-term financing
- Supply of technologies

Competitive advantage

I. There is a 15-year offtake contract for 100% of energy generation.
II. The law *On support of the usage of RES* set fixed tariffs for renewable energy adjusted yearly for inflation and foreign currency exchange rate. The tariff is 70% indexed by CPI and 30% by exchange rate.

RES energy tariff change from 2015 to 2017



Value proposition

This project allows to take advantage of **electrical energy supply shortage** in Almaty region.

Sources: Statistics Committee of the Ministry for national economy of the RK, UN Comtrade, Official internet-resource of Almaty city

Construction of a hydro power plant in Almaty Oblast

Project description:
Construction of a cascade of small hydropower plants (HPP) on the Buyen River (and on its tributaries Koksai and Burkettybien) in Almaty Oblast

Power capacity: 18.2 MW

Location: Republic of Kazakhstan, Almaty Oblast, Aksu district, 100 km to the north-east from Taldykorgan, 30 km to the south-east from the village of Zhansugurov

Project Initiator: "Kazgidrokaskad" LLP

Consumer Market: Almaty Oblast

Applied technology:
Hydroelectric installations with Pelton turbines

Key Investment Indicators

Indicator	Results
Project implementation period, years	23
incl. investment stage, years	*3*
operational stage, years	*20*
Investment amount, US$ thous.	30,081
Project NPV, US$ thous.	30,607
IRR, %	19.4%
EBITDA margin, %	87%
Payback period, years	7.3
Discounted payback period, years	9.6

Technical characteristics and components of the Project:

Project components:

- **Cascade of small hydro power plants on the Buyen River (14 MW):**
  - HPP-1 (7.6 MW);
  - HPP-2 (1.4 MW);
  - HPP-3 (2.5 MW);
  - HPP-4 (2.5 MW).
- **Small hydropower plant on the rivers of Koksai and Burkettybien (tributaries of the Buyen River):**
  4.2 MW.

Project's average yearly electricity production:
89.9 GWh

Market prerequisites

Lack of electricity in the region

Almaty Oblast (including Almaty) is experiencing shortages of electricity. About 30% of the electricity consumed in the region comes from the energy-excessive Northern energy zone or is imported from Kyrgyzstan (neighboring country). In 2017, the volume of electricity generation amounted to 7.4 bln kWh, with the volume of consumption reaching 10.4 bln kWh (deficit of 3 bln kWh). According to the Ministry of Energy of the Republic of Kazakhstan, the shortage of electricity in the Southern energy zone (including the Almaty Oblast and the city of Almaty) in 2017 amounted to 9.2 bln kWh and according to their forecasts it will remain at approximate level of 9 billion kWh per year until 2024.

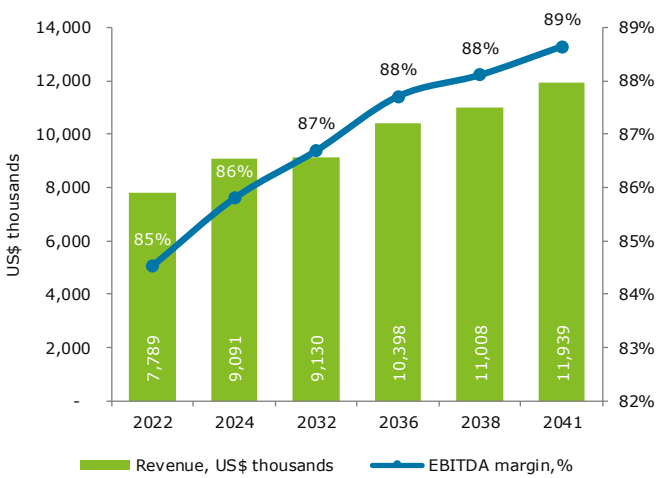
The growth of electricity consumption

In 2017, electricity consumption in the Almaty Oblast amounted to 10.4 bln kWh, which is a 9% increase compared with 2013 (the average annual growth rate over the past five years was equal to 2.1%). In order to reduce the size of the electricity deficit in the region, it is necessary to put significant additional energy generating capacities into the operation in the future.

Government support

The sector of Renewable Energy Sources ("RES") is actively supported by the state. Today, RES sector enterprises are exempt from electricity transmission fees. Also, they are guaranteed to have predictable and long-term tariffs, as well as a full purchase of all generated electricity.

Project profitability



TRANSPORT AND LOGISTICS

Creation of a multimodal transportation hub at the Astana International Airport

Project Description:

Creation of a multimodal transportation hub at the Astana International Airport which in turn will become a center of a new Aerotropolis with commercial and residential objects, industrial zone, logistical companies, recreational and touristic facilities

Location: project will be implemented in Astana city at the current Astana International Airport.

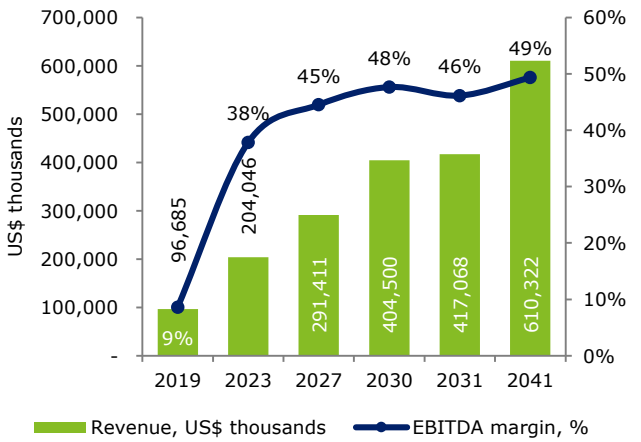
Services provided:

- Service of aircraft, service of passengers, cargo services and storage, multimodal cargo services;
- Development of the Aerotropolis: attracting private investors into the industrial and commercial zones and for construction of recreational, touristic and residential facilities.

Key Investment Indicators

Indicator	Results
Project implementation period, years	24
incl. investment stage, years	*10*
operational stage, years	*14*
Investment, US$ thousands	430,975
Project NPV, US$ thousands	967,264
IRR, %	21.3%
EBITDA returns, %	3-51%
Payback period, years	9.7
Discounted payback period, years	11.7

Project profitability



Market prerequisites:

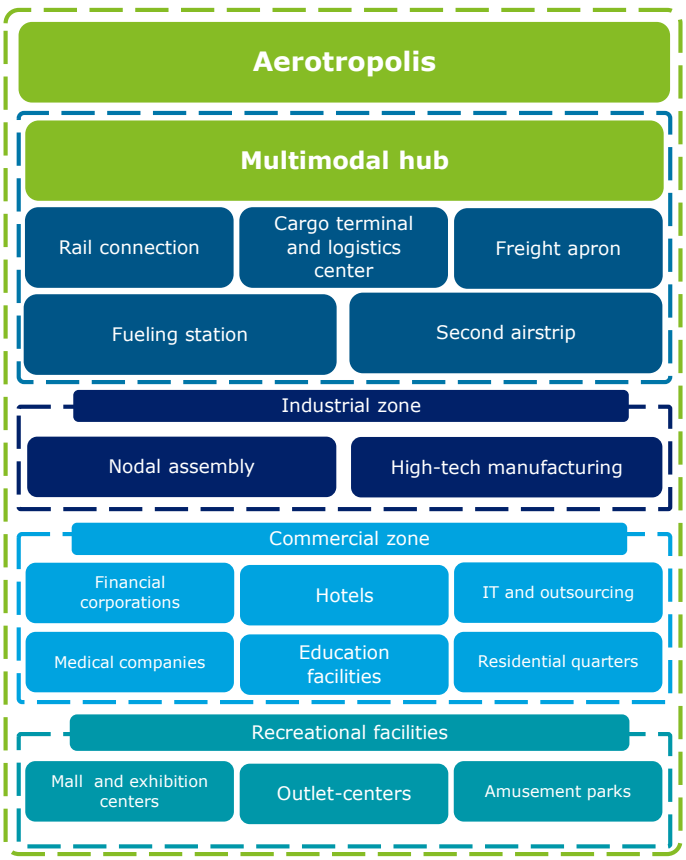
Strategic location Astana Airport has a unique chance to become a transcontinental air bridge, since in a 8 hour flight radius there are 2.3 billion people, which includes populations of China, India and Russia.

Growth of passenger and freight traffic at the airport Average annual growth rate of freight traffic at the Astana airport amounted to 8% (CARG since 2013 until 2017), while passenger traffic increased from 2.6 million to 4.3 million passengers in the same period. According to Lufthansa Consulting Astana airport will see passenger traffic of 13 million passengers and freight traffic of 117 thousand tons in 2030.

New destinations Due to the beginning of the functioning of the Financial Center in the city of Astana and in accordance with the Nation's Plan (Step 67) new destinations will be launched to New York, Tokyo and Singapore. This will lead to an additional increase in passenger and freight traffic at the airport.

Freight traffic from China Located in-between two major exporters and importers of the world: China and EU, will allow the multimodal hub to service the transit of goods between China and Europe.

Structure of the multimodal hub and the Aerotropolis



Construction of transportation and logistics center in Ust-Kamenogorsk

Project description:

Construction of a modern transportation and logistics center (TLC) in the East Kazakhstan Oblast, in the city of Ust-Kamenogorsk, which provides a full range of commercial services for transportation and logistics (Ust-Kamenogorsk TLC, UTLC)

Cargo turnover capacity: 0.5 million tonnes of cargo turnover per year

Project location: East Kazakhstan Oblast, Ust-Kamenogorsk, along the road connecting Ust-Kamenogorsk and Almaty

Services provided:

- customs and brokerage services, as well as other services for registration of all cargo categories
- cargo handling at terminals
- provision of railway docks, open storage areas, warehouses and office premises

Key investment data

Index	Results
Project implementation period, years	24
incl. investment stage, years	*4*
operational stage, years	*20*
Investment, US$ thousands	29,674
Project NPV, US$ thousands	24,920
IRR, %	24.8%
EBITDA returns, %	87%
Payback period, years	6.3
Discounted payback period, years	8.8

Market assumptions:

Favorable location East Kazakhstan Oblast borders with China and Russia, which will give UTLC more prospects to develop as the local transportation and logistics hub connecting Western China and the Eastern regions of Russia. UTLC has a great chance of becoming a transportation and logistics gateway to Siberia.

Increase in foreign trade in East Kazakhstan Oblast Over the period of 2015-2017, foreign trade turnover of East Kazakhstan Oblast has seen an average annual increase of 6%. Notably, China and Russia were the main trade partners. This suggests the existence of reliable demand for warehousing, transportation and customs services.

Growth in wholesale and retail trading volumes Annual growth in the volumes of wholesale and retail trade in East Kazakhstan Oblast during the years of 2016 and 2017 was equal to 19% and 15% respectively. Considering a positive correlation between trading volume increases and increases in the occupancy of warehouses, it is expected that the demand for services of UTLC will be rising.

Growth in the volume of industrial product shipments from East Kazakhstan Oblast to other regions of the country There was a 401% increase in the volume of shipped industrial products from East Kazakhstan Oblast to other regions of the country over the 2014-2016 period. This creates an additional demand for distribution, storage and sorting of goods services.

Low level of competition Currently, there are no similar enterprises in East Kazakhstan Oblast that provide a full range of high-quality services related to transportation and logistics.

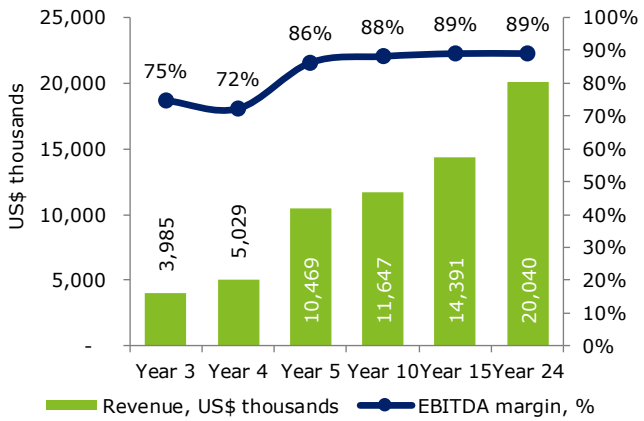
Quality indicators

TLC facilities:

- TLC warehouse with a temporary storage zone (dry and climatic)
- Cargo container terminal: loading and unloading platform with a railway, container platforms, temporary storage zone and a container crane
- Parking lot for cars and trucks
- Admin and accommodation complex
- Repair workshop with a garage for special equipment

TLC area: 10 hectares

Project profitability



Construction and operation of a container terminal at Dostyk station

Project Description: construction of a modern multi-functional freight terminal ("Terminal") near the Dostyk railway station

Location: on a 150 ha land plot, between the main railway and the Kazakhstan-China highway, 7 km south-west of the Dostyk railway station

Project initiator: Dostyk TransTerminal LLP

Capacity:

100,000 units of 20-foot containers ("TEU") per year

Primary activities:

- Transshipment of container cargo;
- Transshipment of general, oversized, heavy and other types of cargo;
- Other transport and logistics services (brokerage, cargo and container warehousing)

Potential consumers

- Logistics companies (DHL, Kuehne & Nagel, DB Schenker Logistics);
- Exporters/importers to and from Kazakhstan;
- Transport and logistics companies engaged in transit of cargo through Kazakhstan.

Market Prerequisites:

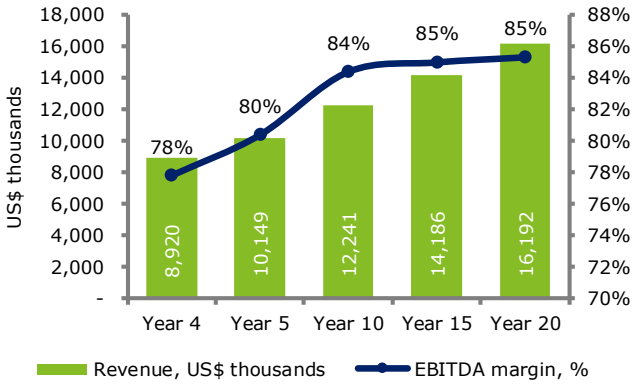
Demanded transport corridor Terminal will be located on the Europe-China corridor. Transit container cargo volume on this corridor has been growing two-fold every year since 2014. In 2017 it reached 201 thousand TEU

Dynamic growth in goods turnover through Dostyk station. Transit container cargo volume passing through the station on the Europe-China corridor reached 114 thousand TEU in 2017. At the moment goods turnover volume passing through the station is only limited by the carrying capacity of the station.

Key Investment Indicators

Indicator	Results
Investment period	2018-2019
Investment amount, US$ thousands	26,099
NPV, US$ thousands	24,878
IRR, %	24.1%
Payback period, years	6.3
Discounted payback period, years	8.8

Project profitability



Location of the Project:

Project life cycle:

The project will be implemented in stages.

- At the first stage, it is planned to commission of a Terminal with 2x2 railway lines (1,435 mm and 1,520 mm). The launch of the first phase is scheduled for September 2019;
- The subsequent stages will increase the capacity of the Terminal to 150-200 thousand TEU;

There is a land fund and infrastructure to create a Multifunctional Business Zone consisting of an industrial and logistic zone near the Terminal.

Transport and logistics center (TLC)

Project overview:

Construction of a modern class A transport and logistics center (TLC), which will be a part of a single and integrated TLC network, providing a full range of commercial services for transport and logistics.

Investment amount: US$ 76,406 thousand

Capacity: total area of 59,167 sq. meters and 984 thousand tons of turnover per year

Location: the city of Aktobe, adjacent territory to the airport of Aktobe

Project implementation period:
24 years, including construction period

Target markets: Aktobe and nearby oblasts

Types of products for storing: climatic warehouse: food, vegetables, fruits; dry storage warehouse: consumer goods, food products, household chemicals, household appliances

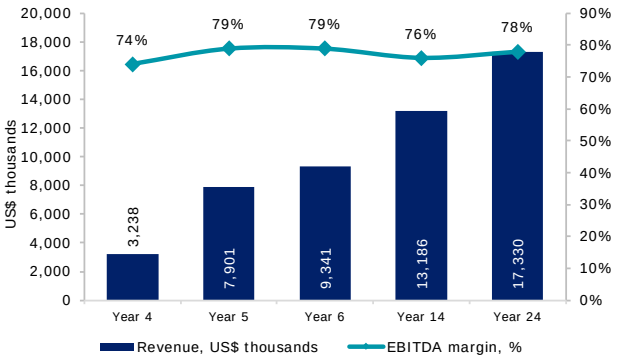
Market prerequisites:

- *Demand growth on the domestic market* – Freight turnover volumes have grown from 95 million tons to 118 million tons during the period of 2012-2016.
- *Growth in transit volumes* – According to Strategy Partnership experts, transit volumes through Kazakhstan's territory are expected to reach 36 million tons by 2020.
- *Enhancing competitiveness* – Implementation of the "Silk Road" project and an increase in the average annual volume of transportations between Europe and Asia (which, according to forecasts, should reach 800 million tons by 2020) increases the flow of cargo through the territory of Kazakhstan.
- *Growth in trade volumes* – Growth in wholesale and retail trade volumes during the period of 2013-2016 amounted to 8% and 3% respectively.

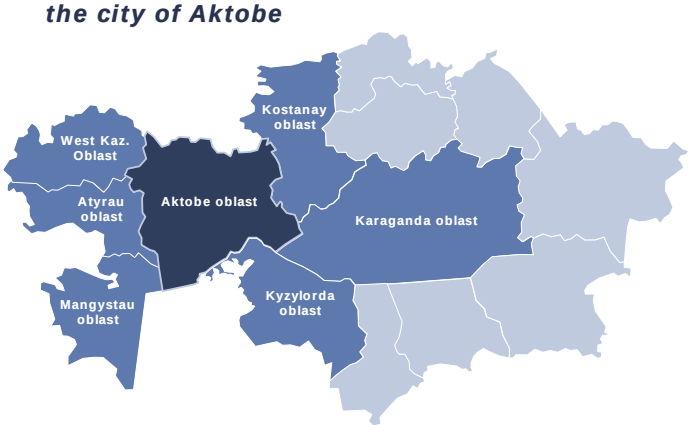
Key investment indicators

Indicator	Result
Investment amount, US$ thousands	76,406
Project NPV, US$ thousands	10,130
IRR	11.5%
EBITDA margin	74-80%
Payback period, years	11.4
Discounted payback period, years	24

Project profitability



Project location: Aktobe Oblast, the city of Aktobe



TLC location advantages

The geographic location of the oblast has following advantages: 1) bordering with 6 Kazakhstan oblasts (West Kazakhstan Oblast, Atyrau Oblast, Mangystau Oblast, Kyzylorda Oblast, Karaganda Oblast, Kostanay Oblast), as well as with Russia and Uzbekistan; 2) proximity to key transportation channels ("Western Europe - Western China" highway, Zhezkazgan-Beineu railway). Thus, the transport and logistics center in Aktobe city has potential to become the main logistics center for servicing transit and interregional transportations.

TOURISM

Development of a resort complex on Bolshoe Chebachye and Tekekol lakes

Project description:

Development of a multifunctional resort complex ("Complex") in Burabay resort area, on the shores of Bolshoye Chebachye and Tekekol lakes, with a year-round operational schedule.

Location:

Akmola region, Burabay resort area, the shores of Bolshoye Chebachye and Tekekol lakes

Project initiator:

Burabay Damu LLP: subordinate organization of the Office of the President's Affairs ("OPA").

Governmental support:

OPA provides a land plot and the government finances construction of engineering infrastructure

Key investment indicators

Indicator	Results
Project implementation period, years	24
incl. investment stage, years	*13*
operating stage, years	*11*
Investment amount, US$ thous.	190,151
Project NPV, US$ thous.	53,898
IRR, %	17.4%
EBITDA margin, %	42%
Payback period, years	10.6
Discounted payback period, years	17.9

Market prerequisites:

Growing demand for tourism services The average annual growth in the number of domestic tourists in Kazakhstan in 2013-2017 amounted to 10%, while the number of outbound tourists was almost left unchanged over the last five years. Average annual growth in the number of inbound tourists in 2016-2017 amounted to 18%. In 2017, the number of inbound tourists (mainly from the CIS countries) amounted to 7.7 million people.

Increase in attendance of Burabay resort area

Burabay resort area is one of the most popular resorts in Kazakhstan. In 2017, 150,000 people have stayed at its guest stay facilities. While an estimated total attendance of the resort area came at around 600,000 people over the same period. According to expert forecasts, the average annual growth of the total resort attendance untill the 2030 will be equal to 4.1%.

Low market competition level To date, in Burabay resort area there are no tourist facilities providing a similar array of accomodation and leisure services, and with similar quality standards. The only complex with a similar scale and versatility of the provided services is the "8 lakes" Park resort complex, located near Almaty.

Capacity projections for the Complex by 2040:

Capacity of the guest stay facilities: accommodating 380 thousand tourists per year;

Residential area population: 2000 people;

One-off visits to the leisure and entertainment facilities of the Complex: 3.3 million per year.

Key facilities of the Complex:

Land plot area

233 hectares

Guest stay facilities

- Family hotel;
- Hotel for adults;
- Hotel for sports events and meetings;
- Guest cottage houses and villas.

Total capacity of the guest stay facilities: 800 rooms (1900 beds).

Hotel categories: 4/4+.

Leisure and entertainment facilities

- Aqua-park and adventure park;
- The ski arena;
- Center for learning and entertainment;
- Health recreational center;
- City center with commercial areas;
- Sports complex.

Residential area

- 340 cottage houses;
- 84 villas.

Construction of all of the facilities of the Complex is divided into 3 phases, with the planned completion of all construction works in 2030.

Construction of "Kokterek" resort town

Project description

The project plan is to build a new resort town "Kokterek" (in the village "Saryagash") in order to develop health tourism by providing services with mineral and thermal waters. The project includes a hotel, a sanatorium, indoor and outdoor swimming pools (thermal water) and spa. The advantage of this project is its proximity to Uzbekistan, source of current tourists in Kazakhstan. Also, the availability of natural mineral water Saryagash.

Project location

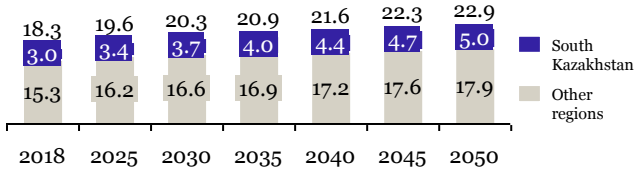
Investment highlights

Upfront investment	$162 MM
NPV	$16 MM
IRR	11%
Payback period	12 years

Market analysis

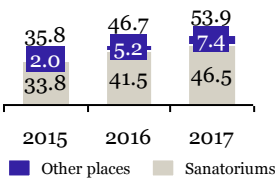
Expected population growth creates demand for increase in domestic tourism.

Forecast of population growth in short-term in Turkestan region, mln people

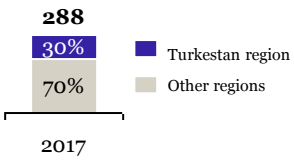


Growth of visitors in the resort sanatorium of the Turkestan region from 2015-2017. increased by **50%**.

Number of users served in sanatoriums Saryagash region, thousand people



Share of Turkestan region served n the sanatorium, thousand people



Target Investor Mandate

- Long cheap financial resources
- Transfer of advanced technologies

Competitive advantage

I. Share of visitors to resort organizations: the largest region in Kazakhstan by the volume of visitors in resort organizations is SKO, - 30% of the market, most of which, ~55% is in the region of Saryagash.

II. Advantageous geographical location: the resort area is near historical places of Kazakhstan and in 15 km. from Uzbekistan, which will additionally provide growth of foreign tourists.

III. Favorable natural conditions: the project is located near the unique sources of mineral waters of Saryagash, where tourists have been coming from around the world for about 6 years.

Value proposition

The project provides opportunity to use unique location in Kazakhstan and develop both internal and external tourism.

Sources: Statistics Committee of the Ministry for national economy of the RK

Construction of the "Akkol resort" recreation area

Project description

The project plan is to construct a resort close to the capital of Kazakhstan - Astana. The key driver is a growing population of the most wealthy region of the country and a lack of large resorts near Astana, where in 2017 the population amounted to 973 thd people. The resort has a logistics advantage in a growing segment of the market. It is expected that the company will provide 126 rooms, 15 guest houses, 3 conference rooms and offer SPA, sports and restaurant services for guests.

Project location

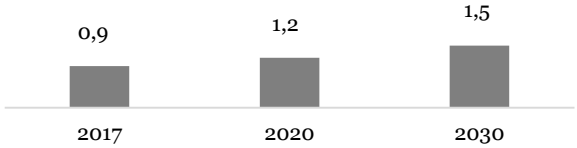
Investment highlights

Upfront investment	$35 MM
NPV	$22 MM
IRR	19%
Payback period	7 years

Market analysis

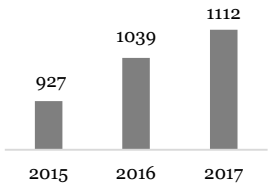
Expected urbanization in Astana drives demand for recreational spaces. Expansion of market will boost necessity for range of variety and number of services available for recreational purposes.

Population growth forecasts in Astana, mln people

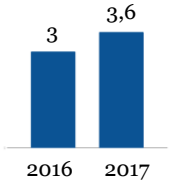


Number of visitors to touristic areas in the region is increasing. There is also a steady growth of foreign tourists in Kazakhstan, who are also expected to be resort visitors.

Number of residents in selected touristic area, thd people



Number of foreign tourists in Kazakhstan, mln people



Target Investor Mandate

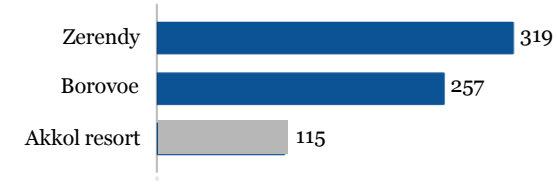
Long cheap financial resources

Competitive advantage

I. Well-established infrastructure that allows frequent and fast movement to the location of a potential hotel.

II. Distance to the area is twice shorter from Astana than to other large recreational centres in the region (Borovoe and Zerendy). This factor can attract citizens of Astana and frequency of tourists is expected to be higher than of competitors.

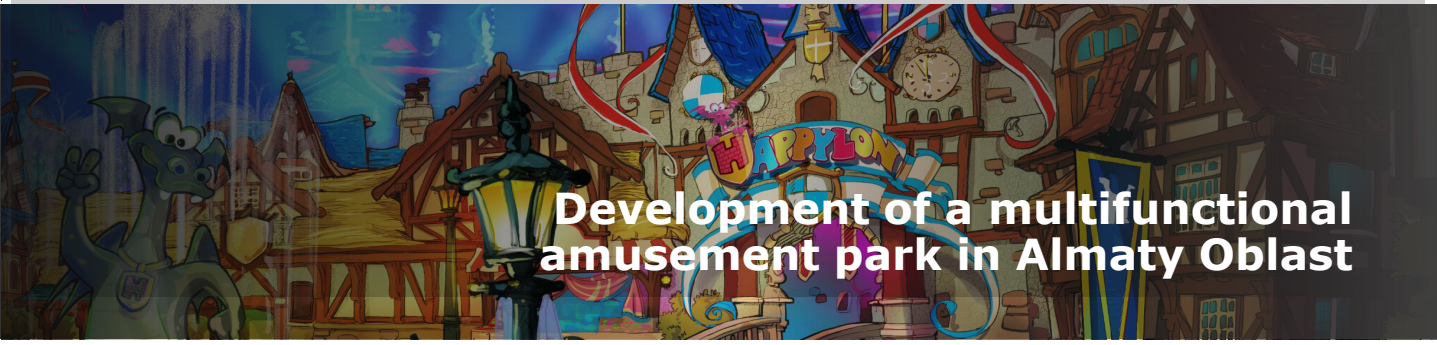
Distance of largest resort areas from Astana, km



Value proposition

This project proposes to take advantage of **the growing tourism demand** in the most developed region of country.

Sources: Statistics Committee of the Ministry for national economy of the RK



Development of a multifunctional amusement park in Almaty Oblast

Project Description:

Development of a multifunctional amusement park «HAPPYLAND PARK» in Almaty Oblast («Project»).

Project goal: To provide citizens of Kazakhstan and Central Asia the opportunity to visit a world-class amusement park.

Location: 23 km from Almaty city

Project initiator: «HAPPYLON» group of companies, which belong to an international network of indoor theme parks and restaurants, providing services for family holidays.

Governmental support: The project corresponds to the objectives of the national concept of development of the tourist industry until 2023, which includes the creation of a cultural and tourist cluster "Almaty –free cultural zone of Kazakhstan"

Area of the Park: 193 ha

Key investment indicators

Indicator	Result
Construction period, years	6
Investment, US$ thousands	125,989
Project NPV, US$ thousands	87,000
IRR, %	15.1%
EBITDA returns, %	55%
Payback period, years	8.7
Discounted payback period, years	11.7

Key Project Facilities

Amusement Park, 45 ha:

- Children's zone – 20 attractions;
- Family zone – 20 attractions;
- Extreme zone – 10 attractions.

Waterpark, 5 ha:

- Open air – 3 ha, 26 attractions
- Indoor – 1 ha, 16 attractions.

Additional segments:

- Nature park, 20 ha;
- Golf club, 78 ha.

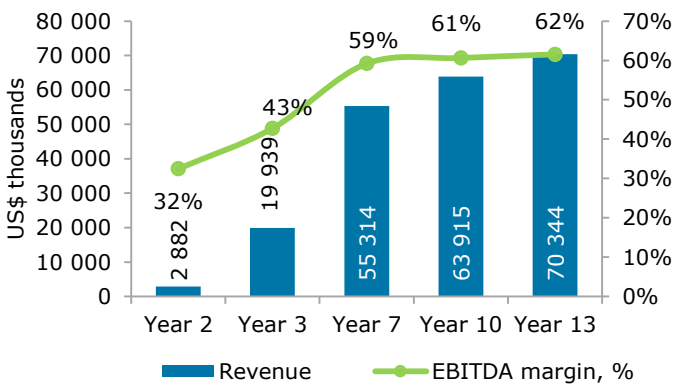
Market prerequisites:

Growing demand for tourism services– Average annual growth in the number of domestic tourists in Kazakhstan in 2013-2017 was 10%. The average annual growth in the number of incoming tourists in 2016-2017 was 18% (2017 – 7,7 million people). The number of visits to parks and recreation areas in Kazakhstan was more than 27 million in 2017.

Geographical location – The park will be located, 20km from the largest megacity of Kazakhstan with a population of 1.8 million people alongside the new highway Almaty – Kapshagai. The target audience of the project covers 162 million people – Kazakhstan, Central Asia, border regions of Russia, China and the Caucasus.

Competence of the initiator– HAPPYLON is the leading player in the «Indoor amusement parks» segment on Kazakhstan market, with a share of more than 70%. The company has 12 years of experience in creating and managing projects in the entertainment industry. The number of visitors in 2017 was more than 1 million people.

Project Profitability



Indoor entertainment center, 5 ha:

- Ethnographic park;
- Happy City (Professions Park) and Science Park;
- Starting platforms for large attractions and karting.

SPA & Resort Hotel, 15 ha:

- Hotel – 200 rooms;
- Cottage house town – 150 rooms and 100 houses
- Bungalow complex – 100 rooms;
- Spa complex– 0,5 ha.

Development of a multifunctional amusement park in Shymkent

Project Description:

Development of a multifunctional amusement park «HAPPYLAND PARK» in Shymkent («Project»).

Project goal: To provide citizens of Kazakhstan and Central Asia the opportunity to visit a world-class amusement park.

Location: : 20 km from the center of Shymkent, on the shore of the Badam reservoir

Project initiator: «HAPPYLON» group of companies, which belong to an international network of indoor theme parks and restaurants, providing services for family holidays.

Governmental support: The project corresponds to the objectives of the national concept of development of the tourist industry until 2023

Area of the Park: 152 ha

Market prerequisites:

Growing demand for tourism services– Average annual growth in the number of domestic tourists in Kazakhstan in 2013-2017 was 10%. The average annual growth in the number of incoming tourists in 2016-2017 was 18% (2017 – 7,7 million people). The number of visits to parks and recreation areas in Kazakhstan was more than 27 million in 2017.

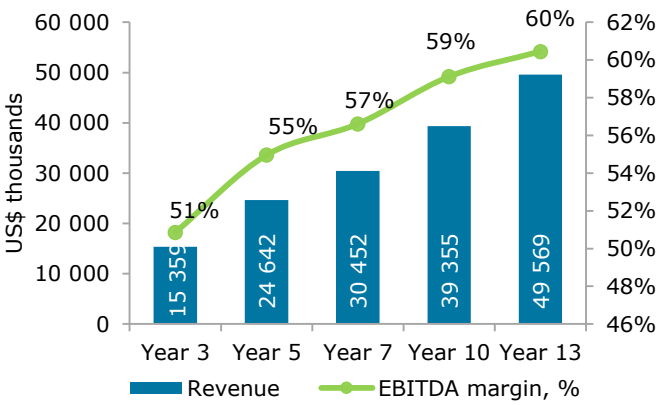
Geographical location – The park will be located 20 km from the agglomeration of Shymkent with a population of 1.8 million people The target audience of the project covers 162 million people – Kazakhstan, Central Asia, border regions of Russia, China and the Caucasus.

Competence of the initiator– HAPPYLON is the leading player in the «Indoor amusement parks» segment on Kazakhstan market, with a share of more than 70%. The company has 12 years of experience in creating and managing projects in the entertainment industry. The number of visitors for 2017 was more than 1 million people.

Key investment indicators

Indicator	Result
Construction period, years	4
Investment, US$ thousands	56,388
Project NPV, US$ thousands	68,727
IRR, %	18.4%
EBITDA returns, %	57%
Payback period, years	7.5
Discounted payback period, years	10.1

Project Profitability



Key Project Facilities

Amusement Park, 45 ha:

- Children's zone
- Family zone
- Extreme zone.

Waterpark, 5 ha:

- Open air

Additional segments:

- Nature park, 20 ha;
- Golf club, 78 ha.

Indoor entertainment center, 2 ha:

- Starting platforms for large attractions and karting.
- Large food-court – 0.12 ha
- Recreational areas

SPA & Resort Hotel, 15 ha:

- Hotel & SPA – 200 rooms
- Cottage house town – 200 rooms
- Bungalow complex – 160 rooms.

PUBLIC-PRIVATE PARTNERSHIP

Multi-profile Hospital in Almaty

Project overview:

Construction of a modern multi-profile hospital to provide a full range of medical services, as well as clinical training for medical students and doctor retraining

Investment amount: US$ 125,717 thousand

Capacity: a hospital for 300 beds and an out-patient clinic with a capacity of 150 visits per shift (2 shifts, 300 visits per day)

Location: Almaty, S D Asfendiyarov Kazakh National Medical University ("KazNMU")

Project implementation period: 15.3 years, including 3,3 years of construction

PPP model: Concession (infrastructure model)

Suppliers: manufacturers of medical equipment and medicines

Clients: Almaty residents, non-residents, foreigners, corporate clients, insurance companies

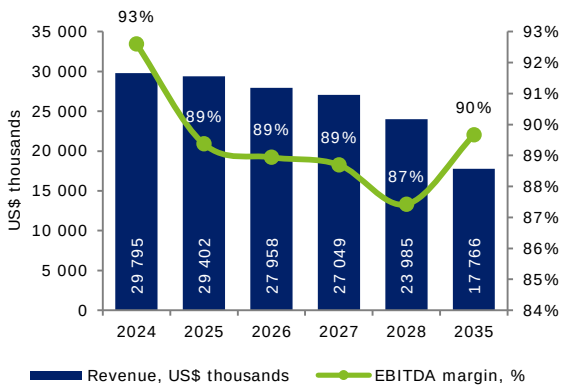
Market prerequisites:

- *High demand for medical services*. Almaty and Almaty Oblast report high statistics of hospitalizations, visits to out-patient clinics and overload of hospital beds. According to 2016 results, the need for in-patient care per 100 thousand residents in Almaty amounts to 398 hospital beds.
- *Proximity to southern regions.* The majority of country population live in southern regions, with high population density. However, the availability of hospital beds in these regions is poor.
- Highly demanded medical profiles are absent among medical services rendered by KazNMU clinics. Moreover, the majority of KazNMU policlinics, including the building of the university, were built between 1932-1982, which does not meet the modern standards of training and retraining of medical personnel. Overall, 71% of hospital infrastructure in Almaty are worn out.

Key investment indicators

Indicator	Result
Investment amount, US$ ths	125,717
NPV, US$ ths	13,140
IRR	16%
EBITDA margin	85-93%
Payback period, years	8.2
Discounted payback period, years	11.4

Revenue forecast



Quality indicators

Project participants

- Private partner
- State partner (Kazakhstan Ministry of Health)
- The operator of medical services
- (S D Asfendiyarov Kazakh National Medical University)

Private partner income

- Compensation of investment and operating costs;
- Management fee;
- Additional income (pharmacy, waste utilization, canteen)

Clinic structure

- Day-stay center;
- Diagnostic department;
- Family Health Center.

Hospital structure

- Medical rehabilitation;
- Surgical departments;
- Therapeutic departments.

Integrated Clinic for 1,265 beds in Almaty

Project overview:

Construction and operation of an Integrated Clinic under the S D Asfendiyarov Kazakh National Medical University through the combination of leading medical and scientific-research institutes and centres in Almaty

Investment amount: US$ 336,496 thousand

Capacity: a hospital for 1,265 beds, including 1,065 profile beds, 55 beds for the rehabilitation department and 145 beds for the day hospital

Location: Almaty, S D Asfendiyarov Kazakh National Medical University ("KazNMU")

Project implementation period:

15.3 years, including 3,3 years of construction

PPP model: Concession (infrastructure model)

Suppliers: manufacturers of medical equipment and medicines

Clients: Almaty residents, non-residents, foreigners, corporate clients, insurance companies

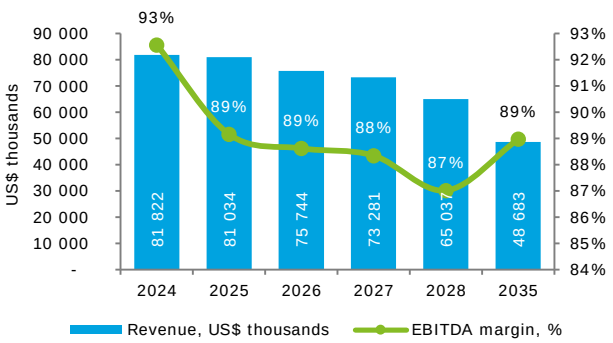
Market prerequisites:

- *High demand for medical services*. Almaty and Almaty Oblast report high statistics of hospitalizations, visits to out-patient clinics and overload of hospital beds. According to 2016 results, the need for in-patient care per 100 thousand residents in Almaty amounts to 398 hospital beds.
- *Proximity to southern regions.* The majority of country population live in southern regions, with high population density. However, the availability of hospital beds in these regions is poor.
- Highly demanded medical profiles are absent among medical services rendered by KazNMU clinics. Moreover, the majority of KazNMU policlinics, including the building of the university, were built between 1932-1982, which does not meet the modern standards of training and retraining of medical personnel. Overall, 71% of hospital infrastructure in Almaty are worn out.

Key investment indicators

Indicator	Result
Investment amount, US$ ths	336,496
NPV, US$ ths	35,925
IRR	16%
EBITDA margin	85-93%
Payback period, years	8.2
Discounted payback period, years	11.3

Revenue forecast



Quality indicators

Project participants

- Private partner
- State partner (Kazakhstan Ministry of Health)
- The operator of medical services
- (S D Asfendiyarov Kazakh National Medical University)

Private partner income

- Compensation of investment and operating costs;
- Management fee;
- Additional income (pharmacy, waste utilization, canteen)

Clinic structure

- Surgery Center;
- Center for Cardiology and Internal Diseases;
- Center of Gynecology and Perinatology;
- Center of Oncology;
- Surgery Block;
- Pediatric Unit.

Multi-profile hospital in Karaganda

Project overview:

Construction of a modern multi-profile hospital to provide a full range of medical services, as well as clinical training for medical students and doctor retraining in the latest medical advancements

Investment amount: US$ 125,717 thousand

Capacity: a hospital for 300 beds and an out-patient clinic with a capacity of 150 visits per shift (2 shifts, 300 visits per day)

Location:
Karaganda, Karaganda State Medical University ("KGMU")

Project implementation period:
15.3 years, including 3,3 years of construction
PPP model: Concession (infrastructure or integration model)

Suppliers: manufacturers of medical equipment and medicines

Clients: Karaganda residents, non-residents, foreigners, corporate clients, insurance companies

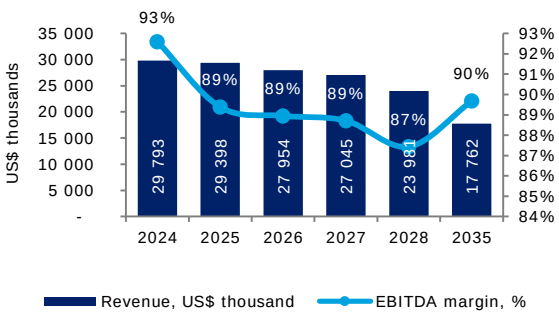
Market prerequisites:

- *High demand for medical services in the region*
- *High demand for hospital beds.* According to 2016 results, the need for in-patient care per 100 thousand people in Karaganda amounts to 612 hospital beds. A complete coverage of the population with in-patient care would require 8,230 hospital beds. Most medical organizations in Karaganda were built in 1930-1990. and are in adulthood.
- *Educational and scientific activities in health care.* Highly demanded medical profiles are absent among medical services rendered by KGMU clinics. Moreover, the remoteness of medical institutions cooperating with the university impede the continuity of the teaching process for students and tutors.

Key investment indicators

Indicator	Results
Investment amount, US$ ths	125,717
NPV, US$ ths	13,140
IRR	16%
EBITDA margin	85-93%
Payback period, years	8.2
Discounted payback period, years	11.4

Revenue forecast



Quality indicators

Project participants
- Private partner
- State partner (Kazakhstan Ministry of Health)
- The operator of medical services
- KGMU (under infrastructure model)/private partner (under integration model)

Private partner income
- Compensation of investment and operating costs;
- Management fee;
- Additional income (pharmacy, waste utilization, canteen)

Clinic structure
- Day-stay center;
- Diagnostic department;
- Family Health Center.

Hospital structure
- Medical rehabilitation;
- Surgical departments;
- Therapeutic departments.

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