INVESTMENT OPPORTUNITIES OF KAZAKHSTAN
Niche projects
Agriculture-industrial complex
Growing and processing potatoes

**Products**
When reaching the design capacity from 2024, the annual output will be 14 thousand tons of frozen French fries. It is planned to sell about 7 thousand tons annually on the domestic market, and about 7 thousand tons to the border regions of the Russia.

**Project**
This investment project envisions the construction of a plant with a capacity of 20,000 tonnes per year for processing potatoes and producing frozen fries in Akkol in Akmola oblast. The construction of the plant is planned on a land plot with a total area of 16 hectares. The Company also leases a plot with a total area of 38 hectares located 15 km from the plant construction site for the purpose of growing potatoes.

**Project objectives:**
- creation of capacities for the production of import-substituting products;
- increasing the export potential of the region;
- creation of more than 30 jobs.

**Company**
Alatau Mashroom Land LLP currently specializes in growing champignons in Akkol and carries out wholesale deliveries to the Sharyn market in Nur – Sultan.

**Market**
- Growing demand and the impact of global taste preferences.
  The volume of international purchases of processed potatoes in 2021 amounted to US$ 7.97 billion. The average annual growth rate over the past 5 years was 3.6%.

**Investment attractiveness of the project:**
- Investment – 113,007 thou. USD
- NPV – 138,001 thou. USD
- IRR – 48.2%
- Payback period – 3.5 years

**What is the attractiveness of the project?**
- **Proximity to raw materials.** The key factor in the choice of production location is proximity to raw materials. On a land plot of 38 hectares, the Company plans to grow its own potatoes. In addition, over 160,000 tonnes of potatoes are grown annually in the North Kazakhstan, Akmola, Pavlodar, and Karaganda oblasts.
- **Proximity to the consumer market.** The region of the production location is distinguished by an extensive transport and logistics infrastructure, which minimizes both the time and costs of delivering products to major cities of Kazakhstan and the border regions of Russia.

**Investment proposal**
The Project requires investment of 113,007 thousand USD, of which:
- 70% (79,105 thousand USD) – debt financing subject to collateral
- 30% (33,902 thousand USD) – investor participation.

The proposed financing structure and state support measures are indicative. The final financing structure and Project interests will be determined based on the results of negotiations with the investor.
Poultry plant construction

Project
This investment project (the "Project") envisages the construction of a poultry plant of poultry meat in the Industrial Zone of Almaty. The Project launch will create 79 additional jobs.

Company
The initiator of the Project is Gaudi-08 LLP. Since 2007, the Company has been a major wholesale supplier of poultry meat and has a well-established distribution system across Kazakhstan. The initiator also has an agreement with the KFC restaurant chain to supply processed chicken meat. In 2021, the Company sold more than 12 thousand tonnes of poultry meat.

Market
• Poultry production and consumption in Kazakhstan. The meat industry is one of the most important food industries in Kazakhstan due to the relatively high meat consumption per capita.
  • Among all types of meat, poultry ranks second based on consumption in Kazakhstan, in particular, it accounts for about 25% of total consumption.
  • In 2021, the poultry production and consumption amounted to 233 and 431 thousand tonnes, respectively. On average, 63% of poultry consumption is covered by domestic production, the rest is covered by imported meat. The CAGR of poultry consumption in Kazakhstan in the period from 2022 to 2026 will amount to 2.85%, reaching the level of 498 thousand tonnes. The growth in the poultry consumption is explained by the population growth and a gradual change in the food culture of the population, which in recent years has become healthier and more dietary.

Investment attractiveness of the project:
Investment – US$ 12,361 thousand,
Project NPV – US$ 16,206 thousand
IRR – 30.7%
Payback period – 5.80 years

What is the attractiveness of the project?
• Favourable location. The presumed location of the plant is Almaty, a densely populated and economically active city in Kazakhstan. The Almaty agglomeration stands out for its extensive road and logistics infrastructure, which is one of the major factors influencing the successful implementation of the Project. The plant will also be located in close proximity to the main suppliers of raw materials, which are poultry farms of Alel Agro JSC (Burundai), Alatau-Kus LLP (Chapaevo village), Otan LLP TM Aiser, Sary-Bulak LLP. Proximity to the raw materials suppliers will significantly reduce transportation costs and the delivery time to the poultry plant.
• The Initiator’s experience. Since 2007, the Company has been a major wholesale supplier of poultry meat and has a well-established distribution system throughout Kazakhstan.

Investment proposal
The Project requires investment of US$ 12,361 thousand, of which:
• 85% (US$ 10,507 thousand) – debt financing subject to collateral;
• 15% (US$ 1,854 thousand) – investor participation.
The proposed financing structure and state support measures are indicative. The final financing structure and Project interests will be determined based on the results of negotiations with the investor.

Products
Production and sales will be as follows: fillet – 1,080 tonnes per year; chicken legs – 1,260 tonnes per year; wing – 360 tonnes per year; minced meat – 210 tonnes per year; bone residue – 90 tonnes per year; semi-finished products – 400 tonnes per year.
Plant for the production of meat and bone meal and animal feed

Commercial products
Upon reaching the full design capacity in 2026, the product range will be as follows:
• meat and bone meal – 3,168 tonnes per year;
• animal feed – 3,500 tonnes per year.

Project description
The Project envisages the construction of a plant for the production of meat and bone meal and animal feed with a capacity of 3,168/3,500 tonnes per year in Kostanay.

Company
The initiator of the Project is Beef Export Group LLP. Since 2018, the Company has been engaged in slaughtering and processing of animal meat, and also selling finished products within the country.

Market
• The global animal and pet feed market was worth US$ 349 billion or 0.37% of global GDP in 2021. Dog and cat food was the largest segment in the animal feed market, accounting for 85% (US$ 65 billion) of the market. Share of other animal feed – 15% (US$ 12 billion).
• The global animal and pet feed market is expected to grow from US$ 348.79 billion in 2021 to US$ 562.24 billion by 2026.
• In 2021, the production of meat and bone meal in Kazakhstan reached 9,505 tonnes. On average, from 2017 to 2021, the annual production volumes of these products were 8,803 tonnes, and the compound annual growth rate (CAGR) of production was 10%. At the end of 2021, the production of cat and dog food packaged for retail sales fell by 59% to 31 tonnes compared to the results of 2020.

Investment attractiveness of the project:
Investment – US$ 34,432 thousand  
Project NPV – US$ 14,141 thousand  
IRR – 20.4%  
Payback period – 6.88 years

What is the attractiveness of the project?
• Favorable location. The Project has a favorable industrial and geographical location. The land plot with an area of 14 hectares is adjacent to the meat-processing complex of the Initiator. Kostanay has an extensive transport and logistics infrastructure. The region has highways of republican and regional significance with access to the regions of Russia (Omsk and Kurgan regions) and the cities of Kazakhstan.
• Company experience. Since 2018, Beef Export Group LLP has been engaged in slaughtering and processing of animal meat, and also selling finished products domestically.
• Wasteless production. The construction of the plant will allow the Company to produce meat and bone meal and animal feed from meat waste and bone remains of the main production.

Investment proposal
The Project requires investment of US$ 34,432 thousand, of which:
• 70 % (US$ 24,102 thousand) – debt financing subject to collateral;
• 30 % (US$ 10,330 thousand) – Investor participation.

The proposed financing structure and state support measures are indicative. The final financing structure and Project interests will be determined based on the results of negotiations with the investor.
Construction of a fruit storage facility and cider vinegar production plant

**Products**
Production and sales will be as follows: apples – 5,475 tonnes; cider vinegar – 3,255 litres and pectin – 146 tonnes.

**Project**
The aim of this investment project ("Project") is to build a fruit storage facility and cider vinegar production plant in Almaty Oblast. The Project stipulates the construction of a 5,000 tonne fruit storage facility, and a 5 million litre/year cider vinegar production plant. Storage facility technology fitted with a controlled atmosphere will allow the Company to extend the cider vinegar storage period until November of the following year after the harvest, which will make it possible to sell high added-value apples during product shortage periods. The Company is also planning to adjust the cider vinegar and pectin production process, allowing it to produce two litres of natural vinegar from one kg of apples.

**Company**
Saraylim Tarim owns a 14,000 tonne fruit storage facility and a 25 ha intensive fruit garden in Corum, Turkey. The Company’s product range includes: 8 types of apple, total weight of 22.5 thousand tonnes per year; other fruit, total weight of 5 thousand tonnes per year; several types of vegetables, total weight of 38.1 thousand tonnes per year.

**Market**
- **Growing demand.** The global apple market was valued at 8 billion USD in 2021 and is predicted to reach 8.6 billion USD by 2028 (CAGR 1%). The global vinegar market was valued at 839 million USD in 2021 and is predicted to reach 1,819 million USD by 2030 (CAGR 8%). Fruit consumption in Kazakhstan also increased in 2021 to 76.8 kg per capita per year (5-year CAGR was 3.54%).

**Investment attractiveness of the project:**
- **Investment – 18,282 thous. USD**
- **NPV – 372 thous. USD**
- **IRR – 17.9%**
- **Payback period – 7.8 years**

**What is the attractiveness of the project?**
- **Advantageous location.** The fruit storage facility and cider vinegar production plant are due to be built in Almaty Oblast, where apple cultivation is widespread. In 2021, total apple orchard area amounted to 35,996 ha, which creates 262,809 tonnes of apples every year.
- **Successful experience in a similar project.** The Company has been operating a 14 thousand tonne fruit storage facility in Corum (Turkey) since 2013, which allows apples to be stored for 11 months. The Company also has the largest commercial fruit orchard in the region, covering an area of 250 thousand m2, enabling the Company to sell 22.5 thousand tonnes of apples, 5 thousand tonnes of other fruit, and 38 thousand tonnes of vegetables every year.

**Investment proposal**
The Project requires debt financing in the amount of US$ 18,282 thousand, of which:
- 70% US$ (12,798 thousand) – debt financing (subject to collateral);
- from 30% (US$ 5,485 thousand) - investor participation.

The proposed financing structure and state support measures are indicative. The final financing structure and Project interests will be determined based on the results of negotiations with the investor.
Construction of a greenhouse complex

Commercial products
The annual production capacity when reaching full capacity in 2025 will be:
• Tomatoes – 1,642 tonnes;
• Cucumbers – 2,309 tonnes.

Project description
The project envisages the construction of a greenhouse-type agro-industrial complex for the production of tomatoes and cucumbers in Aktobe. The complex will be built on own land plot with an area of 5.6 hectares. Aktobe agglomeration is a densely populated region, where about 0.9 million people live, and have an extensive road transport and logistics infrastructure. Thus, the location of the greenhouse complex in Aktobe region will allow covering the neighbour regions of Kazakhstan (Uralsk, Atyrau and Nur-Sultan), as well as border regions of Russia (Orsk, Samara, Orenburg, etc.).

Company
Eco product Company LLP owns a land plot with a total area of 14 ha.

Market
• Imports of tomatoes and cucumbers into Kazakhstan in 2020 amounted to 60 thousand tonnes and 8 thousand tonnes, respectively. The construction of the greenhouse complex will reduce the volume of imports and provide the domestic market with high-quality domestic products.
• In 2020, the gross harvest of greenhouse tomatoes and cucumbers in Kazakhstan amounted 145 and 101 thousand tonnes, with an increase of 18.0% and 14.8% compared to the previous year, respectively. In 2020, the area of greenhouses for growing tomatoes and cucumbers in the country amounted to 744.4 ha and 623.9 ha respectively.

Investment attractiveness of the project:
Investment – US$ 15,550 thousand
Project NPV – US$ 17,813 thousand
IRR – 25.4%
Payback period – 6.1 years

What is the attractiveness of the project?
• Environmentally friendly products and year-round harvest. Compliance with standards of environmentally friendly growing of tomatoes and cucumbers, without the use of genetically modified material is an advantage in comparison with imported tomatoes and will allow occupying a certain niche in the consumer basket. Heating and artificial lighting systems ensure year-round harvesting.
• State support. The project is included in the list of priority sectors for state support. The state programmes provide for a number of benefits, preferences and grants. The availability of resources and state support instruments and the use of innovative production technology allow increasing production capacity, taking into account export opportunities, and diversifying the range of products.

Investment proposal
The Project requires investment of US$ 15,550 thousand, of which:
• 70 % (US$ 10,885 thousand) – mezzanine financing;
• 30 % (US$ 4,665 thousand) – Investor participation.

The proposed financing structure and state support measures are indicative. The final financing structure and Project interests will be determined based on the results of negotiations with the investor.
Expansion of the confectionery production

Commercial products
Production volume will be as follows:
- biscuits – 2,371 tonnes;
- candies – 402 tonnes;
- marshmallow – 1,099 tonnes;
- chak-chak – 298 tonnes;
- jams, preserves, fillers – 265 tonnes.

Project description
This investment project (hereinafter - the "Project") envisages the expansion of the confectionery production in Shymkent in order to meet domestic demand for high-quality confectionery products, increase export potential of the country, as well as create up to 160 new jobs in Shymkent.

Company
SWEET Ideas-KZ LLP is an operating confectionery enterprise. Main activity: Production of bread; production of fresh flour confectionery, cakes and pastries. Company has distributors in Kazakhstan and Kyrgyzstan.

Market
- In 2020, the production of flour confectionery, as well as cocoa, chocolate and sugar products in the world amounted to USD 412 billion and USD 163 billion, respectively. In 2020, there was a slight decrease in production indicators by 2%.
- Consumption of long-life confectionery increased by 12% in 2020 compared to 2016, while CAGR of consumption of breadcrumbs and biscuits for the period 2016-2020 was 3%, which indicates a stable demand for products in the low-price segment. Consumption of chocolate and sugar products has increased by 5% over the past five years, reaching 163,000 tonnes in 2020.

Investment attractiveness of the project:
- **Advantageous location.** The initiator is one of the producers of confectionery products in Shymkent agglomeration. The plant is located in close proximity to the target group of consumers numbering 1.1 mln people. Availability of developed transport junction in Shymkent will allow prompt delivery of products to the regions of Kazakhstan and further to the market of Kyrgyzstan and Uzbekistan.
- **Year-round production.** The company has a storage area of 2,500 sq.m, which will allow it to keep raw materials in proper quality to ensure year-round uninterrupted production, which in general mitigates the risk of seasonal production.

Investment proposal
The Project requires investment of US$ 10,779 thousand, of which:
- 70 % (US$ 7,545.3 thousand) – debt financing subject to collateral;
- 30 % (US$ 3,233.7 thousand) – Investor participation.

The proposed financing structure and state support measures are indicative. The final financing structure and Project interests will be determined based on the results of negotiations with the Investor.
Modernization and expansion of the existing pig-breeding complex for a selection-hybrid center with further processing of its own raw materials

Commercial products
Annual capacity: 30,000 pigs; 2,300 tonnes of meat products, 474 tonnes of offal

Project description
The Project envisages a pig-breeding complex upgrade and expansion to achieve a production capacity of 30,000 per year with the creation of a genetic selection centre ("GSC").

Company
Initiator of the project is ZhK Leninsky LLP. The Company’s main activity is the production of pigs in live weight for slaughterhouses in Kostanay and other regions of Kazakhstan. The total area of the Company’s buildings and structures is 7,563.9 sq. m. The staff includes specialists who have degrees in veterinary sciences and animal science with the 15-year average work experience in pig breeding.

Market
• In 2020, the volume of global pork consumption was 106.3 million tonnes. According to the OECD and UN FAO forecasts, the global consumption of this type of meat will increase. The CAGR in 2021-2029 will be 1.75%. Pork consumption is projected to increase by 9.2% by 2023.

• A decrease in the level pork consumption is observed within the period of 2016-2020. The average per capita consumption of pork reached 5.4 kg in 2015-2016, while in 2019-2020 the mentioned indicator stabilised at the level of 4.7 kg. According to the forecast of OECD, pork consumption in the country will stabilize at 4.5 kg by 2029. Generally, it should be noted that domestic demand is fully satisfied by domestic production. Therefore, production of pork in Kazakhstan has a high export potential.

Investment attractiveness of the project:
Investment– US$ 7,282 thousand
Project NPV – US$ 15,836 thousand
IRR – 33.4%
Payback period – 5.1 years

What is the attractiveness of the project?
• Favourable location. The availability of a developed transport infrastructure and large vacant lands, as well as water and specialised labour resources make Kostanay region attractive for pig breeding.
• Availability of infrastructure. The company has land a plot of over 11 hectares, with connected electricity and water supply systems, as well as production facilities.
• Independence from feed supply and quality control. The availability of equipment for the compound feed production with a capacity of 10 t/h allows the company to reduce feed costs and to ensure the proper quality of feed.

Investment proposal
The Project requires investment of US$ 7,282 thousand, of which:
• 70% (5,097 thousand USD) – debt financing subject to collateral;
• from 30% (2,185 thousand USD) – investor participation.

The proposed financing structure and state support measures are indicative. The final financing structure and Project interests will be determined based on the results of negotiations with the investor.
Construction of a vertically integrated pig-breeding complex for meat processing

Annual capacity:
- Frozen pork meat – 95,017 tonnes,
- Raw casings of categories 1 – 4,353 tonnes,
- Raw casings of categories 2 – 14,227 tonnes,
- Replacement gilts – 24,660 units.

Project investment attractiveness:
- Investment – 136,396 thousand USD
- Project NPV – 150,480 thousand USD
- IRR – 21.9%
- Payback period – 8.8 years

What is the project’s attractiveness?
- Favorable location. The chosen location of the complex is convenient in terms of the accessible distance from large settlements, which corresponds to the Company’s strategy to ensure maximum biosecurity of facilities, but at the same time, it allows for significant reduction of logistics costs when delivering products to end consumers in Russia and China. The site has access to overhead utilities (railway, high voltage power line), underground utilities - cable line (telephone and Internet), sewerage and water supply.
- Independence from feed supplies: Availability of high-quality and inexpensive feed base is one of the key conditions for a competitive advantage in pig breeding. The project provides for the construction of a feed mill with a capacity of 100 tonnes per hour and an elevator for storing grain with a capacity of 90,000 tonnes, which meets world quality and biosafety standards. This will reduce feed costs and logistics costs and eliminate supplier risks.

Investment proposal
The Project requires investment of US$ 136,396 thousand, of which:
- 70% (US$ 95,477 thousand) – debt financing subject to collateral;
- 30% (US$ 40,919 thousand) – investor participation.

The proposed financing structure and state support measures are indicative. The final financing structure and Project interests will be determined based on the results of negotiations with the investor.

Agro - industrial complex
Project profitability

Company
Agro Tech Innovation LLP was established for the implementation of the project.

Market
In 2020, the volume of global pork consumption was 106.3 million tonnes, which is 11.5% lower than in 2018. A downward trend in pork consumption since 2018 is associated with a decrease in pork production because of the African swine fever and a corresponding increase in prices.

- A decrease in the level pork consumption is observed within the period of 2016-2020. The average per capita consumption of pork reached 5.4 kg in 2015-2016, while in 2019-2020 the mentioned indicator stabilised at the level of 4.7 kg. According to the forecast of OECD, pork consumption in the country will stabilize at 4.5 kg by 2029.

Project
the construction of a vertically integrated complex for the production and processing of pork in the North Kazakhstan region. There is a preliminary franchise agreement with Genesus Genetics (Canada), the world’s largest producer of registered purebred pigs. The enterprise will be built in 4 stages:
- At the first stage, it is planned to build a pig farm, a selective hybrid centre, an elevator, a railway branch, a slaughterhouse, a meat processing plant and a feed mill;
- Further, construction of two pig farms at each stage.

KAZAKH INVEST. Investment proposal December 2021
Construction of a starch factory

Annual capacity:
- potato starch (packaging 40 kg) – 597,816 packages/year;
- potato starch (packaging 25 kg) – 50,342 packages/year;
- fodder protein – 1,311 tonnes/year;
- fibre (cellulose) – 23,184 tonnes/year.

Project
The Project envisages the construction of a 60.3 thousand tonne/year factory to produce potato starch and other derivative products. The Project is due to be realised in Pavlodar Oblast’s Zheleznik District, due to its proximity to raw material sources, such as 5 industrial enterprises and over 300 farms growing industrial potatoes. The proposed area of the Project site is 40 ha.

Company
JSC SPK Pavlodar. Main activities: realisation of investment projects with state participation.

Market
- According to Mordor Intelligence, due to its practical functionality, the potato starch market is expected to continue to grow gradually between 2021 and 2026 at an average annual rate of 4.5%.
- The period between 2016 and 2020 saw significant growth in starch production in Kazakhstan with CAGR at 41%. This was partially explained by the relaunch in 2018 of starch and gluten production in North-Kazakhstan Oblast.

Project investment attractiveness:
- Investment – 57,524 thousand USD
- Project NPV – 31,463 thousand USD
- IRR – 23.4%
- Payback period – 5.9 years

What is the project’s attractiveness?
- Advantageous location. The region’s proximity to the Russian border and its transportation corridors such as the Zheleznik-Omsk highway and the Karasuk-Omsk railway will help speed up and increase sales both domestically and overseas.
- Favourable climate. Pavlodar Oblast had the highest potato yield in Kazakhstan between 2016 and 2020 thanks to irrigation from the Irtysh river, rising in the same period from 25.6 tonnes/ha to 29 tonnes/ha, which is 41% higher than the national average.

Investment proposal
The Project requires investment of 57,524 thousand USD, of which:
- 30% (17,257 thousand USD) – investor participation;
- 70% (40,267 thousand USD) - debt financing subject to collateral.

The proposed financing structure and state support measures are indicative. The final financing structure and Project interests will be determined based on the results of negotiations with the investor.
Multifunctional grain complex for receiving, storing, processing and shipping agricultural and food products

Annual capacity:
- Production capacity – 150,869 tonnes, particularly: all-purpose feed – 76,313 tonnes, corn flour – 21,925 tonnes, short cut pasta – 10,977 tonnes, long cut pasta – 6,534 tonnes, coarse-grained flour – 14,352 tonnes, fine-grained flour – 9,864 tonnes, corn oil – 1,756 tonnes, soybean oil – 1,147 tonnes, cornmeal – 3,081 tonnes, full fat soybeans – 4,511 tonnes, grain waste – 390 tonnes.

Project construction of a multifunctional grain complex for receiving, storing, processing and shipping agricultural and food products in the Uygur district of Almaty region.

Company
Ramadan Foods LLP. Company management has 10 years of experience in agriculture and grain trading and processing. The majority of the raw material suppliers are affiliated companies with 43 hectares of farmland, which covers over 70% of the need for raw materials.

Market
- The current outlook for global grain crops production indicates a moderate growth for the third consecutive year. Total production in 2020 was 2,295 million tonnes and is forecasted by the UN FAO to reach 2,438 million tonnes by 2026, with CAGR of 0.81% in the period from 2021 to 2026.
- In 2020, Kazakhstan produced 3,555 tonnes of fine flour, which is 3% more than a year earlier (3,272 million tonnes). Compound annual decline rate from 2016 to 2020 was -3%. The lowering was caused by a downward trend in imports from a number of Central Asian countries due to the launch of their own flour mills.

Project investment attractiveness:
- Investment – 51,013 thousand USD
- Project NPV – 24,668 thousand USD
- IRR – 30.1%
- Payback period – 4.2 years

What is the project’s attractiveness?
- **Ultra-processing.** Raw materials are used to produce primary processing products (flour), secondary processing products (butter, pasta and bakery products) and the waste is used as raw material for the production of compound feed for animals and birds.
- **Geographic location.** The advantages of location in Almaty region are the developed transport infrastructure (access to the Silk Road, One Belt - One Way railway and the Western Europe - Western China highway), proximity to the capacious consumer markets of Almaty and Almaty region, availability of own raw materials and low transportation costs for their delivery.
- **Year-round production.** There are elevators and other storages in place with a total volume of more than 50 thousand tonnes, which will keep the raw materials in proper quality to ensure year-round continuous production, which generally mitigates the risk of seasonal production variability.

Investment proposal
The Project requires investment of US$ 51,013 thousand, of which:
- 70% (US$ 35,709 thousand) – debt financing subject to collateral;
- 30% (US$ 15,304 thousand) – investor participation.

The proposed financing structure and state support measures are indicative. The final financing structure and Project interests will be determined based on the results of negotiations with the investor.
Poultry farm construction

Annual capacity:
- broiler meat - 19,500 tonnes;
- by-products - 7 million;
- compound feed - 3,000 tonnes.

Project profitability

This project envisages the construction of a poultry farm for broiler meat and chicken egg production in Atyrau region. The production capacity will be 19,500 tons of poultry meat and 7 million eggs. The Project launch will provide the region with high-quality products and create additional 200 jobs.

Company
The project initiators are Atyrau region Mayor’s Office represented by Atyrau Social and Entrepreneurial Corporation JSC (49%) and Meken Farm, established in 2009. Atyrau SEC and Meken Farm signed a memorandum on joint implementation of the project, as a result of which the project company Meken Chicken LLP was created.

Market
- According to the OECD and FAO UN forecast, there will be an increase in overall poultry consumption in the world. The CAGR in 2021-2024 will be 1.8%.
- In 2020, the poultry production and consumption amounted to 96.5 and 246.2 thousand tons, respectively. On average, 84% of poultry consumption is covered by domestic production, the rest is covered by imported meat. The CAGR of poultry consumption in Kazakhstan in the period from 2021 to 2024 will amount to 1.3%, reaching the level of 263.9 thousand tonnes. Per capita poultry consumption in Kazakhstan was 12.4 kg per person in 2020. Per capita poultry consumption will also rise to 12.9 kg per person by 2024.

Investment attractiveness of the project:
- **Competitive advantage factors.** There is one poultry farm that produces broiler meat in Atyrau region.
- **State support.** The project is included in the list of priority sectors for state support. The state programs provide for a number of benefits and preferences.
- **Modern equipment.** The use of the advanced technology in combination with professional vertical integration process management allows the optimal use of equipment and compliance with biological safety.

Investment proposal
The Project requires investment of US$ 64,006 thousand, of which:
- 70% (US$ 44,804 thousand) – debt financing subject to collateral;
- from 30% (US$ 19,202 thousand) – investor participation.

The proposed financing structure and state support measures are indicative. The final financing structure and Project interests will be determined based on the results of negotiations with the investor.
Construction of a poultry farm for meat and egg production

Commercial products
Annual project capacity:
• poultry meat - 260 tonnes;
• commercial egg - 122 mln units.

Project description
This investment project envisages the construction of a poultry farm for meat and egg production in Aktobe region. The design production capacity is 122 million eggs and 260 tonnes of chicken meat per annum. A lease contract for a land plot of 30 ha for the period of up to 10 years has been concluded with the Mayor’s Office of Alga district, Aktobe region. In addition, 6.3 ha were allocated under the Project for connecting external gas supply and electricity networks.

Company
Ulan Poultry Farm LLP is an agricultural enterprise specially created for the implementation of this project.

Market
• According to the OECD and FAO UN forecasts, there will be an increase in overall poultry consumption in the world. The CAGR in 2021-2024 will be 1.8%.
• In 2020, the poultry production and consumption amounted to 96.5 and 246.2 thousand tonnes, respectively. On average, 84% of poultry consumption is covered by domestic production, the rest is covered by imported meat. The CAGR of poultry consumption in Kazakhstan in the period from 2021 to 2024 will amount to 1.3%, reaching the level of 263.9 thousand tonnes. The growth in the poultry consumption is explained by the population growth and a gradual change in the food culture of the population, which in recent years has become healthier and more dietary.
• Per capita poultry consumption in Kazakhstan was 12.4 kg per person in 2020. Per capita poultry consumption will also rise to 12.9 kg per person by 2024.

Investment attractiveness of the project:
Investment – US$ 11,212 thousand
Project NPV – US$ 10,728 thousand
IRR – 26.5%
Payback period – 6.05 years

What is the attractiveness of the project?
• Project location. Aktobe region has an extensive road transport and logistics infrastructure: the region has highways of republican and regional significance with access to the regions of Russia and the cities of Kazakhstan.
• State support. The project is included in the list of priority sectors for state support. The state programmes provide for a number of benefits and preferences.
• Own fodder base. The initiator plans to produce its own feed, which will reduce the cost of the final product, as well as dependence on suppliers.
• Final stage of the Project. An administrative block, a veterinary block and a utility building have been already built on the territory of the planned poultry farm, the foundations for the construction of two poultry houses and a feed mill have been prepared.

Investment proposal
The Project requires investment of US$ 11,212 thousand, of which:
• 70% (7,848.4 thousand USD) – debt financing subject to collateral;
• from 30% (3,363.6 thousand USD) – Investor participation.
The proposed financing structure and state support measures are indicative. The final financing structure and Project interests will be determined based on the results of negotiations with the investor.
Fresh fruit processing plant for juice production

Commercial products
Apples – 3,900 tonnes;
Apple juice of direct extraction - 437 thousand litres.

Project description
This investment project ("Project") envisages to expand the production of an existing fruit growing enterprise in the Almaty region. The expansion plan provides for the laying of an additional 80 ha of orchards, the construction of a 2,000 tonnes fruit storage facility equipped with a standard CAS (controlled atmosphere storage) and a workshop for the production of direct-pressed apple juice.

Company
ARNAU AGRO LLP owns land plots with a total area of 348.9 ha in the Enbekshikazakh district of Almaty region, where apple orchards and infrastructure for special machinery and fruit storage are located.

Market
• In 2020, the global juice market was valued at 44.4 billion litres. According to Report linker forecasts, this figure will reach 50.6 billion litres by 2024, with CAGR at 2%.
• In 2020, the production of apple juices in Kazakhstan amounted to 14.6 million litres. Fitch Solutions expects an increase in fruit juices consumption in Kazakhstan due to the transition to a healthy lifestyle of the population after the pandemic (CAGR of 8.59% in the sales of fruit and vegetable juices in the period from 2021 to 2024).

Investment attractiveness of the project:
Investment – US$ 9,365 thousand
Project NPV – US$ 5,860 thousand
IRR – 20.6%
Payback period– 7.77 years

What is the attractiveness of the project?
• Favorable climate and advantageous location. The gardens are located in the foothills of the Zailyskiy Alatau in the Almaty region, where the combination of a warm climate, fertile soil and a special irrigation system contributes to effective gardening and, accordingly, high yields.
• The use of advanced technologies. Storing apples in a controlled atmosphere (CAS) slows down the processes of post-harvest ripening in the fruit, which prolongs the period of their storage without reducing the commercial quality. Ripe apples that do not meet the standard for sale fresh serve as raw material for the production of natural juices. Juice production expands the range of products produced and minimizes production waste.
• Drip irrigation system. Uniform and balanced supply of water and fertilizers allows to optimize growing conditions and increase crop yields, improving the quality of the product.

Investment proposal
The Project requires investment of US$ 9,365 thousand, of which:
• 70% (6,555.5 thousand USD) – debt financing subject to collateral;
• from 30% (2,809.5 thousand USD) – investor participation.
The proposed financing structure and state support measures are indicative. The final financing structure and Project interests will be determined based on the results of negotiations with the investor.
Construction of a commercial dairy farm in Kostanai Oblast

Annual production capacity:
- raw milk production – 108,609 tonnes/year;
- meat for sales (cow) – 2,395 tonnes/year;
- meat for sales (heifer) – 108 tonnes/year;
- meat for sales (bull) – 825 tonnes/year;
- Sales of heifer – 2,704 tonnes/year.

Project:
The Project involves the construction of 8 commercial dairy farms to produce 106 thousand tonnes of raw cow’s milk in Kostanai Oblast per year.

Company:
Olzha Agro LLP is one of the most modern agriculture sector holding companies in Kazakhstan. It manages 10 agricultural enterprises, 8 grain elevators, 2 commercial dairy farms, a milk processing plant, and service enterprises (logistics, trading and agricultural machinery repairs).

Market:
- In 2016–2020, average annual growth in global milk production was 1.8%. The OECD predicts that in 2021-2029, milk production growth will remain steady at 1.6%.
- 2016–2020 saw positive changes in the consumption of liquid cow’s milk with average annual growth of 7.3%. According to Fitch Solutions, the growth in milk consumption in Kazakhstan will average 3%, which is in line with global trends.

Project investment attractiveness:
- Investment – 96,668 thousand USD
- Project NPV – 72,370 thousand USD
- IRR – 22.5%
- Payback period – 7.1 years

What is the project’s attractiveness?
- **Available fodder base.** The Company owns major crop areas (530 thousand ha) in Kostanai Oblast, of which 60 thousand ha will be allocated to ensure the required virus-neutralising antibodies in its own fodder base. Fodder accounts for a large part of material costs, which is why virus-neutralising antibodies in its own fodder base will help reduce milk production costs.
- **Geographic location.** The Project will be realised in the Kostanai Oblast agglomeration (population of 0.9 million) with an extensive road and logistics infrastructure. The region is home to major processing companies such as DEP LLP and MILK LLP, as well as 15 smaller milk processors. The location of production is an advantage, given the efficiency with which deliveries are made throughout Kazakhstan, the proximity and ability to enter the Russian market.

Investment proposal:
The Project requires investment of 96,668 thousand USD, of which:
- 10% (9,667 thousand USD) – debt financing subject to collateral;
- 80% (77,335 thousand USD) – private equity fund participation (KIDF, KCM and SKI);
- from 10% (9,667 thousand USD) – investor participation.
The proposed financing structure and state support measures are indicative. The final financing structure and Project interests will be determined based on the results of negotiations with the investor.
Agro-industrial complex

Project profitability

Location of the project

Investment proposal

Investment attractiveness of the project:
Capital expenditures: US$ 100,257 thousand
NPV – US$ 81,211 thousand
IRR – 18.2%
Payback – 7.0 years

What is the attractiveness of the project?
• Proximity to capacious markets. Urzhar district is located in geographical proximity to capacious consumer markets of Almaty and Almaty Oblast (with a population of 4.0 million people). Urzhar district is located 100 km from highway Almaty-Ust-Kamenogorsk A-3.
• State support. The project is included in the list of priority sectors for state support. The state programmes provide for a number of benefits and preferences.
• Fodder base. The Initiator plans to grow fodder crops (wheat, barley, corn and soybeans) on a land plot of 36,000 ha to reduce the fodder base cost and the final product cost. It will also reduce dependence on feed suppliers.

Investment proposal
The Project requires investment of US$ 100,257 thousand, of which:
• 70% (70,180 thousand USD) – debt financing subject to collateral;
• from 30% (30,077 thousand USD) – investor participation.
The proposed financing structure and state support measures are indicative. The final financing structure and Project interests will be determined based on the results of negotiations with the investor.

Poultry farm construction in East Kazakhstan Oblast

Product
Production capacity: 35.5 thousand tons of meat annually, including carcasses (whole) – 21,414 tons; brisket – 3,624 tons; thigh – 1,647 tons; soup set – 2,965 tons; wings – 1,318 tons; drumstick – 1,318 tons; others (liver, neck, stomach, chicken legs, heart) – 3,624 tons.
Domestic demand: 246.2 thousand tons of meat

Project
The Project envisages the construction of a poultry farm with a capacity of 35 thousand tons of meat annually in Urzhar district of East Kazakhstan Oblast. The construction is planned on a land plot of 300 ha in East Kazakhstan Oblast, Urzhar district, Zhanai village. A full production cycle will be organized on the production site.

Company
The Project initiator is the East Kazakhstan Oblast Akimat represented by Ertis Social and Entrepreneurial Corporation established by the Presidential Decree in 2007 (“Initiator”, “Corporation”, “SEC”). The main objective of the SEC is to promote the social and economic development of the East Kazakhstan Oblast based on the principles of partnership between the state and business. Currently, SEC has 12 subsidiaries and related entities.

Market
• In 2020, the global production amounted to 125 million tons of poultry. According to the OECD and FAO UN forecasts, there will be an increase in overall poultry consumption in the world. The CAGR in 2021-2024 will be 1.8%.
• The CAGR of poultry consumption in Kazakhstan in the period from 2021 to 2024 will amount to 1.3%, reaching the level of 263.9 thousand tons. The growth in the poultry consumption is explained by the population growth and a gradual change in the food culture of the population, which in recent years has become healthier and more dietary. Per capita poultry consumption in Kazakhstan was 12.4 kg per person in 2020. Per capita poultry consumption will also rise to 12.9 kg per person by 2024.

Revenue, US$ thous. EBITDA margin, %

Project profitability

Location of the project

KAZAKH INVEST. Investment proposal
August 2021
Expansion of poultry production

Annual capacity:
- commercial egg – 4,803 thou. units/year;
- poultry meat – 91,967 tonnes/year;

Domestic demand:
- poultry meat consumption – 246 thousand tonnes/year.

Project

This investment project (Project) envisages the expansion of the existing business of Alel Agro JSC by launching six broiler farms with an annual capacity of 47.9 million tonnes of poultry in Zhambyl Oblast. At the moment, the construction of two poultry farms has been completed, but the facilities have not yet been commissioned.

Company

Alel Agro JSC is the largest poultry producer in Kazakhstan. The sales volume in 2020 reached 51.4 million tonnes. The Company’s assets include 6 operating poultry farms in Almaty Oblast, a feed mill, a slaughterhouse, a sorting terminal and an incubator. As part of expanding its own distribution network in 2020, the Company opened 4 regional distribution centres and 10 branded stores.

Market

- In 2020, the global production amounted to 125 million tonnes of poultry. According to the OECD and FAO UN forecasts, there will be an increase in overall poultry consumption in the world. The CAGR in 2021-2024 will be 1.8%.
- In 2020, the poultry production and consumption amounted to 96.5 and 246.2 thousand tonnes, respectively. On average, 84% of poultry consumption is covered by domestic production, the rest is covered by imported meat.

What is the project's attractiveness?

- Well-established trade and logistics chain. To sell products under its own brands Alel, Ameral Fresh and Tasty Chick, the Company launched a chain of branded stores in Almaty and 4 regional distribution centres.
- State support. The project is included in the list of priority sectors for state support. The state programmes provide for a number of benefits and preferences.
- Proximity to capacious markets. Zhambyl Oblast is located in geographical proximity to the capacious sales markets of Almaty and Almaty Oblast (4.0 million people), as well as to the border with China.

Investment proposal

The Project requires investment of US$ 102,633 thousand of which:
- 10% (US$ 10,266 thousand) – debt financing subject to collateral;
- 80% (US$ 82,130 thousand) – private equity fund participation (KIDF, KCM and SKI);
- from 10% (US$ 10,266 thousand) – investor participation.

The proposed financing structure and state support measures are indicative. The final financing structure and Project interests will be determined based on the results of negotiations with the investor.
Development of intensive fruit orchards

Commercial products
The annual volume of production in 2022 - 10,136 tonnes. Products assortment: apples, cherries, peaches, plums, pears, apple juice.

Project description
This investment project envisages the modernization of an existing fruit farm in Almaty region. The effective area of the intensive orchard is 1,004 hectares.

Company
Zharkent Fruit LLP is one of the largest private horticultural enterprises in Kazakhstan and Central Asia. The main shareholder of the Company is Ordabasy Group (51% ownership interest), one of the largest investment holdings in Kazakhstan. The company produces fruits under the Qazaq Fruit brand, selling them through retail chains in Kazakhstan and Russia.

Market
• In 2020, the global juice market was valued at 44.4 billion litres. According to Report linker forecasts, this figure will reach 50.6 billion litres by 2024, with CAGR at 2%.
• In 2020, the production of apple juices in Kazakhstan amounted to 14.6 million litres. Fitch Solutions expects an increase in fruit juices consumption in Kazakhstan due to the transition to a healthy lifestyle of the population after the pandemic (CAGR of 8.59% in the sales of fruit and vegetable juices in the period from 2021 to 2024).

Investment attractiveness of the project:
Investment – US$ 19,127 thousand
Project NPV – US$ 29,483 thousand
IRR – 27.8%
Payback period – 6.9 years

What is the attractiveness of the project?
• Climate of Almaty region: The orchards are located in Almaty region, where the combination of a warm climate, fertile soil and proximity to a mountain river contributes to the effective gardening and, accordingly, high yields.
• Well-established sales strategy and own brand. Over the years, the Company has established the supply of products under the Qazaq Fruit brand and sells its products through wholesale suppliers in Almaty, Karaganda and Nur-Sultan. There are valid sales contracts with Russian companies OOO Siberian Tradition and OOO Flagman.
• Proximity to sales markets: The orchards are located close to the largest sales markets, namely: Almaty (1.8 million people, 284 km from Aydarly), Taldykorgan (0.72 million people, 112 km from Aydarly), the rest of Almaty region (more than 2 million people), XUAR (China) (21 million people in 80 km).

Investment proposal
The Project requires investment of US$ 19,127 thousand, of which:
• 80% (US$ 15,302 thousand) – Investor participation;
• 20% (US$ 3,825 thousand) – will be funded by Initiator.

The proposed financing structure and state support measures are indicative. The final financing structure and Project interests will be determined based on the results of negotiations with the investor.
Development of intensive apple and stone fruit orchards and production of natural juices

Commercial products
12 varieties of apples (Golden & Red Delicious, Fuji, Gala, Granny), 2 varieties of peaches, nectarines, cherries and apple juice. The annual production: 6,665 tons and 277.2 thous. packages of apple juice.

Project description
This investment project envisages the expansion of an existing berries and fruits growing enterprise in Almaty region by establishing additional 200 hectares of orchards, as well as building a fruit storage with a capacity of 6,000 tonnes and a workshop for the production of directly squeezed apple juice.

Company
Since 2012, AmalBio LLP has owned land plots with an area of 223.3 hectares in the Talgar and Enbekshikazakh districts of Almaty region, where apple and stone fruit orchards and infrastructure for storing fruits and producing apple juices are located. Products are manufactured under the Amal Bio brand and are sold through a retail chain in Kazakhstan and Russia.

Market
• In 2020, the global juice market was valued at 44.4 billion litres. According to Report linker forecasts, this figure will reach 50.6 billion litres by 2024, with CAGR at 2%.
• In 2020, the production of apple juices in Kazakhstan amounted to 14.6 million litres. Fitch Solutions expects an increase in fruit juices consumption in Kazakhstan due to the transition to a healthy lifestyle of the population after the pandemic (CAGR of 8.59% in the sales of fruit and vegetable juices in the period from 2021 to 2024).

What is the attractiveness of the project?
• Favourable climate. The orchards are located in the foothills of the Zaili Alatau in Almaty region, where the combination of a warm climate, fertile soil and a special irrigation system contributes to the effective gardening and, accordingly, high yields.
• Well-established sales strategy and own brand. For 9 years of operation, the Company has established the supply of products under the Amal Bio brand to Kazakhstan (42.4%) and Russia (57.6%). There are direct apple sales contracts with retail chains, schools and preschool institutions, as well as with a chain of dealers and distributors. Halal certification will allow exports to the UAE.
• High degree of processing. Ripe apples, which do not meet the standard for fresh sale, are used as raw materials for the production of natural juices. Juice production expands the range of products and minimises production waste.

Investment attractiveness of the project:
Investment – US$ 50,898 thousand
Project NPV – US$ 41,224 thousand
IRR – 30.1%
Payback period– 7.1 years

Investment proposal
The Project requires investment of US$ 50,898 thousand, of which:
• 70% (US$ 35,629 thousand) – debt financing subject to collateral;
• 30% (US$ 15,269 thousand) – Investor participation.
The proposed financing structure and state support measures are indicative. The final financing structure and Project interests will be determined based on the results of negotiations with the investor.
Construction of a melon processing plant

**Product**
Annual capacity: fresh melons - 10,000 tons, fresh-frozen melons - 6,000 tons, dried melons - 1,000 tons, melon juice - 2,678 tons, watermelon juice - 2,678 tons.

**Project**
The aim of the investment Project (“Project”) is to build a melon processing plant in Turkestan Oblast’s Arys. The area of the plant will be 10,000 m².

A 3.7 ha site has been registered and may be used for 7 years with the option to extend.

**Company**
The Project initiator is Tansari Trading A LLP. The company was registered in 2018 to operate in the wholesale trading of a wide range of goods without specific categorisation (CCEA 46909). The Project Initiator receives production advice from the VitAl GmbH to launch production in good time and establish a production process.

**Market**
- The world has seen organic product consumption growth. The global organic fruit and vegetable market was worth 30.8 billion USD in 2019 and, according to forecasts, will reach 55.9 billion USD by 2027 (CAGR 7.9%).
- Fruit consumption in Kazakhstan increased in 2020 to 78.8 kg per capita per year (CAGR for 2015-2020 – 4.34%).
- In Kazakhstan in 2020, the total harvest of melons amounted to 1,165 thousand tons and watermelons - 1,260 thousand tons. The main crop of melons and gourds falls on the Turkestan region - 59% of the total harvest.

**Investment attractiveness of the project:**
Capital expenditures: US$ 4,802 thousand
NPV – US$ 6,477 thousand
IRR – 35.7%
Payback period – 4 years

**What is the attractiveness of the project?**
- Modern technology used in freezing and storage. The Project’s uniqueness is its year-round product through a single summer harvest, and which can be stored using shock freezing therapy. Fast cooling and shock freezing slow down post-harvest ripening processes, extending the storage period (up to 2-3 years).
- Favourable climate. Turkestan Oblast is traditionally Kazakhstan’s melon-growing area, where the combination of a warm climate, fertile soil and special irrigation system aid effective plant growing development and, correspondingly, high crop yield. Roughly 37% of melon growing areas are in Turkestan Oblast. Turkestan (59% of the total for the country) and Dzhambul (17%) Oblasts are responsible for the country’s main melon yield.

**Investment proposal**
The Project requires investment of US$ 4,802 thousand, of which:
- 70% (3,362 thousand USD) – debt financing subject to collateral;
- from 30% (1,441 thousand USD) – investor participation.

The proposed financing structure and state support measures are indicative. The final financing structure and Project interests will be determined based on the results of negotiations with the investor.
Construction of a dairy farm in East Kazakhstan region

**Product**
Annual capacity:
- meat production – 47,858 tons / year;
- milk sales - 10,957,193 liters / year.

**Project**
The Project involves the construction of a commercial dairy farm capacity of 1,400 forage-fed cows in East Kazakhstan region per year.
Raw milk will be sold to local long-life milk producers and dairy product processors.
To provide the dairy farm with fodder base (hay, straw, haylage and silage), the Initiator will grow fodder on 3.7 thousand ha plots allocated for sowing work.

**Company**
Beskaragay-Agro LLP. The company was established in 2016 with the aim of covering domestic demand for raw milk in East Kazakhstan region.

**Market**
- In 2016–2020, average annual growth in global milk production was 1.8%. The OECD predicts that in 2021-2029, milk production growth will remain steady at 1.6%.
- 2016–2020 saw positive changes in the consumption of liquid cow’s milk with average annual growth of Fitch Solutions, the growth in milk consumption in Kazakhstan will average 3%, which is in line with global trends.

**Investment attractiveness of the project**: Capital expenditures: US$ 14,097 thousand
NPV – US$ 4,784 thousand
IRR – 18.0%
Payback period – 8.4 years

**What is the attractiveness of the project?**
- **Geographic location.** The Project will be realised in the East Kazakhstan region agglomeration (population of 1.4 million) with an extensive road and logistics infrastructure. The region is home to 25 milk processors (Emil LLP, Vostok-Milk LLP, Kamyshinskoe LLP), the capacities of which are currently underutilised (about 80%). The location of production is an advantage, given the efficiency with which deliveries are made throughout Kazakhstan, the proximity and ability to enter the Russian and Chinese markets. The location of dairy farms near the Irtysh River also contributes to a stable crop of forage crops.
- **Available fodder base.** The Company has major crop areas (3.7 thousand ha) under long-term lease to ensure the dairy farm with its own fodder base. It should be noted that fodder accounts for a large part of material costs, which is why own fodder base will help reduce milk production costs.

**Investment proposal**
The Project requires investment of US$ 14,097 thousand, of which:
- 70% (9,868 thousand USD) – debt financing subject to collateral;
- from 30% (4,229 thousand USD) – investor participation.

The proposed financing structure and state support measures are indicative. The final financing structure and Project interests will be determined based on the results of negotiations with the investor.
Construction of an oil extraction plant in Pavlodar region

Commercial products
Annual capacity: 6.8 thousand tonnes of vegetable oils

Project description
The Project provides for the construction of an oil extraction plant for the production of vegetable oils with a capacity of 6.8 thousand tonnes per year in Kalkaman village of Pavlodar region.

Company
Initiator of the project is agricultural production cooperative Ertis Agro. The Company’s main activity is related to the production, processing and sale of oilseeds and grain crops, storage and logistics. The Initiator has a land plot of 9.881 hectares, an elevator for storage, processing and drying of raw materials. The Company has more than 100 thousand hectares of agricultural land (about 25% of total sown areas of Pavlodar region), more than 400 units of special-purpose equipment, of which 150 are tractors, over 100 combines and over 100 seeders.

Market
- According to Fitch Solutions forecasts, sunflower oil market will grow increasing at CAGR of 5.3% for the period of 2021-2026.
- Over the last five years, the CAGR of sunflower oil production was 8.9%. In 2020, the production capacity of unrefined oil reached 434 thousand tonnes per year. Share of unrefined sunflower oil production in total sunflower oil production over the last five years reached 53%. In 2020, the production of unrefined oil increased by 1.9% compared to 2019, and CAGR of production during 2015-2019 was 17.1%.

What is the attractiveness of the project?
- Proximity to capacious markets. Considering the geographical proximity of the country to capacious sales markets of Russia and China, the short transport leverage makes it possible to establish exports to take a significant share in those consumption markets.
- Reliable suppliers of raw materials. The initiator entered into a forward purchase agreement for the supply of seeds with agricultural producers included in Ertis-Agro SEC. Cooperation with SEC members will ensure uninterrupted supply of raw materials for production.
- Reliable equipment supplier. As part of the preparation of a technical proposal for the equipment supply, an agreement was concluded with one of the leading manufacturers of equipment for agricultural food products processing.

Investment proposal
The Project requires investment of US$ 5,116 thousand, of which:
- 70% (US$ 3,581 thousand) – debt financing subject to collateral;
- from 30% (US$ 1,535 thousand) – Investor participation.

The proposed financing structure and state support measures are indicative. The final financing structure and Project interests will be determined based on the results of negotiations with the investor.
Creation of pork production complex

Annual capacity:
- pork – 2,268 thousand tons
- by-products – 425 thousand tons
Import of pork in China in 2020 – 4, 304 thousand tons

Project
The investment project plans for the construction of a pig farm with a capacity of 40 thousands pigs and a feed mill with a capacity of 10 tons / hour.
A contract was signed for the lease of 40 hectares of land for pig farm construction and 10 hectares for feed mill construction.
The project is focused on the development and increase of the country’s export potential in the markets of China and Russia.
Company
Petropavlagro LLP was established for the implementation of the project. The company’s management has professional knowledge in engineering construction and law.

Market
- According to the OECD and UN FAO forecasts, the global consumption of this type of meat will increase as the market recovers from the African swine fever from 2021. The CAGR in 2021-2029 will be 1.75%. Pork consumption is projected to increase by 9.2% by 2023.
- At the same time, these forecasts indicate an increase in per capita pork consumption. In 2020, this figure was 10.7 kg per person, and by 2029 it is forecasted to grow by 11.8 kg per person.
- The largest consumer of pork in the world is China, with 39% of global consumption. The Southeast Asian Countries, the EU countries, the USA and Russia are also major pork consumers.

Project investment attractiveness:
Investment – 27,723 thousand USD
Project NPV – 8,023 thousand USD
IRR – 18.5%
Payback period – 6.8 years

What is the project’s attractiveness?
- Favorable location. The location of the complex was chosen optimally, taking into account the distance from large settlements, which corresponds to the Company’s strategy to ensure maximum biosecurity of facilities, but at the same time, it allows the Company to significantly reduce logistics costs when delivering products to end consumers in Russia and China. The climatic conditions of the selected region are favorable for pig breeding. On the territory of the site and nearby there are ground communications: railway, high-voltage power line, as well as underground cable communication lines (telephone and Internet), sewerage, water supply.
- Independence from feed supplies and feed quality control. Under the Project, it is planned to build a feed, which meets the advanced global quality and biosafety standards. This will reduce feed costs, including shipping costs, as well as ensure feed quality and reduce the risk of supply chain disruption.

Investment proposal
The Project requires investment of US$ 27,723 thousand, of which:
- 70% (19,406 US$ thousand) – debt financing subject to collateral;
- From 30% (8,317 US$ thousand) – participation of Investor.
The proposed financing structure and state support measures are indicative. The final financing structure and Project interests will be determined based on the results of negotiations with the investor.
Construction of an advanced wool processing plant in East-Kazakhstan Oblast

Product
Processing capacity: 10,000 tons of unwashed wool.
Production volumes: tops – 2,453 tons; cashmere – 2,180 tons.

Project
The plan for the investment project ("Project") is to construct a wool primary treatment ("WPT") plant with advanced wool processing and fibre (cashmere) removal, as well as wool washing and tops production.

In the second stage, the Company is planning to build its own agricultural firm to source raw materials for the WPT plant.

Company
Belsan I K LLP was registered in 2009 to treat wool. After reaching planned capacity, the Company is planning to apply to join the International Wool Textile Organisation (IWTO), which will help establish close links with leading companies (processors and/or sellers).

Market
• In the last 5 years, annual wool production in Kazakhstan averaged 39 thousand tonnes. Average wool production growth was 0.9%, while production reached 40.2 thousand tonnes in 2020.
• Sheep wool makes up the greatest share of wool production (97.7%). It is due to the large sheep herds in Kazakhstan. The majority of animals are bred in private businesses, with the share of agricultural enterprises insignificant.

Investment attractiveness of the project:
Investment – 20,000 thousand USD
NPV – 27,692 thousand USD
IRR – 25.3% Payback – 6.5 years

What is the attractiveness of the project?
• **Advantageous location.** East-Kazakhstan Oblast with its favourable climate is traditionally Kazakhstan’s meat and wool sheep breeding region. The region also has a well-developed road and logistics network, which helps minimise both the time and costs needed to deliver finished products to practically any region of the country.
• **Creation of purchasing centres.** The plant will be in close proximity to raw material suppliers, which will ensure an uninterrupted supply of crude wool.
• **Advanced processing.** Modern production equipment makes it possible to produce quality fibre to create cashmere from crude wool. Cashmere is in demand in the EU, China, Turkey and the CIS.

Investment proposal
The Project requires investment of US$ 20,000 thousand, of which:
• 70% (14,000 thousand USD) – debt financing subject to collateral;
• from 30% (6,000 thousand USD) – investor participation.

The proposed financing structure and state support measures are indicative. The final financing structure and Project interests will be determined based on the results of negotiations with the investor.
Project description:
Construction of a plant for the production of pectin and dry granulated feed from beet pulp (waste from the processing of sugar beet) based on the new practical technology for extracting pectin from beet pulp (new practical way). Number of jobs created – 82.

Location:
Taldykorgan city, "Taldykorgan" industrial zone.

Initiator:
Green Technology Partners LLP.

Commercial products and capacities:
pectin - 600 tons per year, granulated dry feed – 6,000 tons per year.

Sales markets:
Kazakhstan, Kyrgyzstan, Tajikistan, Uzbekistan, Mongolia, UK, EU countries.

Manufacturing process:
raw materials washing - sorting and disintegration - extraction (extraction of pectin by heating the mixture) - cooling extraction - filtration - precipitation of pectin - liquid extraction of pectin – extraction of dry pectin into powder.

Key investment indicators

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Results</th>
</tr>
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<tbody>
<tr>
<td>Investment amount, US$ thous.</td>
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<tr>
<td>Project NPV, US$ thous.</td>
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<td>IRR, %</td>
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<td>EBITDA margin, %</td>
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<td>Payback period, years</td>
<td>7.1</td>
</tr>
<tr>
<td>Discounted payback period, years</td>
<td>10.9</td>
</tr>
</tbody>
</table>

Market prerequisites:

**Absence of similar production in Kazakhstan.** The absence of direct competitors on the market will make it possible to gain a large market share and implement an import substitution strategy.

**Plentiful raw materials.** The production volume of beet pulp in the Almaty Oblast alone reaches 150,000 tons annually. This Project will require 30,000 tons of beet pulp annually.

**Project innovativeness.** A new technology has been developed for extracting pectin from beet pulp, which is more economical than technologies for extracting pectin from citruses and apples. The developers of the technology registered their rights to the technology in accordance with the requirements of copyright laws in Kazakhstan. Registration has also been done in 167 countries around the world. When structuring the transaction, exclusive rights to the technology will be transferred by the authors to the Project Initiator on a long-term or perpetual basis.

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**Construction of a plant for the production of pectin in the “Taldykorgan” industrial zone**

**Agro-industrial complex**

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**Project profitability**

![Graph showing project profitability with revenue and EBITDA margin over years.]

**Financing structure**

- **Initiator equity**
  - 15% ($1.99 million)

- **Participation of the Fund**
  - (KIDF or KCM) 7.3% ($0.98 million)

- **Debt financing subject to collateral**
  - 70% ($5.29 million)

- **Participation of the Investor from 7.7% ($1.02 million)**

The proposed financing structure is indicative, the final financing and project participation structures will be determined based on the results of negotiations with the Investor.
Expansion of a modern pig farm to a capacity of 500,000 heads
Agro-Industrial complex

Project idea:
The project envisages an expansion of an existing pig farm from a capacity of 50,000 heads to 500,000 heads. Project implementation will create around 240 additional jobs.

Project location:
Taynsha district of North Kazakhstan oblast

Project Initiator:
EMC Agro LLP

Production capacity:
51 thousand tons of finished products (2026), of which meat on bone is 68%, sausage products - 24% and offal - 8%. 86% of the total volume of finished products comes from slaughtering of pigs and 14% – from cattle.

Sales market:
The company plans to export 70% of its manufactured goods to China and sell the rest on the domestic market through distribution networks.

Production process:
An economically justified technological scheme for organizing pig breeding is considered to be a process with a complete production cycle, including the reproduction of piglets, nursery and feeding until the stage of commodity items. This mechanism provides a steady reproduction and formation of the herd, as well as the flow rate and uniformity of the arrival of young stock for fattening.

Investment attractiveness of the Project

<table>
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<tr>
<th>Indicator</th>
<th>Results</th>
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<td>Investment amount, US$ thousand</td>
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<tr>
<td>Project NPV, US$ thousand</td>
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</tr>
<tr>
<td>IRR, %</td>
<td>26.4%</td>
</tr>
<tr>
<td>EBITDA margin, %</td>
<td>22%</td>
</tr>
<tr>
<td>Payback period, years</td>
<td>8.2</td>
</tr>
<tr>
<td>Discounted payback period, years</td>
<td>10.2</td>
</tr>
</tbody>
</table>

Project profitability

![Graph showing project profitability]

Investment structure

<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction and assembly work</td>
<td>53.2%</td>
</tr>
<tr>
<td>Machinery and equipment</td>
<td>26%</td>
</tr>
<tr>
<td>Initial working capital</td>
<td>8.1%</td>
</tr>
<tr>
<td>Primal biological assets</td>
<td>5.4%</td>
</tr>
<tr>
<td>Others</td>
<td>7.3%</td>
</tr>
</tbody>
</table>

Investment proposal

Revenue, USD million: $67.52 million, $33 million, $10.27 million, $6.86 million, $9.21 million

Prerequisites for the Project implementation

Food base. The pig farm is located in the center of the grain region of Kazakhstan, rich in cultivated wheat, rapeseed, and soy. Availability of high-quality and inexpensive feed is one of the key conditions for pig farming and gives a significant competitive advantage. EMC Agro LLP purchases feed from the sister companies Aziaagrofud JSC and Bio Operations LLP (5 km from the pig farm).

Export to China. Over the past 5 years, China’s pork imports have increased 2.6 times and amounted to 2 million tonnes in 2019. It is expected that this indicator will grow due to the decline in the volume of domestic pork production. According to the agricultural survey 2020-2029 of the Ministry of agriculture of the People’s Republic of China, it is expected that in 2020 pork production will decrease to 39 million tons (-9.2% by 2019) due to the African swine fever in China (hereinafter-ASF) and COVID-19. It is planned to include EMC Agro LLP in the Register of The General Customs Administration of the People’s Republic of China as a potential pork exporter to China.

Availability of the necessary infrastructure and qualification

The Initiator manages a modern pig farm, has a land plot with all engineering and technical communications. The pig complex, where technological processes are automated, includes: reproductive farm, artificial insemination station, growing and fattening farm, meat processing plant, own veterinary service, and equipped laboratory.

Project’s profitability

![Graph showing project profitability]

Financing structure

- Initiator equity: $12.69 million (20%)
- Participation of the Fund (KIDF or KCM): $15 million (7%)
- Debt financing subject to collateral: $76.9 million (61%)
- Participation of the Investor: $26 million (61%)

The proposed financing structure is indicative, the final financing and Project participation structures will be determined based on the results of negotiations with the Investor.
Full-cycle cattle fattening and meat processing and sale enterprise
Agricultural sector

Project summary
Increasing the production capacity of a full-cycle enterprise for fattening cattle, processing and selling cattle meat in Almaty Oblast.

Under the project implementation in two locations it is planned to:

- expand in Boleksaz village of Kegen district the existing feedlot capacity, and to provide own forage resources on a leased land plot;
- build in Koshmambet village of Karasay district new feedlot, to increase the meat processing plant capacity.

Within the Project 192 jobs are expected to be created.

Project Initiator:
Meat Processing and Service LLP
Project location:
Republic of Kazakhstan, Almaty Oblast
Marketed products and Project capacity:
24,157 tons of meat annually since 2022. Within the Project is planned to produce:
- chilled beef carcasses.

Consumer markets: domestic market of the Republic of Kazakhstan and China market.

Equipment suppliers: Jarvis Russia LLC, ScanRef Company LLC, Agromanagement Kazakhstan LLP, Individual entrepreneur Pesterev I.A.

Investment attractiveness of the Project

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investment, US$ thousand</td>
<td>35,508</td>
</tr>
<tr>
<td>Project NPV, US$ thousand</td>
<td>44,277</td>
</tr>
<tr>
<td>IRR, %</td>
<td>27.8</td>
</tr>
<tr>
<td>EBITDA margin, %</td>
<td>11%</td>
</tr>
<tr>
<td>Payback period, years</td>
<td>6.3</td>
</tr>
<tr>
<td>Discounted payback period, years</td>
<td>8.3</td>
</tr>
</tbody>
</table>

Financing structure

- Initiator equity 51% ($18 million)
- Debt financing subject to collateral 35% ($12.2 million)
- Participation of the Fund (KIDF or KCM) 7% ($2.6 million)

The proposed financing structure is indicative, the final financing and Project participation structures will be determined based on the results of negotiations with the Investor.
Project idea:
Construction of a greenhouse-type agro-industrial complex for the production of strawberries. Production will create over 100 new permanent workplaces.

Project location:
Panfilov rural area of Talgar district of Almaty region

Project Initiator:
Green Land Alatau LLP

Production capacity and sales market:
It is planned to produce strawberries at the capacity of 870 tonnes per year and sell them through the HoReCa segment, as well as in large retail chains and hypermarkets in Almaty, such as Ramstore, Metro Cash & Carry, Magnum Cash & Carry, Dastarkhan, SMALL, A-Store, Carrefood, Galmart.

Production process:
The cultivation of strawberries will be carried out in greenhouses using the hydroponic method. This method involves growing plants on artificial substrates without soil. When applying this method, the plant receives all the necessary nutrients from the solution in correct quantities.

Hydroponic cultivation technology

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Growth method</td>
<td>Coconut</td>
</tr>
<tr>
<td>Growth system</td>
<td>Hanging trays</td>
</tr>
<tr>
<td>Number of rows</td>
<td>8</td>
</tr>
</tbody>
</table>

Investment attractiveness of the Project

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investment amount, US$ thousand</td>
<td>8,207</td>
</tr>
<tr>
<td>Project NPV, US$ thousand</td>
<td>5,995</td>
</tr>
<tr>
<td>IRR, %</td>
<td>20.1%</td>
</tr>
<tr>
<td>EBITDA margin, %</td>
<td>43%</td>
</tr>
<tr>
<td>Payback period, years</td>
<td>6.0</td>
</tr>
<tr>
<td>Discounted payback period, years</td>
<td>9.4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction and assembly work</td>
<td>42%</td>
</tr>
<tr>
<td>Machinery and equipment</td>
<td>45%</td>
</tr>
<tr>
<td>Other</td>
<td>13%</td>
</tr>
</tbody>
</table>

|$8.2 million |

The proposed financing structure is indicative, the final financing and Project participation structures will be determined based on the results of negotiations with the Investor.
Construction of an oil extraction plant

Agro-industrial complex

Project Description:
The construction of an oil extraction plant for the production of vegetable oils in North Kazakhstan oblast provides for the use of a combined process of processing up to 847 thousand tons of sunflower seeds, rapeseed and soybeans annually. The project provides for the creation of 364 jobs.

Estimated sales volumes and markets:
- on the domestic market - 145.4 thousand tons per year, including oil in the amount of 34.1 thousand tons, flakes - 58.1 thousand tons, fuel pellets - 51.4 thousand tons, vegetable lecithin - 1.8 thousand tons
- for export - 522.5 thousand tons per year, of which: oil - 193.5 thousand tons, meal - 329.0 thousand tons.

The plant's products are planned to be sold through its own trading house:
Location of the Project:
Petropavl, North Kazakhstan oblast, Kazakhstan
Initiator of the project:
LLP "Petropavlovsk Oil Extraction Plant"

Key investment indicators of the Project

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investment amount, US$ mill.</td>
<td>179.0</td>
</tr>
<tr>
<td>Project NPV, US$ mill.</td>
<td>252.3</td>
</tr>
<tr>
<td>IRR, %</td>
<td>25.5%</td>
</tr>
<tr>
<td>EBITDA margin, %</td>
<td>20.22%</td>
</tr>
<tr>
<td>Payback period, years</td>
<td>6.4</td>
</tr>
<tr>
<td>Discounted payback period, years</td>
<td>8.6</td>
</tr>
</tbody>
</table>

Project profitability

- Rich raw material base - The gross harvest of sunflower, rapeseed and soybean seeds in Kazakhstan in 2019 amounted to 918, 241 and 282 thous. tons.
- Price differential with neighboring countries. In general, there is a disparity in prices in Kazakhstan in comparison with prices for products in neighboring countries, which justifies the increased export of oilseeds from Kazakhstan in a number of positions.
- Qualified staff. The company attracts qualified personnel for effective production management, as well as with scientific and practical experience in the selection of oilseed varieties with increased consumer properties.
- A reliable partner and modern plant equipment. The Exoil Group has significant experience in processing, trading of oilseeds and grains, port handling and logistics. In 2016, the group put into operation a similar project for the production and deep processing of oilseeds with a capacity of 2,000 tons per day in the Lipetsk oblast, RF.

Investment structure

- Construction and assembly work 41% $73.6 million
- Machinery and equipment 51% $91.4 million
- Other expenses 8% $14.1 million

Financing structure

- Initiative equity 15% ($26.9 million)
- Debt financing subject to collateral 70% ($125.3 million)
- Participation of the Fund (KIDF or KCM) 7.35% ($13.1 million)

The proposed financing structure is indicative, the final financing and Project participation structures will be determined based on the results of negotiations with the Investor.
Growing global demand for lamb. According to forecasts by the OECD and the UN FAO, there will be an increase in the global level of consumption of mutton. The average annual growth rate in 2020-2024 will be 2.39%.

Price differential with neighboring countries. The average price of mutton in the regions of the RF bordering with the RK is 37% higher than the average Kazakhstan prices. The average price in the PRC market (9.82 USD / kg) exceeds the average price of mutton in the RK by more than 2 times. The average import price of mutton in the Middle East is 54% higher than the domestic market’s average price.

Development of export to foreign countries. The export volumes of mutton from Kazakhstan have been growing rapidly in recent years (3 times since 2017) due to beginning of large supplies to Iran, China and Russia.

Favorable location. The climatic conditions of the region are favorable for sheep breeding. The selected plot for the farm is sown meadows with access to river water.

Description of the project:
Organization of a full-cycle meat cluster for the production of lamb and beef in West Kazakhstan oblast.

Reproducer with a capacity of 5,000 heads of one-time keeping, a feedlot with a capacity of 20,000 heads of one-time keeping, a meat processing plant with a slaughter capacity of 700 carcasses per shift are planned to be built according to the project. Production will create 95 additional workplaces.

Location:
West Kazakhstan Oblast, Syrym district, Sholankatyn district, Toganas village

Initiator:
KazMeat Industry LLP - the main activity is the breeding of sheep and goats.

Output and capacity:
Mutton – 3,425 tons, beef - 33 tons. It is expected that mutton will be sold to meat-processing plants of the country and will be exported to the CIS countries, the Middle East and China. Beef will be sold to the regional meat processing plant.

Production process:
1. Maintenance of small cattle and broodstock. The farm has chosen a mixed system of keeping small cattle: a combination of pasture and stall keeping.
2. Slaughter, sorting, and preparation of meat products for sale (cooling and storage).

Project Profitability

<table>
<thead>
<tr>
<th>Year</th>
<th>Revenue, US$ thous.</th>
<th>EBITDA margin, %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year 4</td>
<td>-104</td>
<td>-6</td>
</tr>
<tr>
<td>Year 5</td>
<td>-96</td>
<td>35</td>
</tr>
<tr>
<td>Year 6</td>
<td>84</td>
<td>67</td>
</tr>
<tr>
<td>Year 7</td>
<td>115</td>
<td>47</td>
</tr>
<tr>
<td>Year 8</td>
<td>221</td>
<td>83</td>
</tr>
</tbody>
</table>

Investment attractiveness of the Project

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investment amount, US$ thous.</td>
<td>18,468</td>
</tr>
<tr>
<td>Project NPV, US$ thous.</td>
<td>32,164</td>
</tr>
<tr>
<td>IRR, %</td>
<td>16.7</td>
</tr>
<tr>
<td>EBITDA yield, %</td>
<td>26</td>
</tr>
<tr>
<td>Payback period, years</td>
<td>11.1</td>
</tr>
<tr>
<td>Discounted payback period, years</td>
<td>15.7</td>
</tr>
</tbody>
</table>

Investment structure

| Construction and assembly work | 29% | $5.4 million |
| Machinery and equipment | 46% | $8.5 million |
| acquisition of breeding stock | 6% | $1.0 million |
| Other | 19% | $3.5 million |

Financing structure

| Initiator equity | 30% ($5.5 million) |
| Participation of the Fund (KIDF or KCM) | 6% ($1.2 million) |
| Debt financing subject to collateral | 57% ($10.6 million) |

The proposed financing structure is indicative, the final financing and Project participation structures will be determined based on the results of negotiations with the Investor.
Development of an aquaculture complex to produce black caviar and commercial sturgeon

Agricultural sector

Project description:
Development of an aquaculture complex to produce black caviar and commercial sturgeon, with the creation of 31 additional workplaces.

Project location:
West-Kazakhstan Oblast, Uralsk, Zachagansk Village

Project Initiator:
Scientific Research Complex for Aquaculture Pilot Production LLP ("SRCPPA")

Product and output:
- Smoked fish – 3 tonnes
- Fresh-frozen fish – 6.7 tonnes
- Black caviar - 10 tonnes.

Sales market:
Domestic market: 2 tonnes of caviar and 3 tonnes of smoked fish;
Exports: fresh-frozen fish 6.7 tonnes (Russia) and 8 tonnes of caviar (Russia, UAE, USA, Japan, EU).

Production process:
1. Maintenance in a closed water supply system unit (obtaining larvae, juvenile rearing, rearing to a mature brood fish, hibernation)
2. Preparation of marketable product (selection, pasteurization, addition of preservatives)

Key investment indicators of the Project

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investment amount, US$ thousands</td>
<td>8 400</td>
</tr>
<tr>
<td>Project NPV, US$ thousands</td>
<td>30,533</td>
</tr>
<tr>
<td>IRR, %</td>
<td>36.5%</td>
</tr>
<tr>
<td>EBITDA margin, %</td>
<td>58%</td>
</tr>
<tr>
<td>Payback period, years</td>
<td>7.4</td>
</tr>
<tr>
<td>Discounted payback period, years</td>
<td>8.7</td>
</tr>
</tbody>
</table>

Investment structure

- Biological assets 35% $2.9 million
- Machinery and equipment 9% $0.8 million
- Initial working capital 6% $0.5 million
- Other 50% $4.2 million

Financing structure

- Initiator equity 18% ($1.5 million)
- Debt financing subject to collateral 70% ($5.9 million)
- Participation of the Investor from 12% ($1.0 million)

The proposed funding structure is indicative, the final structure of financing and shares of participation in the Project will be determined based on the results of joint negotiations with the Investor.

Prerequisites for Project implementation

Revival of the population of rare species - the Company’s activities are aimed to resolve the ecological problem of extinction and to revive the population of sturgeon in the Caspian region.

Growing demand for fish and sturgeon caviar – According to forecasts by the OECD and UN FAO, there will be an increase in the total level of fish consumption in the world. Average annual growth rate (CAGR) in 2019-2025 will be 1.8%. Thus, whilst in 2018 fish consumption per capita amounted to 20.3 kg per person, by 2027 consumption will reach the level of 21.3 kg per person.

According to forecasts, the global caviar market will also grow with a significant CAGR of 7% for 2015-2025. It is estimated that by 2025 the caviar market will be valued at US$ 560.6 mln.

Import substitution – Total volume of imports of sturgeon caviar in 2019 had shown a 1.5 times increase compared to 2018 and amounted to 3.4 tonnes. That provides the possibility to occupy a significant niche in the market by producing the quality products at reasonable prices.
Juice, beverage and milk production in Nur-Sultan

Agricultural sector

Project summary
The Project stipulates retrieving a plant producing juice, juice drinks, ice tea and ultra-pasteurised milk in Nur-Sultan from a bank pledge, and launching and relaunching production. The plant was previously commissioned in 2015 and shut down in 2018. The Project will create 82 jobs.

Project Initiator:
Astana Bottlers LLP

Project location:
Republic of Kazakhstan, Nur-Sultan

Marketed products and Project capacity:
The Company is planning to reach planned capacity of 79.2 million units from 2026.

- "Kariba" juices and nectars;
- "Kariba" ice tea alcohol-free beverages;
- "Zhanym" milk;
- "Mirovoi" non-alcoholic beverages;
- "Balapan" children’s food.

Consumer markets: Domestic market, the markets of Kyrgyzstan, Uzbekistan and Russia.

Investment attractiveness of the Project

<table>
<thead>
<tr>
<th>Financial indicators</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investment, US$ thousand</td>
<td>15,655</td>
</tr>
<tr>
<td>Project NPV, US$ thousand</td>
<td>19,300</td>
</tr>
<tr>
<td>IRR, %</td>
<td>23.9%</td>
</tr>
<tr>
<td>EBITDA margin, %</td>
<td>22.5%</td>
</tr>
<tr>
<td>Payback period, years</td>
<td>7.4</td>
</tr>
<tr>
<td>Discounted payback period, years</td>
<td>10.3</td>
</tr>
</tbody>
</table>

Prerequisites for Project implementation

Demand for non-alcoholic beverages in Kazakhstan — Average annual growth in the sale of non-alcoholic beverages for 2017-2019 was 9.3%, demonstrating an intensive growth. According to Fitch Solutions, the expected inflation slowdown and growth in real purchase power across the country will help maintain the 8.7% sales growth seen in non-alcoholic beverages in 2020-2024 (CAGR).

Milk production deficit — According to Fitch Solutions, milk consumption in Kazakhstan will follow global trends in 2020-2024 and grow by an average of 4.7%. The historical balance of the production, consumption, export and import of liquid milk and cream in Kazakhstan points to a production deficit in the country. In 2019, the production deficit amounted to 21.5 thousand tons.

Modern production base in Nur-Sultan that is a part of a food agglomeration — The initiator is the only major producer of drinks in Nur-Sultan agglomeration. The location of the plant in Nur-Sultan is a profitable advantage for prompt delivery to the regions of Kazakhstan and the Russian market. The plant is fully fitted with production and packaging equipment and aseptic filling lines. The plant also has its own infrastructure and utilities networks.

Project profitability

Investment structure

- Land plot: 0% $0.03 million
- Construction and assembly work: 17% $2.6 million
- Machinery and equipment: 37% $5.8 million
- Other: 46% $7.3 million

Financing structure

- Initiator equity 15% ($2.4 million)
- Debt financing subject to collateral 70% ($11 million)
- Participation of the Investor from 15% ($2.3 million)

The proposed financing structure is indicative, the final financing and Project participation structures will be determined based on the results of negotiations with the Investor.
Prerequisites for implementation of the Project

Water composition. The water of the Khorgos field is unique for its ultra-freshness and balanced composition of cations and anions. This composition is rarely found in Central Asia and is comparable to the composition of premium mineral waters.

Location. The plant’s location is perfect for cross-border trade with the regions of China: the distance from the wells to the border with China is 35 km. It significantly reduces transport costs and ensures prompt delivery of products.

Work experience with the Chinese market. Initiator currently supplies oilfield service equipment from China, i.e. Initiator has an experience of interacting with large Chinese supply companies in various fields.

Production and bottling of mineral water in the Almaty region
Agro-industrial complex

Project Description:
Construction of a filling line for the production of carbonated and non-carbonated mineral water in glass bottles of 0.33 and 0.5 liters. Water from artesian well No. 791 of the Khorgos field will be used as a raw material. The project will create 35 new job places.

Location:
Almaty oblast, 39 km south of Zharkent.

Initiator:
Kartex Group LLP is a supplier of oilfield equipment for oil producing companies in the Republic of Kazakhstan and Turkmenistan.

Output, capacity and sales markets:
Output is mineral water in glass bottles of 0.33 and 0.5 liters: 5.2 mln bottles of 0.5 liters and 7.8 mln bottles of 0.33 liters are going to be produced after gaining maximum production capacity. All products manufactured under the project will be exported to China.

Production process:
Acceptance of mineral water from the well, filtration, saturation with carbon dioxide, disinfection, preparation of bottles, filling, packaging and storage.

Investment attractiveness of the Project

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investment amount, US$ thous.</td>
<td>4,841</td>
</tr>
<tr>
<td>Project NPV, US$ thous.</td>
<td>4,576</td>
</tr>
<tr>
<td>IRR, %</td>
<td>29%</td>
</tr>
<tr>
<td>EBITDA yield, %</td>
<td>22.62%</td>
</tr>
<tr>
<td>Payback period, years</td>
<td>5.23</td>
</tr>
<tr>
<td>Discounted payback period, years</td>
<td>6.92</td>
</tr>
</tbody>
</table>

Investment structure

<table>
<thead>
<tr>
<th>Construction and assembly work</th>
<th>31%</th>
<th>$1.8 mln</th>
</tr>
</thead>
<tbody>
<tr>
<td>Machinery and equipment</td>
<td>45%</td>
<td>$2.6 mln</td>
</tr>
<tr>
<td>Land rent</td>
<td>7%</td>
<td>$0.4 mln</td>
</tr>
<tr>
<td>Initial working capital</td>
<td>17%</td>
<td>$1.0 mln</td>
</tr>
</tbody>
</table>

Financing structure

- Initiator equity 25% ($1.5 mln)
- Debt financing subject to collateral 70% ($4.1 mln)
- Participation of the Investor on 5% ($0.3 mln)

The proposed financing structure is indicative, the final financing and Project participation structures will be determined based on the results of negotiations with the Investor.
**Project description:**
Construction of a plant for the production of organic and humic complex fertilizers with the creation of 30 new workplaces.

**Project location:**
Karaganda oblast, Karaganda, on the territory of the SEZ “Sary Arka”

**Project Initiator:**
ESMAR LLP

**Product and output:**
Organo-humic fertilizers from brown coal (sodium humate) - 36.5 thousand tonnes per year

**Sales market:**
The entire volume of manufactured products is planned to be sold on the domestic market.

**Production process:**
1. Crushing of oxidized brown coal, alkalization and addition of microelements, production of organomineral fertilizers.
2. Preparation of marketable product (prepackaging operation, packaging and transportation).

**Key investment indicators of the Project**

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investment amount, US$ thousands</td>
<td>4,308</td>
</tr>
<tr>
<td>Project NPV, US$ thousands</td>
<td>6,243</td>
</tr>
<tr>
<td>IRR, %</td>
<td>33%</td>
</tr>
<tr>
<td>EBITDA margin, %</td>
<td>22%</td>
</tr>
<tr>
<td>Payback period, years</td>
<td>5.6</td>
</tr>
<tr>
<td>Discounted payback period, years</td>
<td>6.9</td>
</tr>
</tbody>
</table>

**Project profitability**

![Revenue and EBITDA margin graph]

**Prerequisites for Project implementation**

**Reduction of the level of environmental pollution.** Production involves the usage of pulp brown coal (oxidized in mine), that is classified as unusable recovered waste. the storage of which referred as non-manufacturing costs and is considered a factor of environmental pollution.

**Growing demand for organic fertilizers** - currently the concept of a "green" economy is gaining popularity in the world. The harmful effects of chemical fertilizers, leading to soil depletion, have contributed to the limitation of their use at the legislative level in several developed countries around the world.

**Import substitution** – total volume of imports of organic fertilizers in 2019 had shown a 5 times increase compared to 2015 and amounted to 1.6 thousand tonnes. That provides the possibility to occupy a significant niche in the market by producing the quality products at reasonable prices.

**Investment structure**

- Construction and assembly works: 28% $1.2 million
- Machinery and equipment: 39% $1.7 million
- Technique and transport: 14% $0.6 million
- Initial working capital: 19% $0.8 million

**Financing structure**

- Initiation equity: 0% ($0 million)
- Debt financing subject to collateral: 70% ($3.0 million)
- Participation of the Investor: 30% ($1.3 million)

The proposed funding structure is indicative, the final structure of financing and shares of participation in the Project will be determined based on the results of joint negotiations with the Investor.
Project description
The principal focus of this project is cultivation of cattle and bovine feeds based on lucerne and barley. The Project suggests creation of 20 additional work places.
Production will be carried out in two land plots:
One with a total area of 3,468 ha in Bayterek village (West Kazakhstan, Yanaikinsky district) and the other with a total area of 14,933 ha near the town of Stepnogorsk (Akmola region).

The projects aims fulfilling following goals:
• To increase the export potential of forage crops in the cattle and bovine feed sub-industry agro-industrial complex, which will increase the production capacity of value-added products.
• Development of new land plots, construction of infrastructure for irrigation of land and the use of modern technologies for irrigation of crops;

Initiator:
SC Food LLP. The Company sells cattle meat, produces and sells feed, has over 10 years of experience in agriculture and feed production.

Commodity production and capacity:
Upon reaching the full capacity in the 3rd year of the Project operation, it is planned to sell up to 62,593 tonnes of product annually. Produced goods:
• Barley;
• Lucerne hay.

Sales markets: domestic market and export (to China).

Key investment indicators of the Project

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investment amount, US$ thousand</td>
<td>9,744</td>
</tr>
<tr>
<td>Project NPV, US$ thousand</td>
<td>16,140</td>
</tr>
<tr>
<td>IRR, %</td>
<td>27.3%</td>
</tr>
<tr>
<td>EBITDA margin, %</td>
<td>30.0%</td>
</tr>
<tr>
<td>Payback period, years</td>
<td>6.0</td>
</tr>
<tr>
<td>Discounted payback period, years</td>
<td>8.0</td>
</tr>
</tbody>
</table>

Investment structure

Construction and assembly work 40% $3.91 million

Machinery and equipment 60% $5.83 million

Financing structure

Participation of the Investor 35% ($3.41 million)

Debt financing subject to collateral 65% ($6.33 million)

The proposed financing structure is indicative, the final financing and Project participation structures will be determined based on the results of negotiations with the Investor.
Poultry feed farming and production on newly irrigated land

Agro-industrial complex

Project description
Organisation of forage production based on soybeans and corn for poultry.
The production is planned on a leased land plot with an area of 6,700 ha in Akmol village, Tselinograd district, Akmola Oblast. The production process will include a resource-saving technology for crop irrigation.

Initiator:
Akmola-Fenix Plus LLP is a part of Shanyrak group of companies engaged in food production: chicken eggs, meat products, sausages and delicacies.

Commodity production and capacity:
Upon reaching the design capacity in the third year of the Project, it is planned to produce 23,450 tonnes of feed annually.
Produced goods:
• Corn;
• Soybeans.

Sales markets: domestic market.
The company will provide full feed to the poultry farm of the sister company Capital Project LLP, where it is planned to supply 23,450 tons of products annually.

Key investment indicators of the Project

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investment amount, US$ thousand</td>
<td>11,968</td>
</tr>
<tr>
<td>Project NPV, US$ thousand</td>
<td>14,060</td>
</tr>
<tr>
<td>IRR, %</td>
<td>25.0%</td>
</tr>
<tr>
<td>EBITDA margin, %</td>
<td>53.0%</td>
</tr>
<tr>
<td>Payback period, years</td>
<td>6.0</td>
</tr>
<tr>
<td>Discounted payback period, years</td>
<td>7.9</td>
</tr>
</tbody>
</table>

Investment structure

- Construction and assembly work: 67% ($8.0 mln)
- Machinery and equipment: 27% ($3.2 mln)
- Other capital expenses: 6% ($0.8 mln)

Prerequisites for Project implementation
Guaranteed domestic sales.
The products will be sold under contracts with the sister company Capital Project LLP (100%), which provides a guaranteed sales for the products manufactured.

Demand for grain fodder and grain legume fodder in Kazakhstan. The grain feed consumption by poultry in 2019 increased 3 times compared to 2015. CAGR of grain feed consumption for 2015-2019 was 32%, indicating a strong demand for the product. The grain legumes consumption in 2019 amounted to 1.8 thousand tonnes, with an increase of 23% compared to last year.

Favourable location. The moderately cold climate of the selected region is favourable for the selected crops. The growing season is 150-160 days per year. The absolute maximum temperature is observed in July, with an average monthly temperature of 19.8 °C and the absolute minimum temperature is in February, with an average temperature of -15.8 °C. The precipitation is about 280-350 mm per year. It is planned to use surface water from the Nura River for irrigation of land plot.

Project profitability

<table>
<thead>
<tr>
<th>Year</th>
<th>Sales, US$ thousand</th>
<th>EBITDA margin, %</th>
</tr>
</thead>
<tbody>
<tr>
<td>2023</td>
<td>5,738</td>
<td>53%</td>
</tr>
<tr>
<td>2025</td>
<td>6,356</td>
<td>53%</td>
</tr>
<tr>
<td>2027</td>
<td>6,971</td>
<td>53%</td>
</tr>
<tr>
<td>2029</td>
<td>7,586</td>
<td>53%</td>
</tr>
<tr>
<td>2031</td>
<td>8,199</td>
<td>53%</td>
</tr>
<tr>
<td>2033</td>
<td>8,817</td>
<td>53%</td>
</tr>
<tr>
<td>2035</td>
<td>9,435</td>
<td>53%</td>
</tr>
</tbody>
</table>

Financing structure

- Initiator equity: 10% ($1.2 million)
- Debt financing subject to collateral: 70% ($8.4 million)
- Funds participation (KIDF, KCM, SKI): 10% ($1.2 million)
- Participation of the Investor: 10% ($1.2 million)

The proposed financing structure is indicative, the final financing and Project participation structures will be determined based on the results of negotiations with the Investor.
Poultry feed farming and production on newly irrigated land

Agro-industrial complex

Prerequisites for Project implementation

Guaranteed domestic sales.
The most products will be sold under contracts with the parent company Otan Green food LLP, which provides a guaranteed domestic sales for the products manufactured.

Demand for grain fodder and grain legume fodder in Kazakhstan.
The grain feed consumption by poultry in 2019 increased 3 times compared to 2015. CAGR of grain feed consumption for 2015-2019 was 32%, indicating a strong demand for the product. The grain legumes consumption in 2019 amounted to 1.8 thousand tonnes, with an increase of 23% compared to last year.

Favourable location.
The moderately cold climate of the selected region is favourable for the selected crops. The growing season is 165-170 days per year. The absolute maximum temperature is observed in July, with an average monthly temperature of 22.0 °C and the absolute minimum temperature is in January, with an average temperature of -8 °C. The precipitation is about 400 mm per year.

Project description

Organisation of forage production based on soybeans and corn for poultry. The production is planned in two locations in Almaty Oblast:
- in Turgen rural district of Enbekshikazakhstan district on a leased land plot of 800 ha; and
- in Tigermen rural district of Uygur district on own land plot with an area of 1,200 ha. The production process will include a resource-saving technology for crop irrigation.

The production process will include a resource-saving technology for crop irrigation. The Project will create 75 jobs.

Initiator:
Adal Agro Group LLP, which is a member of Otan Green Food LLP group of companies engaged in the food products industry. It produces chicken eggs, meat products, sausages and delicacies. In the corporate strategy of the Initiator as a holding structure, this project is considered as a vertical integration project, which will allow achieving self-sufficiency, reducing the cost of final products and bringing under cultivation new agricultural products.

Commodity production and capacity:
Upon reaching the design capacity in Year 3 of the Project, it is planned to produce 14,742 tonnes of feed annually. Produced goods:
• Corn;
• Soybeans.

Sales markets: domestic market and export.

Key Investment indicators of the Project

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investment amount, US$ thousand</td>
<td>6,968</td>
</tr>
<tr>
<td>Project NPV, US$ thousand</td>
<td>5,520</td>
</tr>
<tr>
<td>IRR, %</td>
<td>22.9%</td>
</tr>
<tr>
<td>EBITDA margin, %</td>
<td>53.0%</td>
</tr>
<tr>
<td>Payback period, years</td>
<td>6.6</td>
</tr>
<tr>
<td>Discounted payback period, years</td>
<td>9.5</td>
</tr>
</tbody>
</table>

Investment structure

- Construction and assembly work 10% $0.7 million
- Machinery and equipment 28% $2.0 million
- Other capital expenses 62% $4.3 million

Project profitability

Project profitability

- Sales, US$ thousand
- EBITDA margin, %

Financing structure

- Initiator equity 20% ($1.4 million)
- Debt financing subject to collateral 70% ($4.9 million)
- Participation of the Investor 10% ($0.7 million)

The proposed financing structure is indicative, the final financing and Project participation structures will be determined based on the results of negotiations with the Investor.
Full-cycle enterprise for fattening cattle, processing and sale of beef
Agricultural sector

Project summary
The project provides for the organization of a cattle breeding farm with subsequent processing and sale of beef meat in Semey, East Kazakhstan region.

The initiator owns the necessary infrastructure for the implementation of the project: the building of the former meat processing plant (now defunct) with an adjacent land plot of 29 ha. The necessary engineering and technical communications have been brought to the place of the Project implementation. Within the Project 103 jobs are expected to be created.

Project Initiator: Sembell LLP
The company owns two feedlots: Sembell LLP, launched in 2016 in Zharma region of East Kazakhstan region with a one-time keeping of 3,000 bull calves and located in Pavlodar region with a one-time keeping of 3,000 bull calves (My Feedlot LLP). To date, on the territory of My Feedlot LLP work is underway on the implementation of a 4.5 ha land plot irrigation project, which will allow the Company to provide its own feed for the existing livestock.

Project location:
Semey, East Kazakhstan region.

Marketed products and Project capacity:
22,251 tons of products and 162,000 units. skins and offal (heads) annually since 2023. Within the Project is planned to produce: chilled beef carcasses; offal.

Consumer markets: domestic market and export to China.

Investment attractiveness of the Project

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investment, US$ thousand</td>
<td>38,974</td>
</tr>
<tr>
<td>Project NPV, US$ thousand</td>
<td>55,145</td>
</tr>
<tr>
<td>IRR, %</td>
<td>18.3%</td>
</tr>
<tr>
<td>EBITDA margin, %</td>
<td>15%</td>
</tr>
<tr>
<td>Payback period, years</td>
<td>6.9</td>
</tr>
<tr>
<td>Discounted payback period, years</td>
<td>9.9</td>
</tr>
</tbody>
</table>

Prerequisites for Project implementation

Demand for beef meat
In 2015-2019, there was a decrease in beef consumption in the country. In general, in 2015-2016, the average per capita consumption of beef reached 27 kg. In 2018, this indicator returned to normal at 28 kg. According to the OECD, the forecast for beef consumption in the country will stabilise by 2028 at 29.3 kg.

Favourable location.
The moderately cold climate of the Zharma region of the East Kazakhstan region is favourable for breeding gobies for further fattening of cattle. There is moderate rainfall throughout the year, even during the driest month. The temperature averages 4.3 °C. Average annual precipitation is 200-300 mm.

Proximity to potential clients.
The location of the meat processing plant in Semey gives an advantage in proximity to the sales markets in the East Kazakhstan region with a population of 1.8 million people. Also, the strategically convenient location of the region for cross-border trade with the regions of the PRC and the Russian Federation will reduce transport costs when exporting products.

Project profitability

Investment structure

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction and assembly work</td>
<td>29%</td>
<td>$11.3 million</td>
</tr>
<tr>
<td>Machinery and equipment</td>
<td>70%</td>
<td>$27.4 million</td>
</tr>
<tr>
<td>Other expenses</td>
<td>1%</td>
<td>$0.3 million</td>
</tr>
</tbody>
</table>

Financing structure

- **Initiator equity**: 10% ($3.9 million)
- **Debt financing subject to collateral**: 80% ($31.2 million)
- **Participation of the Investor from 10% ($3.9 million)**

The proposed financing structure is indicative, the final financing and Project participation structures will be determined based on the results of negotiations with the Investor.
Project idea:
The Project envisages the launch of a plant to produce 120,000 tonnes of compound feed per year on a 3.3 ha site in Almaty. The plant owned by the Initiator is fully operational. It is connected to all infrastructure and utilities, including railway sidings. The production site covers an area of 4,000 m². The potential partner will have the required sector experience to improve its business by expanding its product range, upgrading the production process, and including Initiator product in its supply chain. The Project creates 25 new jobs.

Project location:
Almaty

Project Initiator:
Baharat LLP

Production capacity:
It is planned to reach full capacity in the third year from the date of launch, after which production volumes will reach a plateau at the level of 118.8 thousand tons per year. At initial stages, product will include compound feed for various bird types, according to age, including:
• Start – 13.1 thou. tonnes;
• Grower – 40.4 thou. tonnes;
• Finish – 65.3 thou. tonnes.

Sales market:
The plan is to sell product created by the Project in neighbouring countries (Uzbekistan and China) through direct targeted sales with subsequent delivery to the buyer’s warehouse.

Investment attractiveness of the Project

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investment amount, US$ thousand</td>
<td>3,633</td>
</tr>
<tr>
<td>Project NPV, US$ thousand</td>
<td>26,417</td>
</tr>
<tr>
<td>MIRR, %</td>
<td>24.5%</td>
</tr>
<tr>
<td>EBITDA margin, %</td>
<td>13%</td>
</tr>
<tr>
<td>Payback period, years</td>
<td>2.0</td>
</tr>
<tr>
<td>Discounted payback period, years</td>
<td>2.1</td>
</tr>
</tbody>
</table>

Prerequisites for implementation of the Project

Advantageous location.
Almaty is a city of national significance and one of the leading industrial and economic centres of Kazakhstan. It is recognised as the southern capital of Kazakhstan. The main rail lines and “Western Europe – Western China” transportation corridor pass through Almaty. It is also home to an international airport, which helps reduce transportation and logistics costs when exporting goods.

Sources of raw materials.
The main Project raw material, which is grain – wheat, will be purchased from local growers. Kazakhstan is one of the top 10 wheat exporting countries, with production reaching 11.5 million tonnes in 2019.

High-tech equipment.
Equipment used to prepare feed meets current technical standards. The manufacturer is the Swiss company Bühler AG, which is one of the global producers of feed and food products.

Project's profitability

<table>
<thead>
<tr>
<th>Year</th>
<th>Sales, US$ mln</th>
<th>EBITDA margin, %</th>
</tr>
</thead>
<tbody>
<tr>
<td>2021</td>
<td>48.1</td>
<td>23%</td>
</tr>
<tr>
<td>2023</td>
<td>59.4</td>
<td>18%</td>
</tr>
<tr>
<td>2025</td>
<td>63.4</td>
<td>16%</td>
</tr>
<tr>
<td>2027</td>
<td>67.2</td>
<td>12%</td>
</tr>
<tr>
<td>2029</td>
<td>69.9</td>
<td>9%</td>
</tr>
<tr>
<td>2031</td>
<td>72.4</td>
<td>8%</td>
</tr>
<tr>
<td>2033</td>
<td>75.2</td>
<td>7%</td>
</tr>
<tr>
<td>2035</td>
<td>78.2</td>
<td>7%</td>
</tr>
</tbody>
</table>

Financing structure

The proposed financing structure and state support instruments are indicative, the final financing and Project participation structure will be determined based on the results of negotiations with the investor.

Investment structure

Initial working capital 100% $3.6 mln

The proposed financing structure and state support instruments are indicative, the final financing and Project participation structure will be determined based on the results of negotiations with the investor.
Prerequisites for Project implementation

Extensive material and technical base.

The Initiator’s assets comprise two large dairy farms that provide a raw material base. Among other things, the Initiator’s group also owns land plots for pasture and irrigation, an operating meat processing plant, a feedlot, seeding equipment and a granary.

Demand for products.

Over the last 5 years, the production of cheese and cottage cheese in the country remained at the same level - 30 thousand tonnes in 2019, while the product consumption increased from 50 thousand tonnes in 2015 to 52 thousand tonnes in 2019. Production and consumption indicators for the first half of 2020 also exceed the indicators for the same period of the previous year.

Proximity to substantial consumer markets.

The location in the densely populated Almaty Oblast gives an advantage in proximity to the large consumer markets of Almaty city and Almaty Oblast (population of about 4 million people). In addition, the strategically convenient location of the region for cross-border trade with China will reduce transportation costs.

Project description

The investment project envisages the construction of a cheese plant with a capacity of 150 tonnes of raw materials per day on the territory of Almaty industrial zone. The Project creates over 250 highly qualified jobs.

Initiator:

Agroholding Dinara Group LLP is a diversified holding based in Almaty Oblast. The holding structure includes: Agrofirm Dinara Ranch (feedlots, meat processing plant and dairy farm), SPK Plemzavod Almaty (dairy farm, sheep-breeding farm and feed production), PK Dinara (rice growing, processing and storage) and Agrofood LLP (combined feed production).

Commodity production and capacity:

From 2026, it is planned to reach full design capacity with production volume 6,408 thousand tonnes. Produced goods:

• Semi-hard cheese;
• Mozzarella cheese;
• Ricotta cheese;
• Butter.

Sales markets:

Export (China, the UAE) and domestic market.

Key investment indicators of the Project

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investment amount, US$ thousand</td>
<td>23,292</td>
</tr>
<tr>
<td>Project NPV, US$ thousand</td>
<td>36,995</td>
</tr>
<tr>
<td>IRR, %</td>
<td>31.4%</td>
</tr>
<tr>
<td>EBITDA margin, %</td>
<td>26%</td>
</tr>
<tr>
<td>Payback period, years</td>
<td>6.6</td>
</tr>
<tr>
<td>Discounted payback period, years</td>
<td>7.7</td>
</tr>
</tbody>
</table>

Investment structure

<table>
<thead>
<tr>
<th>Investment structure</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction and assembly work</td>
<td>$3.7 million</td>
</tr>
<tr>
<td>Machinery and equipment</td>
<td>$17.3 million</td>
</tr>
<tr>
<td>Initial working capital</td>
<td>$1.7 million</td>
</tr>
<tr>
<td>Other capital expenses</td>
<td>$0.6 million</td>
</tr>
</tbody>
</table>

Project profitability

Sales, US$ thousand

EBITDA margin, %

2023 2025 2027 2029 2031 2033 2035

Sales, US$ thousand

EBITDA margin, %

24% 26% 27% 27% 27% 26% 26%

22% 23% 24% 25% 26% 27% 28%

Financing structure

- Initiator equity
  - 15% ($3.5 million)
- Debt financing subject to collateral
  - 70% ($16.3 million)
- Funds participation (KIDF, KCM, SKI)
  - 7% ($1.7 million)
- Participation of the Investor
  - from 8% ($1.8 million)

The proposed financing structure is indicative, the final financing and Project participation structures will be determined based on the results of negotiations with the Investor.
**Project description**

The project proposes the construction of a full-cycle mushroom growing complex with the following range of products: canned mushrooms, fresh mushrooms, compost phase 3 production in the Almaty region. The production is planned on a land plot with an area of 45 ha in Karaoiskiy village, Ili district. The total area of the complex of 3 plants will be 69,000 sq. m.

The following tasks will be solved within the framework of the project:

- providing the domestic market with high-quality competitive products using advanced proven technologies for production, supply and distribution;
- increasing the export potential of agricultural products to the UAE, Russia and the CIS countries, which will increase the production capacity with added value;
- creation of 157 permanent jobs.

**Initiator:**
Alma Agri Industries LLP.

**Commodity production and capacity:**
Reaching full design capacity is expected from 2023. Produced goods:
- Canned mushrooms;
- Mixed compost.

**Sales markets:** export (Russia, UAE) and domestic market.

**Key investment indicators of the Project**

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investment amount, US$ thousand</td>
<td>44,229</td>
</tr>
<tr>
<td>Project NPV, US$ thousand</td>
<td>43,655</td>
</tr>
<tr>
<td>IRR, %</td>
<td>17.5%</td>
</tr>
<tr>
<td>EBITDA margin, %</td>
<td>47.0%</td>
</tr>
<tr>
<td>Payback period, years</td>
<td>6.7</td>
</tr>
<tr>
<td>Discounted payback period, years</td>
<td>8.9</td>
</tr>
</tbody>
</table>

**Investment structure**

- Construction and assembly work: 29% of $11.7 million
- Machinery and equipment: 66% of $27.3 million
- Other capital expenses: 5% of $2.2 million
- Initial working capital: 7% of $3.0 million

**Prerequisites for Project implementation**

**Import substitution.**
Currently, mushrooms are not grown on an industrial scale in Kazakhstan. Due to the country’s 100% import dependence, prices for both fresh mushrooms and canned products in Kazakhstan remain at a high level.

**Global demand for mushrooms and its products.**
The global mushroom growing market in 2019 was estimated at 23,291 million US dollars. It is expected to reach 37,088 million US dollars by 2025. CAGR for the forecast period will be 8%.

**Close to large markets.**
Considering that Almaty and Almaty region have an extensive road transport and logistics infrastructure for access to sizeable sales markets, like the Russian Federation and the CIS countries, a short transport shoulder makes it possible to establish exports in order to occupy a significant share in their consumption markets.

**Project profitability**

**Financing structure**

- Initiator equity: 17% ($7.5 million)
- Debt financing subject to collateral: 65% ($28.7 million)
- Funds participation (KIDF, KCM, SKI): 9% ($4.0 million)

The proposed financing structure is indicative, the final financing and Project participation structures will be determined based on the results of negotiations with the Investor.
Launch of a modern pig farm in Almaty Oblast
Agro-Industrial complex

Project idea:
The project provides for the construction of a slaughterhouse with a capacity of 800 heads per shift and the launch of a pig-breeding complex for 46,800 heads. The project plans to create 113 jobs.

Project location:
Daulet village, Talgar district, Almaty oblast

Project Initiator:
EcoMeat LLP

Production capacity:
It is planned to produce (2023) 3,338 tons of products annually (2,781 tons of meat and 556 tons of by-products).

Sales market:
The company plans to export pork meat (83%) to China, offal (17%) to the domestic market.

Production process:
An economically justified technological scheme for organizing pig breeding is considered to be a process with a complete production cycle, including the reproduction of piglets, nursery and feeding until the stage of commodity items. This mechanism provides a steady reproduction and formation of the herd, as well as the flow rate and uniformity of the arrival of young stock for fattening.

Investment attractiveness of the Project

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investment amount, US$ thousand</td>
<td>5,708</td>
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<tr>
<td>Project NPV, US$ thousand</td>
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<td>IRR, %</td>
<td>22.6%</td>
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<td>EBITDA margin, %</td>
<td>22.9%</td>
</tr>
<tr>
<td>Payback period, years</td>
<td>5.8</td>
</tr>
<tr>
<td>Discounted payback period, years</td>
<td>7.6</td>
</tr>
</tbody>
</table>

Investment structure

- **Buildings and structures** $2.9 million (50.2%)
- **Machinery and equipment** $1.6 million (28.5%)
- **Biological assets** $1.0 million (17.5%)
- **Vehicles** $0.06 million (1.1%)
- **Others** $0.15 million (2.7%)

Prerequisites for the Project implementation

**Favourable location.** The location in the densely populated Almaty Oblast gives an advantage in proximity to the sales markets of Almaty and Almaty Oblast of 3.8 million people. In addition, the strategically convenient location of the region for cross-border trade with China will reduce transportation costs when exporting products.

**Export to China.** Over the past 5 years, China’s pork imports have increased 2.6 times and amounted to 2 million tonnes in 2019. It is expected that this indicator will grow due to the decline in the volume of domestic pork production. According to the agricultural survey 2020-2029 of the Ministry of agriculture of the People’s Republic of China, it is expected that in 2020 pork production will decrease to 39 million tons (-9.2% by 2019) due to the African swine fever in China (hereinafter-ASF) and COVID-19.

**Availability of the necessary infrastructure and qualification**
The Initiator manages a modern pig farm, equipped with necessary engineering and technical communications. The slaughterhouse complex, where technological processes are automated, includes: reproductive farm, artificial insemination station, reproduction workshop, fattening workshop, feed shop equipped with a mechanical feed from the feed kitchen and other.

**Project’s profitability**

<table>
<thead>
<tr>
<th>Year</th>
<th>Revenue, USD million</th>
<th>EBITDA margin, %</th>
</tr>
</thead>
<tbody>
<tr>
<td>2021</td>
<td>-4.2%</td>
<td></td>
</tr>
<tr>
<td>2023</td>
<td>8.5</td>
<td>25.6%</td>
</tr>
<tr>
<td>2025</td>
<td>-5.9</td>
<td>23.6%</td>
</tr>
<tr>
<td>2027</td>
<td>9.1</td>
<td>22.5%</td>
</tr>
<tr>
<td>2029</td>
<td>10.7</td>
<td>22.4%</td>
</tr>
<tr>
<td>2031</td>
<td>11.2</td>
<td>22.2%</td>
</tr>
<tr>
<td>2033</td>
<td>11.7</td>
<td>22.2%</td>
</tr>
</tbody>
</table>

**Financing structure**

- **Initiator equity** 20% ($1.1 million)
- **Debt financing subject to collateral** 70% ($4.0 million)
- **Participation of the Investor** From 10% ($0.6 million)

The proposed financing structure is indicative, the final financing and Project participation structures will be determined based on the results of negotiations with the Investor.

KAZAKH INVEST
Investment proposal
November 2020

Deloitte.
Poultry farm construction in Kostanay Oblast
Agro-industrial complex

Project description:
Construction of a poultry farm with a capacity of 10 million chickens in Kostanay Oblast. A full production cycle will be organised on the production site: feed production, incubation process, growing broilers, slaughterhouse, workshop for products processing. Number of jobs created – 507.

Location: Karabalyk village, Kostanay Oblast, Kazakhstan.
Initiator: Zhas-Kanat 2006 LLP. The main business areas are mixed production and meat and egg production with annual capacity of 250 million eggs and 500 tonnes of chicken meat.

Commercial products and capacities:
production capacity – 64,392 tons, namely: broiler chicken – 38,120 tons, breast – 5,151 tons, thigh – 4,829 tons, ends of cuts – 4,765 tons, fillet – 3,348 tons, drumstick – 2,511 tons, etc.

Sales markets:
neighboring countries.

Key investment indicators

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investment amount, US$ thous.</td>
<td>232,558</td>
</tr>
<tr>
<td>Project NPV, US$ thous.</td>
<td>211,003</td>
</tr>
<tr>
<td>IRR, %</td>
<td>20.1%</td>
</tr>
<tr>
<td>EBITDA margin, %</td>
<td>33.7%</td>
</tr>
<tr>
<td>Payback period, years</td>
<td>7.2</td>
</tr>
<tr>
<td>Discounted payback period, years</td>
<td>9.9</td>
</tr>
</tbody>
</table>

Investment structure

- Buildings and constructions: 58% ($133,757 thous.)
- Machinery and equipment: 40% ($94,166 thous.)
- Transport: 27% ($4,635 thous.)

Market prerequisites:
The Initiator's Experience. The initiator has extensive experience (over 18 years) in the implementation of such projects, management of the existing poultry farm for the production of chicken and chicken eggs. Also, at present, the Initiator is modernizing the poultry farm of Poultry-Agro LLP for the production of broiler chicken meat.

Capacity increase. The availability of resources and the use of new technology allow increasing production capacity and, accordingly, revenue from sales of products.

Growing demand and entering new markets.

According to the OECD and UN FAO forecasts, the total poultry consumption will increase worldwide, which provides opportunities for further expansion of sales markets.

Project profitability

Revenue, US$ thous.: $120,913, 169,977, 191,583, 215,449, 236,396
EBITDA margin, %: 38%, 33%, 34%, 33%, 34%

Financing structure

- Participation of the Fund (KIDF or KCM) 7.5% ($34,186 thous.)
- Debt financing subject to collateral 70% ($162,791 thous.)
- Participation of the Investor from 7.5% ($35,581 thous.)

The proposed financing structure is indicative, the final financing and Project participation structures will be determined based on the results of negotiations with the Investor.
Project description: The project provides for the construction of flax straw fuel pellets and briquettes plant with a capacity of 40 thousand tonnes per year. The production is planned on a land plot with an area of 5.92 hectares with necessary infrastructure and engineering lines.

Number of jobs created - 30.

Location: Konsbay rural district, Zerendy district of Akmola Oblast.

Initiator: Armandas Star LLP

Commercial products and capacities: Product – fuel pellets from flax straw. After reaching the targeted capacity in the 7th year of the Project’s operation, it is planned to produce up to 36 thousand tons of fuel pellets annually.

Sales markets: European Union countries.


Key investment indicators

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investment amount, US$ thous.</td>
<td>4,488</td>
</tr>
<tr>
<td>Project NPV, US$ thous.</td>
<td>7,712</td>
</tr>
<tr>
<td>IRR, %</td>
<td>28%</td>
</tr>
<tr>
<td>EBITDA margin, %</td>
<td>43%</td>
</tr>
<tr>
<td>Payback period, years</td>
<td>6.3</td>
</tr>
<tr>
<td>Discounted payback period, years</td>
<td>7.9</td>
</tr>
</tbody>
</table>

Investment structure

- Buildings and structures: 39% of $1.7 mln
- Purchase machinery and equipment: 60.9% of $2.7 mln
- Other capital expenditures: 0.1% of $0.03 mln

Market prerequisites:

Certified product: Different countries have adopted different standards for the fuel pellets production. The company has the ENplus certificate, which is required for the sale of products in the EU countries, and the products fully comply with GOST 34092—2017 (ISO16993: 2015) standard.

Rich and affordable raw material base: More than 5 million tonnes of agricultural waste are available in Kazakhstan annually, most of which is incinerated. To date, the Company has entered into a memorandum of cooperation with the Akmola Oblast Department of Agriculture to ensure an uninterrupted supply of raw materials.

Reducing the level of environmental pollution: The use of fuel pellets reduces carbon dioxide emissions into the atmosphere, since the pellets do not produce CO2 and sulphur compounds when burned. In addition, ash can be used as fertiliser.

Sales market: Renewable and environmentally friendly sources and energies are in high demand in industrial enterprises in Europe and East Asia.

Project profitability

- Sales, US$ thousand: 3,097, 5,075, 6,024, 6,338, 6,645, 6,938, 7,240, 7,396, 7,596
- EBITDA margin, %: 45%, 45%, 44%, 43%, 42%, 42%, 44%, 46%

Project financing scheme

- Participation of the Initiator: 31% ($1.4 mln)
- Debt financing: 50% ($2.2 mln)
- Participation of the Investor: from 19% ($0.9 mln)

The proposed financing structure is indicative, the final financing and Project participation structures will be determined based on the results of negotiations with the Investor.
Creation of an enterprise for fattening livestock, processing and selling cattle meat

Agricultural sector

Project idea:
Creation of an enterprise for fattening livestock, processing and selling cattle meat.
Successful implementation of the Project will create a feedlot of 5,000 livestock units with its own feed base, provide the domestic market with high-quality competitive products, as well as create about 50 new job places in North Kazakhstan oblast.

Project location: Imantau village, Aiyrtau district, North Kazakhstan oblast

Project Initiator:
Hairun-Agro LLP was established on October 14, 2014. Its main activity is the cultivation and sale of grain crops (wheat and barley).

Production capacity:
It is planned to reach full capacity in the 3rd year from the moment of launch, after which production volumes will reach a plateau at the level of 1,557 tonnes per year. The list of manufactured products is 100% cattle meat.

Sales market:
- Domestic market (70% of finished products);
- Exports to neighboring countries, including Russia and China (30%).

Investment attractiveness of the Project

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investment amount, US$ thousand</td>
<td>$10,444</td>
</tr>
<tr>
<td>Project NPV, US$ thousand</td>
<td>$9,180</td>
</tr>
<tr>
<td>IRR, %</td>
<td>16.97%</td>
</tr>
<tr>
<td>EBITDA margin, %</td>
<td>49%</td>
</tr>
<tr>
<td>Payback period, years</td>
<td>6.8</td>
</tr>
<tr>
<td>Discounted payback period, years</td>
<td>9.8</td>
</tr>
</tbody>
</table>

The proposed financing structure and state support instruments are indicative, the final financing and Project participation structure will be determined based on the results of negotiations with the investor.

Prerequisites for implementation of the Project
Favourable location. The climate of the selected region is favourable for breeding gobies and sowing crops for further fattening of cattle. There is significant rainfall throughout the year, with an average of 350 mm per year. The average air temperature of the warmest month (July) is almost everywhere 18° C, and the coldest month (January) is -16° C. The duration of a warm period with an air temperature above zero is 200 days on average.

The presence of an extensive feed base. The Initiator has large land plots for arable land and pastures, sowing equipment and a granary, which greatly simplifies the implementation of the Project. At the moment the enterprise grows: barley and wheat (3, 4, 5 classes).

Growing demand. According to forecasts, there will be an increase in the overall level of beef consumption in the world and in Kazakhstan, which will provide an opportunity to further expand the sales area.

Project's profitability

Investment structure

| Buildings and structures | 78% | $9.4 mln |
| Biocological assets     | 7%  | $0.8 mln |
| Other expenses          | 1%  | $0.2 mln |
| Initial working capital | 13% | $1.6 mln |

Financing structure

- Initiator equity 2.2% ($230 thous.)
- Participation of funds (KIDF, KCM, SKI) 13.6% ($1.42 mln)
- Debt financing subject to collateral 70% ($7.31 mln)
- Participation of the Investor from 14.2% ($1.48 mln)

Sales, US$ mln

<table>
<thead>
<tr>
<th>US$ mln</th>
<th>2022</th>
<th>2023</th>
<th>2024</th>
<th>2025</th>
<th>2026</th>
<th>2027</th>
<th>2028</th>
<th>2029</th>
<th>2030</th>
<th>2031</th>
<th>2032</th>
<th>2033</th>
<th>2034</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales</td>
<td>2.81</td>
<td>5.56</td>
<td>6.23</td>
<td>6.87</td>
<td>7.40</td>
<td>7.73</td>
<td>8.08</td>
<td>8.26</td>
<td>5.56</td>
<td>6.23</td>
<td>6.87</td>
<td>7.40</td>
<td>7.73</td>
</tr>
<tr>
<td>EBITDA margin, %</td>
<td>48%</td>
<td>49%</td>
<td>49%</td>
<td>49%</td>
<td>49%</td>
<td>49%</td>
<td>49%</td>
<td>49%</td>
<td>48%</td>
<td>49%</td>
<td>49%</td>
<td>49%</td>
<td>49%</td>
</tr>
</tbody>
</table>

The proposed financing structure and state support instruments are indicative, the final financing and Project participation structure will be determined based on the results of negotiations with the investor.
**Project description:**
Construction of a 16,507 capacity sheep farm in Almaty Oblast. It is planned to breed Edilbay, Gissar and Romanov sheep. It is planned to organise the cultivation of forage crops, construction of feed yards, a sheepfold and a slaughterhouse on the farm territory. Number of jobs created – 46.

**Location:**
Almaty Oblast.

**Initiator:**
Amal Agro Line LLP. Since early 2020, Amal Agro Line LLP has been running a farm with an area of 7.5 hectares on the territory of Enbekshikazakh district of Almaty Oblast, where raspberries, currants, blackberries and plums are grown. The farm has been operating since 2016. All cultivated products are exported to Dubai, UAE.

**Commercial products and capacities:**
- mutton – 289 tons per year

**Sales markets:**
United Arab Emirates.

**Market prerequisites:**
**Demand for products.**
Over the last five years, there has been a growth in mutton imports in the targeted countries of the Middle East, which indicates a high demand for products and the possibility of increasing the meat exports from Kazakhstan. The quality and the ecological cleanliness of the domestic mutton, make it competitive, despite very high transportation costs. The average import price of mutton in the Middle East is 54% higher than the average price in the domestic market.

**Favourable location.**
Almaty Oblast with favourable climatic conditions is traditionally a sheep breeding zone in Kazakhstan.

**Sale agreements.**
The Company has a positive experience of supplying berries and fruits to Dubai, UAE. Expansion of the range of exported products and preliminary agreements for the supply of meat products will strengthen the company’s position in the market of Dubai, UAE.

**Key investment indicators**

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investment amount, US$ thous.</td>
<td>3,107</td>
</tr>
<tr>
<td>Project NPV, US$ thous.</td>
<td>3,221</td>
</tr>
<tr>
<td>IRR, %</td>
<td>18.5%</td>
</tr>
<tr>
<td>EBITDA margin, %</td>
<td>50.3%</td>
</tr>
<tr>
<td>Payback period, years</td>
<td>8.3</td>
</tr>
<tr>
<td>Discounted payback period, years</td>
<td>12.7</td>
</tr>
</tbody>
</table>

**Project profitability**

<table>
<thead>
<tr>
<th>Year</th>
<th>Revenue, US$ thous.</th>
<th>EBITDA margin, %</th>
</tr>
</thead>
<tbody>
<tr>
<td>2023</td>
<td>431</td>
<td>-12%</td>
</tr>
<tr>
<td>2026</td>
<td>2,349</td>
<td>48%</td>
</tr>
<tr>
<td>2029</td>
<td>2,655</td>
<td>50%</td>
</tr>
<tr>
<td>2032</td>
<td>2,827</td>
<td>51%</td>
</tr>
<tr>
<td>2035</td>
<td>3,027</td>
<td>52%</td>
</tr>
</tbody>
</table>

**Investment structure**

- **Buildings and constructions**: $1,591 thous. (51%)
- **Machinery and equipment**: $681 thous. (22%)
- **Biological assets**: $835 thous. (27%)

**Debt financing subject to collateral**
70% ($2,175 thous.)

**Participation of the Investor**
from 30% ($932 thous.)

The proposed financing structure is indicative, the final financing and Project participation structures will be determined based on the results of negotiations with the Investor.
Project profitability

Market assumptions
**Growing demand for fish** - According to the OECD and FAO UN projections, there will be an increase in total fish consumption in the world. The average annual growth rate (CAGR) will be equal to 1.8% in the years 2019-2025. So, if in 2018 fish consumption per capita was equal to 20.3 kg per capita, by 2027 it will reach the level of 21.3 kg per capita.

**Import substitution** - The share of imports in the structure of consumption of fish and fish products in the country equals to 74%, which indicates a high import dependence of the country.

Thus, in 2018, Kazakhstan imported 30 thousand tonnes of frozen fish, which is 5 times higher than its own production.

**Export potential** - Kazakhstan also provides biogenous fish products for export. In 2018, exports of fish amounted to 12.5 thousand tonnes, showing an increase of 64% compared with 2013.

Key investment indicators

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investment, US$ thousands</td>
<td>18,716</td>
</tr>
<tr>
<td>Project NPV, US$ thousands</td>
<td>23,739</td>
</tr>
<tr>
<td>IRR, %</td>
<td>23.38%</td>
</tr>
<tr>
<td>EBITDA returns, %</td>
<td>61.8%</td>
</tr>
<tr>
<td>Payback period, amount of years</td>
<td>5.87</td>
</tr>
<tr>
<td>Discounted payback period, amount of years from the start of production</td>
<td>8.04</td>
</tr>
</tbody>
</table>

**Project location:**
Almaty Oblast

**Project overview:**
Organization of integrated farming for the breeding and incubation of catfish and barramundi, the production of fish and related products.

**Project location:**
Almaty Oblast, Talgar district, Kaynar rural district, 25 km away from Almaty.

**Initiator:**
Zor Fish LLP

**Project’s peak capacity:**
729 thousand units of canned catfish (Clarias gariepinus), 900 tonnes of barramundi (Lates calcarifer), 600 thousand units of fry per year.

**Principal products:**
Canned food, fish, fish products, chilled fish, fish products and semi-finished products in the range.

**Production process:**
Fish farming, fish processing (production of canned food, fish products, semi-finished products, minced fish).

**Land**

<table>
<thead>
<tr>
<th>Soil Type/Purpose</th>
<th>Area, sq. m</th>
</tr>
</thead>
<tbody>
<tr>
<td>Building developments</td>
<td>13,786</td>
</tr>
<tr>
<td>Covering</td>
<td>10,887</td>
</tr>
<tr>
<td>Planting</td>
<td>43,569</td>
</tr>
<tr>
<td>Ponds</td>
<td>12,737</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>80,979</strong></td>
</tr>
</tbody>
</table>
Project description:
Construction of a greenhouse complex for the cultivation of tomatoes and cucumbers, domestic and export sales of products for the purpose of import substitution and development of the export potential of country’s vegetable production.

Initiator:
JSC "Social and Entrepreneurial Corporation" Pavlodar "

Production volume:
3.7 thou. tons of tomatoes and 3.9 thou. tons of cucumbers for one year

Project parameters:
The total area of greenhouse – 8.4 ha; planting area – 7.9 ha

Products:
tomatoes and cucumbers

Location:
Pavlodar oblast, city of Ekbastuz

Target markets: Pavlodar oblast, northern regions of Kazakhstan, neighboring regions of Russia

Key investment indicators

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investment amount, $US thousands</td>
<td>21,891</td>
</tr>
<tr>
<td>Project NPV, $US thousands</td>
<td>12,769</td>
</tr>
<tr>
<td>IRR, %</td>
<td>15.7%</td>
</tr>
<tr>
<td>EBITDA margin, %</td>
<td>43%</td>
</tr>
<tr>
<td>Payback period, years</td>
<td>8.0</td>
</tr>
<tr>
<td>Discounted payback period, years</td>
<td>14.5</td>
</tr>
</tbody>
</table>

Key investment indicators

Location of project implementation: Pavlodar oblast

Market prerequisites

Dependence of the country on imports of tomatoes and cucumbers - Due to the climatic features of most regions of Kazakhstan during the off-season, there is a shortage of tomatoes and cucumbers. The deficit is covered by imports, which amounted to 65 thousand tons of tomatoes and 14.5 thousand tons of cucumbers in 2018.

Price differential with Russian Federation - The average price for tomatoes and cucumbers in the regions of the Russia bordering the country is higher than average price in Kazakhstan by 33% and 24%.

Development of export supplies to foreign countries - Exports of tomatoes and cucumbers from Kazakhstan are growing at a dynamic pace: in 2018 exports of tomatoes amounted to 20.7 thousand tons, cucumbers 6.1 tons.

Proximity to the Russia, a major importer of tomatoes and cucumbers, provides easy access to the target market. In 2018 Russia imported 578 thousand tons of tomatoes and 123 thousand tons of cucumbers.

Project profitability

<table>
<thead>
<tr>
<th>Year</th>
<th>Revenue, US$ thous.</th>
<th>EBITDA margin, %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year 1</td>
<td>3,625</td>
<td>33%</td>
</tr>
<tr>
<td>Year 2</td>
<td>7,289</td>
<td>32%</td>
</tr>
<tr>
<td>Year 3</td>
<td>10,113</td>
<td>34%</td>
</tr>
<tr>
<td>Year 4</td>
<td>16,680</td>
<td>54%</td>
</tr>
<tr>
<td>Year 5</td>
<td>18,641</td>
<td>55%</td>
</tr>
</tbody>
</table>

Technical process

Photo culture (electric illumination)
- compensates lack of sunlight
- improves yielding capacity and product quality

Agriculture-industrial complex
Construction of greenhouse in Pavlodar oblast

July 2019
KAZAKH INVEST: Investment proposal
About the Project
Expansion of intensive apple orchards of the operating company Fresh Land LLP to 105 hectares in Enbekshikazakh district of Almaty region.

Initiator:
Fresh Land LLP

Project location:
Almaty region, Enbekshikazakh district

Principal products:
Fresh apples varieties:
- “Golden Delicious”;
- “Red Delicious”;
- “Fuji”.

Project’s peak capacity:
6,819 tons of apples per year

Fruit season: September – October

Sales markets:
The domestic market of the Republic of Kazakhstan and the Russian Federation

Seedling Suppliers:
Vivai Nischler D. Nischler Georg & Co. (Italy)

Investment attractiveness of the Project

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investment amount, US$ thous.</td>
<td>6,814</td>
</tr>
<tr>
<td>Project NPV, US$ thous.</td>
<td>7,291</td>
</tr>
<tr>
<td>IRR, %</td>
<td>22.99%</td>
</tr>
<tr>
<td>EBITDA yield, %</td>
<td>58%</td>
</tr>
<tr>
<td>Payback period, years</td>
<td>7.2</td>
</tr>
<tr>
<td>Discounted payback period, years</td>
<td>9.5</td>
</tr>
</tbody>
</table>

Project Location: Almaty oblast

Prerequisites for implementation of the Project

Stable demand for apples in the domestic market
Among stone fruits, apples are the most common and significant food product. The beneficial properties of apples and ease of consumption create a constant demand for the product. Overall, consumption of apples per capita increased by 8.1% since 2016 and amounted to 17.4 kg in 2018.

Export potential
The neighborhood with the largest apple importer, Russia, provides convenient access to a large target and large-scale sales market. In 2018, Russia imported 843.5 thousand tons of apples or 10% of the world import. Due to the political situation in the country, Russia broke off trade relations with Ukraine and Poland, major suppliers of apples to the Russian Federation, which also allows Kazakhstan to take a certain share in the market of neighboring countries.

Price differential with neighboring countries
In the regions of the Russian Federation adjacent to Kazakhstan, a kilogram of apples on average during the year can be purchased for 1.3 - 2.0 US$, which is higher than the average Kazakhstan prices by 4% - 65%.

Import dependence of Kazakhstan on apples during the off-season
Since the fruit is seasonal, and the shelf life of the product is short-lived, Kazakhstan experiences import dependence in the periods from January to July. Due to the lack of fruit storages, after the end of its stocks, apple imports increase hundreds of times.

Project Profitability

<table>
<thead>
<tr>
<th>Year</th>
<th>Revenue, US$ thous.</th>
<th>EBITDA margin, %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1,366</td>
<td>39%</td>
</tr>
<tr>
<td>3</td>
<td>3,457</td>
<td>56%</td>
</tr>
<tr>
<td>5</td>
<td>5,909</td>
<td>59%</td>
</tr>
<tr>
<td>10</td>
<td>6,753</td>
<td>59%</td>
</tr>
<tr>
<td>15</td>
<td>7,536</td>
<td>59%</td>
</tr>
<tr>
<td>20</td>
<td>8,422</td>
<td>70%</td>
</tr>
<tr>
<td>24</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Revenue, US$ thous.  EBITDA margin, %
Project overview:
Organization of a comprehensive cattle breeding farm (fattening and slaughter) in order to expand the existing production of canned meat.

Project goals:
- Increased workload of the meat processing complex Kublei LLP;
- Creation of a full-cycle production of meat products: from fattening and slaughter of cattle to the production of freshly frozen and chilled meat, canned food and products derived from offal.

Project Initiator: Kublei LLP is one of the largest processing enterprises in Kazakhstan, engaged in the production of freshly chilled meat: horse meat, beef, lamb, as well as the production of canned products.

Commercial products: Beef and offal sent for further processing to the meat processing complex of Kublei LLP.

Key investment indicators

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investment, USD thousands</td>
<td>7,474</td>
</tr>
<tr>
<td>Project NPV, USD thousands</td>
<td>15,731</td>
</tr>
<tr>
<td>IRR, %</td>
<td>35.6%</td>
</tr>
<tr>
<td>EBITDA returns, %</td>
<td>40%</td>
</tr>
<tr>
<td>Payback period</td>
<td>4.9</td>
</tr>
<tr>
<td>Discounted payback period</td>
<td>5.7</td>
</tr>
</tbody>
</table>

Project location: Uralsk, West Kazakhstan Oblast, Kazakhstan

Project market assumptions:

Growing demand for canned meat in Kazakhstan. According to the statistics committee of the Republic of Kazakhstan, the consumption of finished and canned meat products in 2018 amounted to 112.3 thousand tonnes in Kazakhstan.

Growth of demand for beef. According to forecasts by the OECD and UN FAO, there will be an increase in the overall level of beef consumption in the world.

Import substitution. The volume of imports of canned meat from lamb and horse meat in 2018 amounted to 636 tonnes, which is higher by 148% compared to the previous year, which may indicate an increasing import dependence of the country.

Export development. The volume of canned meat export from lamb and horse meat in 2018 amounted to 212 tonnes, which is 135.5% higher than the previous year.

Own raw material base. According to the statistics committee of the Republic of Kazakhstan, in 2017, the share of livestock in the West Kazakhstan Oblast of the republican indicator was equal to 6.35%.

Project profitability

Cattle slaughtering process

Kublei LLP

Nur-Sultan

Almaty
Project description: Construction of a biopharmaceutical plant for the production of biological products according to the GMP (Good Manufacturing Practice) standard with a capacity of 15 million doses per year.

Project goals: Construction of the first biopharmaceutical plant in Kazakhstan in accordance with the international GMP standard.

Project initiator: Republican State Enterprise "Research Institute for Biological Safety Problems".

Product and output:
- Smallpox vaccine – 3,750 thousand doses;
- Avian influenza vaccine – 2,250 thousand doses;
- Cattle Nodular Dermatitis Vaccine – 3,000 thousand doses;
- Cattle Plague Vaccine – 2,250 thousand doses;
- Small Cattle Ecthyma Vaccine – 1,500 thousand doses;
- Animal Brucellosis Vaccine – 2,250 thousand doses.

Prerequisites for Project implementation

Lack of production in accordance with GMP standards

As of today, there are no production of biological products that meets international GMP standards in Kazakhstan. Compliance with GMP standards will provide laboratory comprehensive verification and regulation of production parameters, the quality of all products, and reduce the risk of manufacturing errors to a minimum.

The growth of cattle, small cattle and poultry

Currently, Kazakhstan has seen an increase in the number of cattle, small cattle and birds. For example, in 2018, the increase in the number of cattle was 6%, small cattle - 2% and birds - 11%. For this reason, the need for veterinary drugs for the prevention and treatment of animals is increasing.

Import substitution

The share of imports in the structure of consumption of veterinary drugs in the country is 78%, which indicates a high import dependence. In 2018, imports to the country amounted to 246 tons of veterinary drugs, of which 200 tons were imported from Russia.

Key investment indicators of the Project

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investment amount, thous. USD</td>
<td>10,171</td>
</tr>
<tr>
<td>Project NPV, thous. USD</td>
<td>8,603</td>
</tr>
<tr>
<td>IRR, %</td>
<td>22.4%</td>
</tr>
<tr>
<td>EBITDA margin, %</td>
<td>57%</td>
</tr>
<tr>
<td>Payback period, years</td>
<td>8.2</td>
</tr>
<tr>
<td>Discounted payback period, years</td>
<td>11.2</td>
</tr>
</tbody>
</table>

Project location:
Almaty Oblast, Zhambyl distict, urban-type settlement Gvardeyski.

Biological product manufacturing technology

The accumulation of virus-containing suspension → Preliminary cleaning (clarification) → Virus inactivation → The manufacture of the vaccine (target product) → Concentration and Cleaning → Vaccine formulation → Concentration and Cleaning
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.

**Market analysis**

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

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

**Average import prices of tomatoes, USD/tonne**

- **China**: 633 USD/tonne
- **Uzbekistan**: 772 USD/tonne
- **Others**:
  - 2015: 80 USD/tonne
  - 2016: 54 USD/tonne
  - 2017: 51 USD/tonne
- **Average**:
  - 2015: 103 USD/tonne
  - 2016: 41 USD/tonne
  - 2017: 49 USD/tonne

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

- **Azerbaijan**: 988 USD/tonne
- **Kazakhstan**: 1004 USD/tonne
- **Morocco**: 1232 USD/tonne
- **China**: 1244 USD/tonne

**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.

**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 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 7200 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**

![Map of project location](image)

**Market analysis**

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

<table>
<thead>
<tr>
<th>Year</th>
<th>Import</th>
<th>Production</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>213</td>
<td>172</td>
</tr>
<tr>
<td>2016</td>
<td>307</td>
<td>269</td>
</tr>
<tr>
<td>2017</td>
<td>496</td>
<td>480</td>
</tr>
</tbody>
</table>

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%.

<table>
<thead>
<tr>
<th>Year</th>
<th>Import</th>
<th>Turkey</th>
<th>Armenia</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>2.2</td>
<td>2.6%</td>
<td>70%</td>
</tr>
<tr>
<td>2016</td>
<td>3.0</td>
<td>28%</td>
<td>66%</td>
</tr>
<tr>
<td>2017</td>
<td>3.6</td>
<td></td>
<td>48%</td>
</tr>
</tbody>
</table>

Trout fish import to Russia by country, thd tonnes

During 2015-2017, import of trout fish products to Russia increased 2.4 times.

**Investment highlights**

<table>
<thead>
<tr>
<th>Highlight</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upfront investment</td>
<td>$16 MM</td>
</tr>
<tr>
<td>NPV</td>
<td>$37 MM</td>
</tr>
<tr>
<td>IRR</td>
<td>41%</td>
</tr>
<tr>
<td>Payback period</td>
<td>5 years</td>
</tr>
</tbody>
</table>

**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

<table>
<thead>
<tr>
<th>Country</th>
<th>Price of Russia</th>
<th>Price of Producer in Kazakhstan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kazakhstan</td>
<td>4000</td>
<td>4000</td>
</tr>
<tr>
<td>Turkey</td>
<td>4131</td>
<td>4596</td>
</tr>
<tr>
<td>Belarus</td>
<td>5721</td>
<td>5794</td>
</tr>
<tr>
<td>Armenia</td>
<td>5721</td>
<td>5794</td>
</tr>
<tr>
<td>Iran</td>
<td>5794</td>
<td>5794</td>
</tr>
</tbody>
</table>

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.

**Target Investor Mandate**

Long cheap financial resources

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

![Map of Kazakhstan and surrounding countries with project location](image)

**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 (’000 tonnes)*

<table>
<thead>
<tr>
<th>Year</th>
<th>2018E</th>
<th>2022F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net import</td>
<td>178</td>
<td>98</td>
</tr>
<tr>
<td>Production</td>
<td>220</td>
<td>499</td>
</tr>
<tr>
<td>Total</td>
<td>398</td>
<td>597</td>
</tr>
</tbody>
</table>

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.*

<table>
<thead>
<tr>
<th>Year</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Others</td>
<td>295</td>
<td>382</td>
<td>259</td>
<td>362</td>
</tr>
<tr>
<td>USA</td>
<td>62</td>
<td>15</td>
<td>53</td>
<td>80</td>
</tr>
<tr>
<td>Brazil</td>
<td>38</td>
<td>38</td>
<td>390</td>
<td>506</td>
</tr>
<tr>
<td>Argentina</td>
<td>36</td>
<td>36</td>
<td>57</td>
<td>64</td>
</tr>
</tbody>
</table>

**Investment highlights**

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

**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, %*

<table>
<thead>
<tr>
<th>Year</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fact</td>
<td>26%</td>
<td>36%</td>
</tr>
<tr>
<td>Plan (165thd.tonnes)</td>
<td>40%</td>
<td></td>
</tr>
</tbody>
</table>

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.

**Important notice**

Candidates interested in considering this investment opportunity must confirm this directly with Kazakh Invest.

Contact **FirstName LastName**, Project Manager

+7 7172 917070 lastname@kazakhinvest.kz

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No assurance or guarantees is presented with regard to accuracy and completeness of the information contained in this document.
Mining and smelting industry
Development of Batalinskoye and Krasnoarmeyskoye copper ore deposits
Mining and smelting industry

Project description
This investment project involves construction of an industrial complex for the extraction and beneficiation of copper ores at Bataly and Krasnoarmeysk deposits in Kostanay Oblast.

The project provides for the production of copper concentrate (copper rod-3) with a capacity of 162 thousand tonnes per year with subsequent processing at the Kazzinc copper plant and sale to end users.

The Project creates 31 permanent jobs.

Location: Bataly (ore reserves – 131 thous.t) and Krasnoarmeysk (85 thous.t) deposits are located not far from each other in Denisov district of Kostanay Oblast.

Initiator: Mystau LLP is a joint venture of SEC Tobol JSC and Bataly Copper LLP.

Produced products and capacity: Copper concentrate (copper rod-3) with the volume of 162 thousand tons per a year.

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

Key investment indicators of the Project

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project implementation period, years</td>
<td>17</td>
</tr>
<tr>
<td>Investment amount, US$ thousands</td>
<td>298,600</td>
</tr>
<tr>
<td>Project NPV, US$ thousands</td>
<td>124,607</td>
</tr>
<tr>
<td>IRR, %</td>
<td>19.8%</td>
</tr>
<tr>
<td>EBITDA margin, %</td>
<td>40-47%</td>
</tr>
<tr>
<td>Payback period, years</td>
<td>8.0</td>
</tr>
<tr>
<td>Discounted payback period, years</td>
<td>10.7</td>
</tr>
</tbody>
</table>

Project profitability

Market conditions
Growing demand
Total refined copper production in 2019 amounted to 24.6 mln tonnes, which is 2% higher than in 2018. Stable production growth has been observed between 2015 and 2019. According to EMIS forecasts, refined copper consumption and production will grow between 2020 and 2029 with CAGR of 2.1%. From 2021, analysts are predicting a global copper deficit, which will result in an increase in prices for refined copper.

Price growth
According to Bloomberg, there will be a medium- and long-term shortfall in copper supply. It is expected that copper prices will increase between 2021 (5.8 US$ thous./ton) and 2024 (6.8 US$ thous./ton).

Export potential
Kazakhstan neighbors China, the world's largest importer of copper products, which provides a short transport shoulder for exports. In 2019, copper consumption in China was 34% higher than production. According to EMIS analysts, in the forecast period, copper consumption in China will grow quicker than production. As such, the copper deficit in the country will grow, and by 2029 domestic copper production will cover only 68% of consumption.

Project profitability

Investment structure

<table>
<thead>
<tr>
<th>Construction and assembly work</th>
<th>38%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Machinery and equipment</td>
<td>49%</td>
</tr>
<tr>
<td>Other capital expenses</td>
<td>13%</td>
</tr>
</tbody>
</table>

$114.6 million
$145 million
$39 million

The proposed financing structure is indicative, the final financing and Project participation structures will be determined based on the results of negotiations with the Investor.
Key investment indicators

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amount of investments, US$</td>
<td>210,000</td>
</tr>
<tr>
<td>Project NPV, US$ thousands</td>
<td>116,747</td>
</tr>
<tr>
<td>IRR, %</td>
<td>21.2%</td>
</tr>
<tr>
<td>EBITDA margin, %</td>
<td>14-28%</td>
</tr>
<tr>
<td>Payback period, years</td>
<td>8.5</td>
</tr>
<tr>
<td>Discounted payback period, years</td>
<td>11.7</td>
</tr>
</tbody>
</table>

Project location: Besshoky square, Karagandy oblast

Project overview:
This investment project (hereinafter referred to as the "Project") provides for the construction of a mining and metallurgical complex at the Besshoky field.

Project goals: development of a group of deposits on Besshoky Square, creation of an effective integrated business for the extraction and processing of copper-molybdenum ore.

Initiator: Ulmus Fund B.V.

Production process: open pit mining; ore processing at the processing plant and production of copper-molybdenum concentrate; processing of concentrate at a smelter to produce copper and molybdenum.

Products: copper and molybdenum

Production capacity: 10 mln tons of ore per year

Project implementation assumptions:

**Large reserves of copper.** Kazakhstan takes the 8th place in the world in copper reserves with a share of 4.7% of world reserves (37 million tons).

**High demand.** Copper plays a significant role in modern infrastructure, generation and transmission of electricity, in the production of industrial equipment and electrical appliances. According to the forecasts of the International Copper Study Group, the annual growth in demand for refined copper will be 2% in 2019 and 1.5% in 2020.

**Price stabilization.** According to Bloomberg, the price of refined copper is expected to increase with its subsequent stabilization in the medium term: 2019 - 6038.5 USD, 2023 – 6087 USD per ton.

**Molybdenum price increase.** Despite a significant drop in molybdenum prices from 2013 (24,889 USD) to 2015 (11,625 USD), according to the London Metal Exchange (LME) index, the price of molybdenum began to rise steadily to 24.9 thousand USD in 2018 (CAGR for 2015-2018 - 29%).

Field reserves by JORC (2012)

<table>
<thead>
<tr>
<th>Field</th>
<th>Ore, mln tons</th>
<th>Copper, ths tons</th>
<th>Cu, %</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>East Besshoky</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Measured</td>
<td>9.64</td>
<td>74.58</td>
<td>0.77</td>
</tr>
<tr>
<td>Indicated</td>
<td>19.09</td>
<td>116.93</td>
<td>0.61</td>
</tr>
<tr>
<td><strong>South Besshoky</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Measured</td>
<td>44.36</td>
<td>164.52</td>
<td>0.37</td>
</tr>
<tr>
<td>Indicated</td>
<td>147.32</td>
<td>527.03</td>
<td>0.36</td>
</tr>
<tr>
<td><strong>Kaindyshoky</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Measured</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Indicated</td>
<td>37.87</td>
<td>143.52</td>
<td>0.38</td>
</tr>
</tbody>
</table>
**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 ranks 8th in the world in copper reserves with a share of 4.7% of world reserves, which in real terms is 37 million tonnes.

**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% in 2019 and 1.5% in 2020.

**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$ 5,961, 2021 - US$ 6011, 2022 - US$ 6054.5, 2023 - US$ 6087 per ton.

**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**

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project implementation period, years</td>
<td>14</td>
</tr>
<tr>
<td><strong>Incl. Investment stage, years</strong></td>
<td>2</td>
</tr>
<tr>
<td><strong>Operational stage, years</strong></td>
<td>12</td>
</tr>
<tr>
<td>Investment, US$ thousands</td>
<td>29,951</td>
</tr>
<tr>
<td>Project NPV, US$ thousands</td>
<td>42,879</td>
</tr>
<tr>
<td>IRR, %</td>
<td>39.6%</td>
</tr>
<tr>
<td>EBITDA returns, %</td>
<td>63.6%</td>
</tr>
<tr>
<td>Payback period, years</td>
<td>4.4</td>
</tr>
<tr>
<td>Discounted payback period, years</td>
<td>5.0</td>
</tr>
</tbody>
</table>

---

**Project profitability**

![Project profitability chart]

---

**Project location:**

East-Kazakhstan Oblast

---

**Mineral resources of the Ai field and its NW flank and forecast resources of the Aiskaya area (without the Ai field)**

<table>
<thead>
<tr>
<th>Ore type</th>
<th>Category</th>
<th>Aver. copper content</th>
<th>Copper, thousand tonnes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oxidized</td>
<td>C1</td>
<td>1.47</td>
<td>17.78</td>
</tr>
<tr>
<td></td>
<td>Forecast</td>
<td>0.86</td>
<td>50.1</td>
</tr>
<tr>
<td>Primary</td>
<td>Forecast</td>
<td>0.77</td>
<td>70.0</td>
</tr>
<tr>
<td>Sulfide</td>
<td>C1+C2</td>
<td>1.7</td>
<td>36.48</td>
</tr>
</tbody>
</table>
Mining and smelting industry

Industrial development of non-ferrous and precious metal deposits in the East Kazakhstan Oblast

Project overview:
Investment project (the "Project") provides for industrial development for the extraction and processing of non-ferrous and precious metal ores at the Belousovsky deposit in the East Kazakhstan Oblast.

Products: Cathode copper, silver pellets, gold bars, zinc in zinc concentrate.

Production process:
1) Mining – underground;
2) Ore beneficiation is planned at the Nikolayevsky plant, owned by Kazakhmys;
3) Refining of copper, gold and silver concentrates (obtaining a final product) will be carried out by the Balkhash smelting plant owned by Kazakhmys.

Initiator: Kazakhmys Barlau LLP.

Project location: East Kazakhstan Oblast, Glubokovsky district, Belousovka village.

Annual production capacity: 250 thousand tonnes of ore.

Key investment indicators

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amount of investments, US$ thousands</td>
<td>13,378</td>
</tr>
<tr>
<td>Project NPV, US$ thousands</td>
<td>30,009</td>
</tr>
<tr>
<td>IRR, %</td>
<td>42.2%</td>
</tr>
<tr>
<td>EBITDA margin, %</td>
<td>28%</td>
</tr>
<tr>
<td>Payback period, years</td>
<td>3.8</td>
</tr>
<tr>
<td>Discounted payback period, years</td>
<td>4.4</td>
</tr>
</tbody>
</table>

Project location: East Kazakhstan Oblast, Glubokovsky district

Project implementation assumptions:

High copper demand. A stable increase in demand for the refined copper is expected over the next years as copper is the major resource and industrial driver in the modern technological society. Demand for refined copper is forecasted to increase annually by 2% and 1.5% in 2019 and 2020, respectively.

Stable gold demand. Gold consumption in Kazakhstan is mainly created as a result of gold processing done by three refineries: Kazzink in Ust-Kamenogorsk, Kazakhmys in Balkhash and Tau-Ken-Alty in Nur-Sultan. Currently, all of the produced refined gold is used for the purpose of replenishing the country’s currency reserves. According to experts, by 2020, refining volumes in Kazakhstan will reach up to 80-90 tons.

World silver production. Kazakhstan is one of the largest silver producers. In recent 5 years, Kazakhstan was among the world’s ten largest silver producers. Kazakhstan ranks third by world silver reserves, according to the USGS geological survey.

Deposit reserves, thousand tonnes

<table>
<thead>
<tr>
<th>Ore/metal</th>
<th>On-balance reserves by category</th>
<th>A</th>
<th>B</th>
<th>C1</th>
<th>A+B+C</th>
<th>C2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ore</td>
<td></td>
<td>15</td>
<td>951.3</td>
<td>3,498.3</td>
<td>4,464.6</td>
<td>8,027</td>
</tr>
<tr>
<td>Copper</td>
<td></td>
<td>0.5</td>
<td>16.9</td>
<td>26.2</td>
<td>43.6</td>
<td>33.1</td>
</tr>
<tr>
<td>Lead</td>
<td></td>
<td>0.1</td>
<td>19.3</td>
<td>31.3</td>
<td>50.7</td>
<td>64.2</td>
</tr>
<tr>
<td>Zinc</td>
<td></td>
<td>0.8</td>
<td>65.1</td>
<td>136.5</td>
<td>202.4</td>
<td>287.7</td>
</tr>
<tr>
<td>Gold, kg</td>
<td></td>
<td>-</td>
<td>- 1,398.6</td>
<td>1,398.6</td>
<td>11,102</td>
<td></td>
</tr>
<tr>
<td>Silver, tons</td>
<td></td>
<td>-</td>
<td>- 1,679.4</td>
<td>1,679.4</td>
<td>4,605.0</td>
<td></td>
</tr>
</tbody>
</table>

Project profitability

<table>
<thead>
<tr>
<th>Year</th>
<th>US$ thous.</th>
<th>Revenue, US$ thous.</th>
<th>EBITDA margin, %</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>35,645</td>
<td>27%</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>33,900</td>
<td>27%</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>35,166</td>
<td>28%</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>36,033</td>
<td>28%</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>38,687</td>
<td>28%</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>42,142</td>
<td>28%</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>44,707</td>
<td>29%</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>45,000</td>
<td>29%</td>
<td></td>
</tr>
</tbody>
</table>

December 2019

KAZAKH INVEST:
Investment proposal
**Project overview:**
This investment project ("Project") provides for the commercial development of the Zhaissan deposit in Zhambyl Oblast, involving copper mining and processing.

**Products:** Cathode copper, pelleted silver.

**Manufacturing process:**
- **Mining** – underground method;
- **Processing** – mined oxidized ores are going to be transported by road to the heap leaching site of the Shatyrkul mine. Sulphide ores are going to be transported by truck to the station Berlik-1, then by rail to the Balkhash beneficiation plant (BOF). The copper concentrate obtained at the BOF will be processed at the Balkhash Metallurgical Plant.

**Initiator:** Zhanashyr Project LLP, subsidiary organization Kazakhmys Corporation LLP.

**Project location:** Zhambyl Oblast, Shu district.

**Annual production capacity:**
600 thousand tonnes of ore.

**Key investment indicators**

<table>
<thead>
<tr>
<th>Index</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investment, US$ thousands</td>
<td>118,436</td>
</tr>
<tr>
<td>Project NPV, US$ thousands</td>
<td>111,287</td>
</tr>
<tr>
<td>IRR, %</td>
<td>27.4%</td>
</tr>
<tr>
<td>EBITDA return, %</td>
<td>60%</td>
</tr>
<tr>
<td>Payback period, years</td>
<td>10.2</td>
</tr>
<tr>
<td>Discounted payback period, years</td>
<td>11.4</td>
</tr>
</tbody>
</table>

**Project location:** Shu district, Zhambyl Oblast

**Project implementation assumptions:**

**High demand.** A stable increase in demand for the refined copper is expected over the next years. Copper plays a significant role in infrastructure, generation and transmission of electricity, transport, communications, in the production of industrial equipment and electrical appliances. Demand for the refined copper is forecasted to increase annually by 2% and 1.5% in 2019 and 2020, respectively.


**World silver production.** In recent 5 years, Kazakhstan was among the world’s ten largest silver producers; Kazakhstan is the third largest country by world silver reserves, according to the USGS geological survey.

**Deposit reserves**

<table>
<thead>
<tr>
<th>Index</th>
<th>Unit</th>
<th>Reserves</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zhaissan</td>
<td>On-balance reserves</td>
<td></td>
</tr>
<tr>
<td>Copper (C1)</td>
<td>thousands of tons</td>
<td>205.6</td>
</tr>
<tr>
<td>Copper (C2)</td>
<td>thousands of tons</td>
<td>96.1</td>
</tr>
<tr>
<td>Molybdenum (C1)</td>
<td>tons</td>
<td>908</td>
</tr>
<tr>
<td>Silver (C2)</td>
<td>tons</td>
<td>35.2</td>
</tr>
</tbody>
</table>

**Project profitability**

![Graph showing revenue and EBITDA margin over years]
Mining and smelting industry

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

Key investment data

<table>
<thead>
<tr>
<th>Index</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project implementation period, years</td>
<td>17</td>
</tr>
<tr>
<td>including the investment stage, years</td>
<td>4</td>
</tr>
<tr>
<td>Operational stage, years</td>
<td>13</td>
</tr>
<tr>
<td>Investment, US$ thousands</td>
<td>23,000</td>
</tr>
<tr>
<td>Project NPV, US$ thousands</td>
<td>29,435</td>
</tr>
<tr>
<td>IRR, %</td>
<td>29.5%</td>
</tr>
<tr>
<td>EBITDA returns, %</td>
<td>39-61%</td>
</tr>
<tr>
<td>Payback period, years</td>
<td>7.4</td>
</tr>
<tr>
<td>Discounted payback period, years</td>
<td>8.7</td>
</tr>
</tbody>
</table>

Project implementation location: Mangistau district, Mangistau Oblast

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.

Reserves of Project’s deposits

<table>
<thead>
<tr>
<th>Deposits/Mineral occurrences</th>
<th>Reserves/resources category</th>
<th>Ore, mln tons</th>
<th>Copper grade, %</th>
<th>Amount of copper, thou. tonnes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zhezdybassay</td>
<td>C2+P1</td>
<td>6.7</td>
<td>0.58</td>
<td>39.2</td>
</tr>
<tr>
<td>Dolnapsinskoye</td>
<td>C2+P1</td>
<td>1.8</td>
<td>0.6</td>
<td>10.8</td>
</tr>
<tr>
<td>Sarshasaiskoye</td>
<td>P1</td>
<td>2.4</td>
<td>0.6</td>
<td>14.0</td>
</tr>
<tr>
<td>East-Shairskoye</td>
<td>P1</td>
<td>1.1</td>
<td>0.8</td>
<td>8.8</td>
</tr>
<tr>
<td>Kzyzltanskoye</td>
<td>C2+P1</td>
<td>0.8</td>
<td>0.6</td>
<td>4.8</td>
</tr>
<tr>
<td>Shaniyazskoye</td>
<td>P1</td>
<td>0.09</td>
<td>1.1</td>
<td>1.0</td>
</tr>
<tr>
<td>Koktas</td>
<td>P1</td>
<td>0.36</td>
<td>0.4</td>
<td>0.9</td>
</tr>
<tr>
<td>Other occurrences and areas</td>
<td>P1</td>
<td>2.1</td>
<td>0.5</td>
<td>10.5</td>
</tr>
<tr>
<td>Total</td>
<td>C2+P1</td>
<td>15.3</td>
<td></td>
<td>90.0</td>
</tr>
</tbody>
</table>
FIRST EURASIAN MINING

PROCESSING OF COPPER ORES AND PRODUCTION OF CATHODIC COPPER

PRODUCT

<table>
<thead>
<tr>
<th>ANNUAL PRODUCTION CAPACITY</th>
<th>10 THOUSAND TONS OF COPPER</th>
</tr>
</thead>
<tbody>
<tr>
<td>GLOBAL DEMAND</td>
<td>24 MILLION TONS OF COPPER</td>
</tr>
</tbody>
</table>

VALUATION METRICS

<table>
<thead>
<tr>
<th>REQUIRED INVESTMENT</th>
<th>US$58.4 MILLION</th>
</tr>
</thead>
<tbody>
<tr>
<td>PROJECT NPV</td>
<td>US$95 MILLION</td>
</tr>
<tr>
<td>PROJECT IRR</td>
<td>46%</td>
</tr>
<tr>
<td>PAYBACK PERIOD</td>
<td>4 YEARS</td>
</tr>
</tbody>
</table>

THE PROJECT

The launch of mining and processing of copper ores in Sayak field and production of cathodic copper and copper concentrates.

THE COMPANY

Advanced Mining Technologies, LLP – the project’s operator – has got licenses to produce minerals at the Sayak field of Karagandy region. The ultimate beneficiary of the company is Commonwealth American Partners, LP (via First Eurasian Mining Pte. Ltd.), with some 20 years of experience in oil and metal mining sectors across the world.

THE MARKET

The global market for copper is estimated at US$145.5 billion in 2020, with expected growth at 2% CAGR in the coming decade. The global production of copper is expected to reach 28.7 million tons by 2028 (up from 21.4 million tons in 2019). The Asia-Pacific region (incl. China and India) is the largest market for copper, with the demand amounting 17.3 million tons of copper only last year. The region is expected to increase its demand to 18 million tons of copper by 2021, while the global consumption is expected to reach 25.2 million tons.

REASONS FOR ENGAGEMENT

The company has reached an agreement with international clients (incl. Glencore, Trafigura, Traxys, Noble Group, etc.). Kazakhstan has excessive 37 million tons of reserves of copper (8th largest stock or 4.7% of total reserves in the world). As of today, the State Balance of Natural Resource Reserves of Kazakhstan has a register for 55 copper fields, mainly in Karagandy and East Kazakhstan region.

INVESTMENT OPPORTUNITY

Seeking US$58.4 million of investment to launch production of cathodic copper in Kazakhstan in exchange for a stake in the project, subject to negotiations.
**Project Description**

The project involves construction industrial complex for mining and beneficiation of zinc-copper ores at the Alexandrovskoye deposit in Kurchum district of East-Kazakhstan oblast.

**Product and average annual production:**

**From sulphide ore**
Cu concentrate – 4,400 tons (1,000 tons of copper content);
Zn concentrate – 17,200 tons (9,100 tons zinc content).

**From oxide ore**
Cathode copper – 1,500 tons;
Zn concentrate – 10,300 tons (4,600 tons of zinc content).

**Processing capacity:**
Ore processing plant – 350,000 tons of ore;
Smelter – 2,000 tons of cathode copper.

**Initiator:**
“Varsa Mining” LLP

**Key investment indicators**

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project implementation period, years</td>
<td>6</td>
</tr>
<tr>
<td>incl. investment stage, years</td>
<td>1.7</td>
</tr>
<tr>
<td>operational stage, years</td>
<td>4.2</td>
</tr>
<tr>
<td>Total investment required, US$ ’000</td>
<td>29,113</td>
</tr>
<tr>
<td>Equity investment required, US$ ’000</td>
<td>6,845</td>
</tr>
<tr>
<td>Project NPV, US$ ’000</td>
<td>21,254</td>
</tr>
<tr>
<td>IRR, %</td>
<td>30.3%</td>
</tr>
<tr>
<td>EBITDA Margin, %</td>
<td>47.9%</td>
</tr>
<tr>
<td>Payback period, years</td>
<td>3.9</td>
</tr>
<tr>
<td>Discounted payback period, years</td>
<td>4.1</td>
</tr>
</tbody>
</table>

**Project location:** Kurchum district, East Kazakhstan Oblast

**Reserves growth potential**

The project has reserves growth potential from current 2.9 MM tons of ore up to 4.3 MM tons that can significantly improve investment metrics of the project, for instance, NPV: up to $37.8 MM (+78%) and IRR up to 37.7% (+7.4% abs.).

**Market prerequisites**

The recovery of the world’s largest economies and green initiatives are the main drivers of strong copper demand. As per analysts of Goldman Sachs, copper LME is expected to reach $15,000 per ton by 2025.

According to the estimates of the Ural Mining and Metallurgical Company, global demand for zinc in 2021 is expected to increase by 4.2% to 13.52 MM tons. By 2025-2030 the market may face a shortage of zinc concentrate, which will lead to an increase of product prices.

**Work completed**

✓ Reserves of category C1+C2 were reflected on government balance;
✓ Full scale technological studies were carried out;
✓ Optimization of open pit mining was completed and the limiting contour of the open pit has been determined;
✓ Basic design of the Alexandrovskoye ore processing plant was completed and technological procedure was developed;
✓ Preliminary agreement was reached with an international trader from China on the purchase of products;
✓ External power supply scheme was developed and pre-design work of an access road to the field was developed.

**Reserves of Alexandrovskoye deposit***

<table>
<thead>
<tr>
<th>Name</th>
<th>Unit</th>
<th>Category</th>
<th>Current reserves</th>
<th>Reserves growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zinc-copper ore</td>
<td>’000 tons</td>
<td>C1+C2</td>
<td>2,538</td>
<td>538</td>
</tr>
<tr>
<td></td>
<td></td>
<td>P1</td>
<td>331</td>
<td></td>
</tr>
<tr>
<td>Zinc content</td>
<td>%</td>
<td></td>
<td>2.79</td>
<td>2.71</td>
</tr>
<tr>
<td></td>
<td></td>
<td>P2</td>
<td>3.16</td>
<td>2.03</td>
</tr>
<tr>
<td>Copper content</td>
<td>%</td>
<td></td>
<td>0.63</td>
<td>0.48</td>
</tr>
<tr>
<td></td>
<td></td>
<td>P2</td>
<td>0.40</td>
<td>0.47</td>
</tr>
<tr>
<td>Zinc reserves</td>
<td>’000 tons</td>
<td>C1+C2</td>
<td>70.8</td>
<td>14.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>P2</td>
<td>10.5</td>
<td>18.6</td>
</tr>
<tr>
<td>Copper reserves</td>
<td>’000 tons</td>
<td></td>
<td>15.9</td>
<td>2.6</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1.3</td>
<td>4.3</td>
</tr>
</tbody>
</table>

*Initiator’s proprietary calculation (2020)
MINING AND PROCESSING OF GOLD ORE

PRODUCT
- ANNUAL PRODUCTION CAPACITY: 2.6 TONS ("DORE")
- GLOBAL DEMAND: 80-90 TONS

VALUATION METRICS
- REQUIRED INVESTMENT: US$100 MILLION
- PROJECT NPV: US$337 MILLION
- PROJECT IRR: 45%
- PAYBACK PERIOD: 3 YEARS

THE PROJECT
Extraction at proven gold ore deposits at the Kogadyr-6 field and construction of gold recovery plant. The total reserves include 58 tons of gold resources (JORC) with 10.9 tons of ‘indicated’ category and 28.6 tons of ‘inferred’ category. Average gold grade amounts to 1.2 grams per ton.

THE COMPANY
Central Asia Gold Group is engaged in the exploration and mining of gold ores in the Kogadyr field with a total area of 33 sq. km (includes 11 deposits).

THE MARKET
The local market for gold is estimated at US$5.5 billion in 2020. Gold consumption in Kazakhstan is mainly created as a result of gold processing by three refineries: "Kazzink", "Kazakhmys", and "Tau-Ken-Altytyn". Currently, all of the produced refined gold is used for the purpose of replenishing the country’s currency reserves.

REASONS FOR ENGAGEMENT
Products in the form of complete “Doré” alloy are directly sold to the Government-affiliated refinery plant "Tau-Ken Altytyn", which includes “off-take” agreement (acquisition price at the London Bullion Market Association). The ultimate purchaser of refined gold is the National Bank of the Republic of Kazakhstan. Sales are made in USD, while the majority of operating expenses are tied to Kazakh tenge (KZT).

INVESTMENT OPPORTUNITY
Seeking US$100 million of investment to build a mining and processing plant. The owner is ready to sell a majority stake in the company at US$120 million valuation.
THE PROJECT
The total reserves include 48 tons of indicated category (C1-C2) with average content of 5.8 g/t. Report on mineral resource and reserves in accordance with JORC Code is at the completion stage. The extraction of gold ore from considerable measured resources at the Tokhtar, South Tokhtar and South-Tokhtar-Barambayev (STB) deposits. The project involves the mining of gold-bearing ores by open pit mining (oxidized ores) with further gold recovery by heap leaching; as well as underground method (sulfide ores) with further gold recovery by flotation.

THE COMPANY
“KAML Kazakhstan Holding” LLP is the founder of “Tokhtar Mining Company” LLP, which has the subsoil use right to the Tokhtar deposit, as well as “Integrated Geological and Environmental Expedition” LLP, which has the subsoil use right at the South-Tokhtar-Barambayev (STB) gold ore area, including South Tokhtar deposit.

THE MARKET
The local market for gold is estimated at US$5.5 billion in 2020. It proves to be highly profitable as it is in demand today when the economy is highly volatile, and the threat of a pandemic is looming over nations.
Gold consumption in Kazakhstan is mainly created as a result of gold processing, done by three refineries: “Kazzink”, “Kazakhmys” and “Tau-Ken-Altyn”. Currently, all of the produced refined gold is used for the purpose of replenishing the country’s currency reserves. According to experts, by the end of 2020, refining volumes in Kazakhstan will reach up to 80-90 tons.

REASONS FOR ENGAGEMENT
Demand is fully guaranteed, cathode gold will be sold directly to refineries, which provides the investor with an off-take (the purchase price is in line with the price level of the London Bullion Market Association). The ultimate buyer of refined gold is the National Bank of the Republic of Kazakhstan. Revenue is paid in US dollars and most of the operating expenses are in Kazakhstani tenge.

INVESTMENT OPPORTUNITY
The owner is ready to sell 100% stake of the companies that own Tokhtar, South Tokhtar and South-Tokhtar-Barambayev deposits for $190 mln.
Mining and smelting industry

Increasing the resource base and expanding the production of gold on the Tobolsk area of deposits

**Project overview:** The investment project provides for the development, extraction and processing of gold bearing ores of the Tobolsk area of deposits

**Project Goals:**
- Increase in capacity for the mining/processing of oxide ores;
- detailed exploration of sulfide ores with registering of reserves at a commercial level;
- increase in capacity for the extraction and processing of oxide ores;
- construction of a sulphide ore processing plant.

**Commercial product:** Dore alloy

**Initiator:** Brendt LLP conducts mining of oxide ores, and processes them into the Dore alloy. Ore processing is carried out through the open pit method. The current mining/processing capacity is 800 thousand tonnes of ore per year.

**Planned output:** Annual volume of mining and processing of sulphide ores at the level of 1.8 mln.

**Potential markets:** Kazakhstan

**Key investment data**

<table>
<thead>
<tr>
<th>Index</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project implementation period, years</td>
<td>17</td>
</tr>
<tr>
<td>incl. investment stage, years</td>
<td>~4</td>
</tr>
<tr>
<td>operational stage, years</td>
<td>16</td>
</tr>
<tr>
<td>Investment amount, US$ thousands</td>
<td>70,800</td>
</tr>
<tr>
<td>Project NPV, US$ thousands</td>
<td>39,479</td>
</tr>
<tr>
<td>IRR, %</td>
<td>25.1%</td>
</tr>
<tr>
<td>EBITDA margin, %</td>
<td>30%</td>
</tr>
<tr>
<td>Payback period, years</td>
<td>8.5</td>
</tr>
<tr>
<td>Discounted payback period, years</td>
<td>10.2</td>
</tr>
</tbody>
</table>

**Project location:** The Kutyukhinskoye field and the Tobolsk area are located in the Zhitikarinsky district of Kostanay oblast

**Market assumptions:**

**Consistently high demand** – Gold consumption in the world is at a consistently high level. It is used in technology in the form of alloys with other metals, in the aviation and space industries, radio equipment, electronics, and medicine. A significant part of gold goes to jewelry making. It also plays the role as a main currency metal.

**Availability of customer base** – In Kazakhstan, gold consumption is mainly created for the purpose of replenishing the country’s foreign exchange reserves as a result of processing by three refining plants: Kazzinc in Ust-Kamenogorsk, Kazakhmys in Balkhash and Tau-Ken-Alty in Nur-Sultan. According to experts, by 2020, refining will reach 80-90 tonnes per year

### Project profitability

![Project profitability graph](image)

- **Revenue, US$ mln**
- **Revenue growth rate, %**

### Reserves of Tobolsk’s area of deposits, calculated according to JORC

<table>
<thead>
<tr>
<th>JORC classification</th>
<th>Oxidized ore</th>
<th>Sulphide ore</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Gold, kg</td>
<td>Content, g/t</td>
<td>Gold, kg</td>
</tr>
<tr>
<td>Measures resources</td>
<td>5,324</td>
<td>1.42</td>
<td></td>
</tr>
<tr>
<td>Verified resources</td>
<td>5,686</td>
<td>1.5</td>
<td></td>
</tr>
<tr>
<td>Estimated resources</td>
<td>5,537</td>
<td>1.48</td>
<td>22,434</td>
</tr>
<tr>
<td>State Reserves Commission P3</td>
<td>3,337</td>
<td>1.4</td>
<td>40,100</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>19,884</strong></td>
<td><strong>1.42</strong></td>
<td><strong>62,534</strong></td>
</tr>
</tbody>
</table>

December 2019

KAZAKH INVEST: Investment proposal
Upgrade of the Irtysh Chemical and Metallurgical Plant

Commercial products
Design capacity: 1,385 tonnes of products per year.

Project description
The Project envisages the upgrade of the Irtysh Chemical and Metallurgical Plant to expand the output of products from rare earth metals. The design capacity of the plant will be 1,385 tonnes of products per year.

Company
DINATRON-KAZAKHSTAN Ltd LLP is a specially created company, part of the HOLDING "DINATRON", operating on the basis of the Irtysh chemical and metallurgical plant, leading its history of the production of rare and rare-earth metals since 1958. The goal of the company is to create a new modern complex for the production of rare metals and products from them, including metallurgical facilities using forging, sheet-rolling and pipe-rolling industries.

Market
• Titanium sponge production in 2016-2020 followed a steady positive trend. The production volume increased from 170 thousand tonnes in 2016 to 210 thousand tonnes in 2020 with a CAGR of 5.4%. In 2020, China was the leader in the sector and produced 107 thousand tonnes of titanium sponge, while Kazakhstan ranked fourth with a volume of 15 thousand tonnes.
• 360ResearchReports predicts that the titanium products market will continue to show a strong positive trend through 2026 with a CAGR of 1.3%.

What is the attractiveness of the project?
Import substitution and expansion of production. Kazakhstan doesn’t have enterprises for the production of high value added products from rare non-ferrous metals. The project implementation will allow for advanced processing and finished products of a high conversion rate - ingots, powder, rods, wire, pipes, shaped articles made of niobium, tantalum, zirconium, titanium and their alloys, which will further cover domestic demand for these types of products.

Developed infrastructure. The plant is located 70 km from Ust-Kamenogorsk, in Pervomay village, in a safe distance from large settlements. The plant territory is located in close proximity to the highway leading to Ust-Kamenogorsk and also has its own railway siding.

Investment proposal
The Project requires investment of US$ 205,177 thousand, of which:
• 70% (US$ 143,623.9 thousand) – debt financing subject to collateral;
• from 30% (US$ 61,553.1 thousand) – Investor participation.

The proposed financing structure and state support measures are indicative. The final financing structure and Project interests will be determined based on the results of negotiations with the investor.
**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**

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project implementation period, years</td>
<td>35</td>
</tr>
<tr>
<td><strong>Incl.</strong> Investment stage, years</td>
<td>2</td>
</tr>
<tr>
<td>Operational stage, years</td>
<td>33</td>
</tr>
<tr>
<td>Investment, US$ thousands</td>
<td>70,942</td>
</tr>
<tr>
<td>Project NPV, US$ thousands</td>
<td>173,323</td>
</tr>
<tr>
<td>IRR, %</td>
<td>32.7%</td>
</tr>
<tr>
<td>EBITDA returns, %</td>
<td>49%</td>
</tr>
<tr>
<td>Payback period, years</td>
<td>5.4</td>
</tr>
<tr>
<td>Discounted payback period, years</td>
<td>6.7</td>
</tr>
</tbody>
</table>

**Project profitability**

**South Zhaur deposit reserves (JORC)**

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Balance reserves by C2 category</th>
<th>Quantity, tonnes</th>
<th>Composition, %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ore</td>
<td>122,189,700</td>
<td>122,189,700</td>
<td></td>
</tr>
<tr>
<td>Tungsten trioxide</td>
<td>198,953</td>
<td>198,953</td>
<td>0.163</td>
</tr>
<tr>
<td>Molybdenum</td>
<td>13,062</td>
<td>13,062</td>
<td>0.010</td>
</tr>
<tr>
<td>Bismuth</td>
<td>6,408</td>
<td>6,408</td>
<td>0.005</td>
</tr>
</tbody>
</table>
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

<table>
<thead>
<tr>
<th>Index</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project implementation period, years</td>
<td>26</td>
</tr>
<tr>
<td><strong>including the investment stage, years</strong></td>
<td>1</td>
</tr>
<tr>
<td><strong>operational stage, years</strong></td>
<td>25</td>
</tr>
<tr>
<td>Investment, US$ thousands</td>
<td>88,556</td>
</tr>
<tr>
<td>Project NPV, US$ thousands</td>
<td>332,269</td>
</tr>
<tr>
<td>IRR, %</td>
<td>46.6%</td>
</tr>
<tr>
<td>EBITDA returns, %</td>
<td>30%</td>
</tr>
<tr>
<td>Payback period, years</td>
<td>6.6</td>
</tr>
<tr>
<td>Discounted payback period, years</td>
<td>7.0</td>
</tr>
</tbody>
</table>

Project location: Kostanai Oblast

Drozhilov field reserve

<table>
<thead>
<tr>
<th>Reserves, mln tonnes</th>
<th>Metals, thousand tonnes</th>
<th>Content, %</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mo W Li</td>
<td></td>
</tr>
<tr>
<td>Proven</td>
<td>140 263 64.3</td>
<td>0.19 0.05</td>
</tr>
<tr>
<td>Calculated</td>
<td>131 78 88.3</td>
<td>0.06 0.03 0.45</td>
</tr>
<tr>
<td>Estimated</td>
<td>300 150 150</td>
<td>0.05 0.05</td>
</tr>
</tbody>
</table>
Development of the Aksoran deposit

**Products**
Average annual capacity:
- 5,019 tonnes of tungsten in scheelite concentrate;
- 227 tonnes of molybdenum middlings.

**Project**
The Project envisages the construction of a mining complex to be based on the Aksoran molybdenum-tungsten ore deposit, the largest in Kazakhstan, for the production of tungsten in scheelite concentrate and molybdenum middlings. The plan is to employ a sublevel caving method for the development of the deposit, with an end ore drawing and further ore flotation.

**Company**
The project initiator is Yessil-Mining LLP, whose core activities are geological exploration and survey. The Initiator holds license No. 2-ML dated 31 March 2020 for mining at the Aksoran deposit (until 2045).

**Market**
According to the forecast of Chromatus Consulting, the world tungsten market is expected to show a stable growth trend from 3.27 US$ billion in 2020 to 5.28 US$ billion in 2028 with a CAGR of 6.35% for this period.

Global tungsten production is on an upward trend despite the 2020 crisis caused by the COVID-19 pandemic, when production volumes increased slightly by 0.2% (84,000 tonnes) compared to 2019 (83,800 tonnes).

According to Mordor Intelligence forecast, molybdenum consumption will increase from 247 thousand tonnes in 2020 to 303 thousand tonnes in 2025 with a CAGR of 4% for this period.

**What is the project’s attractiveness?**
- **Reserve evaluation.** An estimate of the deposit reserves is available from the Committee of Geology based on local KAZRC standard; JORC Code compliant estimate was also made. The reserves were recognized in the State Register of Reserves in 2019. Aksoran is known to be one of the richest tungsten deposits in Central Asia.
- **Contacts with potential customers.** The Initiator received letters of interest to purchase his products from businesses located in China, Russia, Germany, Austria and Singapore.
- **Geographic position.** The Project has an advantageous location in terms of geographic proximity to China, the main consumer of tungsten.

**Project investment attractiveness:**
- Investment – US$ 117,868 thousand
- Project NPV – US$ 112,177 thousand
- IRR – 29.4%
- Payback period – 5.6 years

**Investment proposal**
The Project requires investment of US$ 117,868 thousand, of which:
- 50% (58,934 thousand USD) – debt financing subject to collateral;
- 20% (23,574 thousand USD) – shareholder’s equity;
- from 30% (35,360 thousand USD) – investor participation.

The proposed financing structure and state support measures are indicative. The final financing structure and Project interests will be determined based on the results of negotiations with the investor.
Mining and smelting industry

Extraction and processing of nickel-cobalt ore deposit Bogetkol

**Project Description**

This investment project provides for the extraction and processing of nickel-cobalt ores from the Bugetkol deposit in the Aktobe region (the "Project").

**Project goals:**
- Development of the resource base of Sary Arka Mining Company LLP, creation of an effective integrated business for the extraction and processing of cobalt/nickel ores and the sale of final products in the domestic market and abroad;
- obtaining high-quality, export-oriented, competitive products through rational and effective field development using advanced proven technologies.

**Project Initiator**

Mining company "Sary Arka" LLP

**Production**

- Nickel concentrate;
- Cobalt concentrate.

**Annual production capacity:**
Nickel – from 4,508 to 9,125 tons, Cobalt – from 281 to 580 tons.

**Key Investment indicators**

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Results</th>
</tr>
</thead>
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<tr>
<td>Investment amount, thous. USD</td>
<td>574,743</td>
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<tr>
<td>Project NPV, thous. USD</td>
<td>384,347</td>
</tr>
<tr>
<td>IRR, %</td>
<td>35.5%</td>
</tr>
<tr>
<td>EBITDA margin, %</td>
<td>58-61%</td>
</tr>
<tr>
<td>Payback period, years</td>
<td>4.2</td>
</tr>
<tr>
<td>Discounted payback period, years</td>
<td>4.9</td>
</tr>
</tbody>
</table>

**Project location:**
Aytekebi district, Aktobe region

**Market prerequisites:**

**Rising prices for nickel and cobalt.** According to forecasts by Bloomberg analysts, the average nickel price in 2019 will increase by 27% and amount to US$ 13,550 per ton, and for the period 2019 – 2022, the average annual price will increase yearly by 9% and rise to US$ 15,900 per ton by 2027.

**Export potential.** The country’s domestic demand for cobalt and nickel is low, so it is possible to cover it with excess nickel-cobalt ore reserves in Kazakhstan allow the export of this mineral in significant quantities to China, South Korea, Russia, Japan and Ukraine. China is the main importer of nickel, nickel concentrates, cobalt ores and cobalt concentrates.

**In-situ recovery (ISR) method of mining with sulphurous acid leaching:** The extracted productive solution (which contain nickel and cobalt ores) then goes to the processing plant. Received productive solution further goes through the following stages:
- Nickel/cobalt extraction from pregnant solutions by ion exchange;
- Eluate neutralization;
- Nickel/cobalt sulphate purification and recovery;
- Tailings neutralisation, storage and evaporation.

**Project Profitability**

**Field Reserves**

<table>
<thead>
<tr>
<th>Category</th>
<th>min tones</th>
<th>%Ni</th>
<th>%Co</th>
<th>Ni, thous. tones</th>
<th>Co, thous. tones</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Inside Tenement</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indicated</td>
<td>36.01</td>
<td>0.68</td>
<td>0.037</td>
<td>243,366</td>
<td>13,221</td>
</tr>
<tr>
<td>Inferred</td>
<td>1.76</td>
<td>0.68</td>
<td>0.039</td>
<td>11,986</td>
<td>682</td>
</tr>
<tr>
<td><strong>Outside Tenement</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indicated</td>
<td>1.11</td>
<td>0.71</td>
<td>0.041</td>
<td>7,855</td>
<td>454</td>
</tr>
<tr>
<td>Inferred</td>
<td>0.39</td>
<td>0.55</td>
<td>0.045</td>
<td>2,140</td>
<td>173</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>37.12</td>
<td>0.68</td>
<td>0.037</td>
<td>251,221</td>
<td>13,675</td>
</tr>
<tr>
<td>Indicated</td>
<td>2.15</td>
<td>0.66</td>
<td>0.040</td>
<td>14,126</td>
<td>855</td>
</tr>
</tbody>
</table>
Mining and metallurgical complex

Extraction and processing of cobalt-nickel ore deposit Shevchenkovskoye

**Project Description**
Extraction and processing of cobalt-nickel ores from Shevchenkovskoye deposit

**Project Initiator**
"KazCobalt“ LLP, subsoil user of the deposit JSC Qazgeology

**Production**
Ferronickel

**Reserves**
according to 2005 estimates from Bateman Minerals and Metals Ltd., Shevchenkovskoye deposit reserves amount to 104.4 million tonnes of ore, containing on average 0.79% of nickel and 0.045% of cobalt.

**Project location:**
50 km to the south west of Zhetikara, Kostanay Oblast

**Potential consumer markets**
Kazakhstan, China

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**Key Investment indicators**

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project implementation period, years</td>
<td>46</td>
</tr>
<tr>
<td>incl. investment stage, years</td>
<td>1</td>
</tr>
<tr>
<td>operational stage, years</td>
<td>45</td>
</tr>
<tr>
<td>Amount invested, US$ thousands</td>
<td>250,000</td>
</tr>
<tr>
<td>Project NPV, US$ thousands</td>
<td>175,989</td>
</tr>
<tr>
<td>IRR, %</td>
<td>19.3%</td>
</tr>
<tr>
<td>Rate of return in terms of EBITDA, %</td>
<td>71%</td>
</tr>
<tr>
<td>Payback period, years</td>
<td>7.5</td>
</tr>
<tr>
<td>Discounted payback period, years</td>
<td>11.7</td>
</tr>
</tbody>
</table>

---

**Project location:**
Kostanay Oblast, 50 kms to the South-West from the town of Zhetikara

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**Market prerequisites:**

**Rising prices for metals** – According to the forecasts of S&P and Capital IQ, prices for nickel will rise by 23.9%, from US$ 12,985 per tonne in 2018 to US$ 16,094 per tonne in 2022. Prices for cobalt will rise by 1.6% from US$ 82,695 per tonne in 2018 to US$ 84,018 per tonne in 2022.

**Rising demand for metals** – Development of industries (e.g. production of electronic devices, medical equipment and electric vehicles), that use nickel batteries, will provide long-term demand for the metal. According to WMBS, in 2017, the deficit of refined nickel on the world market amounted to around 96 thousand tonnes. According to Palisade and Macquarie, demand for cobalt will rise by 5.1% annually within the next 5 years.

**Export potential** – In 2015, China consumed 65% of total world produced cobalt and nickel products. With the rapidly developing market of electronic devices and electric vehicles, China’s reserves of cobalt and nickel are depleting.

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**Ore field description**

**Explored reserves of C1 and C2 categories**

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Amount, tonnes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ore</td>
<td>104.4 million</td>
</tr>
<tr>
<td>Proven</td>
<td>21.4 million</td>
</tr>
<tr>
<td>Possible</td>
<td>83 million</td>
</tr>
<tr>
<td>Nickel</td>
<td>825 thousand (0.79%)</td>
</tr>
<tr>
<td>Cobalt</td>
<td>47 thousand (0.045%)</td>
</tr>
</tbody>
</table>

- Ore extraction on Shevchenkovskoye can be carried out through an open pit mining, since the depth of ore deposits reaches 40m.
- Extraction of nickel and cobalt by hydrometallurgical and electric smelting methods amounts to 90-95% for nickel and 85-90% for cobalt.
MINING AND PROCESSING OF NICKEL AND COBALT ORE

PRODUCT
ANNUAL PRODUCTION CAPACITY
5 THOUSAND TONS (NICKEL)
365-730 TONS (COBALT)
GLOBAL DEMAND
2.2 MILLION TONS (NICKEL)
125 THOUSAND TONS (COBALT)

VALUATION METRICS
REQUIRED INVESTMENT
US$102 MILLION
PROJECT NPV
US$275.6 MILLION
PROJECT IRR
23.2%
PAYBACK PERIOD
6.3 YEARS

THE PROJECT
The launch of a new innovative production, i.e., the construction of the first nickel plant in Kazakhstan for the processing of oxidized cobalt-nickel ores of the Gornostaevskoye deposit with the production of nickel and cobalt. Proven reserves are up to 1,000 thousand tons of nickel, and up to 66 thousand tons of cobalt.

THE COMPANY
Qaznickel JSC is a metal mining company with operations in Eastern Kazakhstan. Since 2004, it has been engaged in exploration of the Gornostaevskoe field. Since 2019, the company has started pilot production using the in-situ leaching method.

THE MARKET
The target market for nickel and cobalt is estimated at US$20 billion in 2020, with 5% CAGR. The global production of nickel is expected to grow at an average annual rate of 3.5% and reach 2.9 million tons of nickel by 2027. China is the largest consumer of nickel, which hosts world’s largest customers: producers of steel, catalysts, batteries, etc.

REASONS FOR ENGAGEMENT
Kazakhstan is rich for nickel and cobalt (12th and 7th largest stock, respectively). The country is particularly rich for laterite ores of nickel—the only source to produce low-grade and ferrous nickel. Absence of large-scale domestic production also allows for import substitution and exports to world’s largest consumers—China, Korea, Russia, and Japan.

INVESTMENT OPPORTUNITY
Seeking US$100 million of investment to launch production of nickel and cobalt in Kazakhstan in exchange for 25% stake in the project.
MINING AND PROCESSING OF TIN ORES

PRODUCT
ANNUAL PRODUCTION CAPACITY 8.4 THOUSAND TONS
GLOBAL DEMAND 366.3 MILLION TONS

VALUATION METRICS
REQUIRED INVESTMENT US$285 MILLION
PROJECT NPV US$380 MILLION
PROJECT IRR 41.2%
PAYBACK PERIOD 4.7 YEARS

THE PROJECT
The launch of mining and processing of tin ores in Syrymbet deposit. Main products are (i) tin concentrates and (ii) tin sublimates with annual production capacity 3,500 tons and 4,900 tons, respectively.

THE COMPANY
A total of 75% shares in Tin One Mining JSC are owned by private company Berkut-Mining LLP, and 25% shares—by Samruk-Kazyna Invest LLP, a state-owned investment firm.

THE MARKET
The global market for tin ores is estimated at US$7 billion in 2020, with expected growth at 2.24% CAGR in the coming decade. Asia-Pacific is currently the biggest market for tin-based solders, due to its rising demand in the electronics industry, along with growing production base. North America is the second-largest market, followed by Europe, for tin-based solders.

REASONS FOR ENGAGEMENT
Syrymbet deposit is Kazakhstan’s only and the world’s biggest undeveloped deposit of explored and classified tin reserves, according to the 2012 JORC Code. Commercial reserves of the Syrymbet deposit are 124.7 mn tons of ore with overall tin reserves of nearly 501 thousand tons. Tin is not produced in Kazakhstan, and the country is totally dependent on imports (320 tons imported in 2019).

INVESTMENT OPPORTUNITY
Seeking US$125 million of equity investment for construction of the mining and metallurgical facility to mine and process tin ores at the Syrymbet deposit in exchange for 50% stake in the project.
THE PROJECT
The total reserves include 1,066 million tons, including 496 mln tons of indicated category (С1-C2) and 570 mln tons of inferred category (P1-P2). The main feature of Tymlai deposit’s ore is a very high content of titanium dioxide (TiO2) on average 9.5%, iron content 25-35%. The project includes construction of a mining plant at the deposit in the Zhambyl region (staged mining of 1, 5 and 10 mln. tons of ore) and a chemical and metallurgical complex in SEZ Pavlodar (staged production of finished products: special steel 180/950/1800 th. tons and titanium dioxide 60/300/600 th. tons).

THE COMPANY
Tenir Logistic LLP is a subsoil user and has contracts for exploration of titanium-magnetite ores of the Tymlai deposit (exploration works have been completed and reserves in the amount of 226 mln. tons have been reflected in the books of the State Reserves Committee of Kazakhstan; in the process of concluding a mining contract) and the Tymlai ore field (exploration work is almost completed, and the reserves amount to more than 800 mln. tons).

THE MARKET
The global market for titanium dioxide estimated at US$16 bln. in the year 2020 and is projected to grow at a CAGR of 7.5% p/a to US$ 26 bln. by 2027. The most important sales markets for TiO2 pigments are paints and coatings with a market share of over 56%, followed by plastics, paper, and other pigment applications. The main consumer countries are the USA, China, Japan, Canada and the EU countries.

The volume of the steel market is about 1.8 bln. tons. The global steel market is expected to register a CAGR of 2.84% to reach USD 963.6 billion by 2023. Asia-Pacific accounted for the largest market share in 2017 and is projected to grow at the highest CAGR of 3.09% during the forecast period to reach USD 651.5 billion in 2023.

REASONS FOR ENGAGEMENT
There is no titanium dioxide production in Kazakhstan and the Eurasian Economic Union (EAEU), while the annual imports averages 2700 tons (Kazakhstan) and approx. 80 th. tons (EAEU). Also, there is no large-scale production of special steels in Kazakhstan.
For processing of raw materials, it is proposed to use a combination of alternative low-cost “green” technologies, developed and patented by “Tenir Logistic” LLP. The processing plant is to be located in Pavlodar region, which has a surplus of electricity and the cost of 1 kW of electricity is ~US $ 0.02.

INVESTMENT OPPORTUNITY
For implementation of the project’s 1st stage the owner is ready to sell a majority stake (80% or more) in the company at US$87 mln. valuation.
Description of the Project
The present investment project (the “Project”) provides for the construction of a mining and processing complex for the production of manganese concentrate at the Karamola deposit in the Almaty region.

Product: manganese concentrate.

Aims of the Project: Creation of an innovative mining and metallurgical complex for the production of manganese concentrate in the Almaty region.

Manufacturing process: The developed technological enrichment scheme includes two-stage crushing of the initial ore to a fineness of 40 mm, followed by wet screening into fineness classes of 40-5 mm, 5-125 mm and 1.25-0.0 mm.

Initiator: Tentek LLP.

Production volumes: ore - 49.6 thousand tons per year, concentrate - 19.2 thousand tons per year.

Market conditions:
High demand. Manganese in ferromanganese alloys is used to “deoxidize” steel during its melting (to remove oxygen from it). The high growth of steel production in the world and the strategic importance of the further development of industries using steel as raw materials create a steady demand for the products manufactured under the Project. According to the forecasts of the International Steel Association, the global demand for steel and steel products will increase by 1.4% in 2019. According to Lucintel forecasts, the average annual growth rate (CAGR) for steel pipes will be 1.6% in 2019-2024.

Export potential. China is the world’s largest importer of manganese concentrate (27 656 thousand tons in 2018). Russia is the fourth largest importer of manganese concentrate (1318 thousand tons in 2018). Over the past 5 years, the growth rates of imported manganese concentrate by China and Russia amounted to 14.3 and 6.6%, respectively.

Deposit reserves
Currently, one area has been explored with estimated reserves of 1.5 - 2.0 million tons of manganese ores, including the estimated and approved GKZ RK C1 - 233.4 thousand tons (Mn 22.65%), C2 - 215, 0 thousand tons (Mn 22.53%). The reserves of the deposit are estimated at more than 16 million tons of manganese and 80 million tons of ore. The manganese content in ores varies from 12-14% to 38-46%, with a phosphorus content of up to 0.1%. Estimated reserves in general for 23 ore sites (including the Karamola deposit) of the Karamola area are estimated at 250 million tons.

Key investment indicators of the Project

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investment amount, US$</td>
<td>10,114 thous.</td>
</tr>
<tr>
<td>Project NPV, US$</td>
<td>5,651 thous.</td>
</tr>
<tr>
<td>IRR, %</td>
<td>24.04%</td>
</tr>
<tr>
<td>EBITDA yield, %</td>
<td>75.2%</td>
</tr>
<tr>
<td>Payback period, years</td>
<td>6.48</td>
</tr>
<tr>
<td>Discounted payback period, years</td>
<td>8.22</td>
</tr>
</tbody>
</table>

Project location: Alakol district, Almaty Oblast
Development of Alaigyr lead-silver deposit

Mining and smelting industry

Project overview:
This investment project provides for the development of Alaigyr lead-silver deposit.

Implementation of the Project will help develop the technologically advanced sub-sector of the non-ferrous industry and reduce imports of polymetallic products.

Location: Karaganda Oblast, on the border between Shetsky and Karkaralinsky districts

Initiator: National Company Tau-Ken Samruk JSC, which specializes in exploration, development, production, processing and sale of solid minerals.

Project’s operator - Alaigyr LLP.

Capacity:
Concentrate containing:
• Lead - about 30 thousand tonnes per year
• Silver - about 13 thousand kilograms per year

Sales market: Domestic market, KazZinc LLP

Key investment data

<table>
<thead>
<tr>
<th>Index</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project implementation period, years</td>
<td>25</td>
</tr>
<tr>
<td>Investment, US$ thousands</td>
<td>177,962</td>
</tr>
<tr>
<td>Project NPV, US$ thousands</td>
<td>49,002</td>
</tr>
<tr>
<td>IRR, %</td>
<td>19.9%</td>
</tr>
<tr>
<td>EBITDA return, %</td>
<td>43%</td>
</tr>
<tr>
<td>Payback period, years</td>
<td>7.3</td>
</tr>
<tr>
<td>Discounted payback period, years</td>
<td>12.5</td>
</tr>
</tbody>
</table>

Market assumptions
Growing demand.
According to the analytical agency International Lead and Zinc Study Group, the volume of global lead consumption in 2019 amounted to 12,174 thousand tons, which is 8% more than in 2015. Global silver consumption was 992 mln ounces in 2019, which 3% more than in 2017. Thus, the demand for lead and silver demonstrates historical growth.

Experienced team
The management team of the Company has a successful track record of implementing similar projects in the mining and metallurgical sector.

Import substitution
Despite the observed steady growth in the production of lead and lead ores over the past few years, Kazakhstan imports lead ores and concentrates. In 2020, the total volume of imported lead ore amounted to 132 thousand tons.

Project profitability

Investment structure
- Construction and assembly work: 62% $111.2 million
- Machinery and equipment: 33% $58.1 million
- Other assets: 5% $8.6 million

The proposed financing structure is indicative, the final financing and Project participation structures will be determined based on the results of negotiations with the Investor.
Mining and smelting industry

Construction of a complex for the production of barite concentrate in Mangystau Oblast

Project description:
The project involves construction of a complex for the extraction of barite-celestine ores and their processing into barite concentrate for use as weighting agents for drilling muds. The mining of barite-celestine ores and their processing will be carried out at the North Aurtas deposit.

Product: Barite-celestine based weighting agent («BCWA»), carbonate based weighting agent («CWA»).

Reserves (Category C1): 3,579 thousand tons

Initiator: Chemicals trading LLC.

Location: Mangystau district, Mangystau Oblast

Annual production capacity:
200 thousand tons of ore per year;
• BCWA - 186 thousand tons;
• CWA - 14 thousand tons.

Key investment indicators

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amount of investments, US$ thousands</td>
<td>14,123</td>
</tr>
<tr>
<td>Project NPV, US$ thousands</td>
<td>14,999</td>
</tr>
<tr>
<td>IRR, %</td>
<td>32.5%</td>
</tr>
<tr>
<td>EBITDA margin, %</td>
<td>34-41%</td>
</tr>
<tr>
<td>Payback period, years</td>
<td>5.0</td>
</tr>
<tr>
<td>Discounted payback period, years</td>
<td>6.1</td>
</tr>
</tbody>
</table>

Project location: Mangystau district, Mangystau Oblast

Project implementation assumptions:
Existence of a rich resource base.
The Aurtas deposit, located in Mangistau Oblast, is the largest barite ore deposit with a balance stock of 3.5 million tons of ore. Additionally, ore reserves may increase during additional geological exploration of the area during mining operations.

Advantageous location.
The geographical proximity of the Aurtas deposit to the oil and gas fields of western Kazakhstan and to the Caspian Sea and the ports of Aktau and Kuryk provides a favorable logistic advantage in the delivery of final products to both domestic and foreign consumers.

Development of the oil and gas industry of Kazakhstan.
The last four years, the volume of purchases of the entire oil and gas market in Kazakhstan has increased by an average of 20% per year. The total amount of oil services purchased in 2018 amounted to US$ 8.26 billion, which is 15.5% more than in 2017 (US$ 7.15 billion).

Lack of competition in foreign markets and export potential.
According to the analysis of competitors in foreign markets in Turkmenistan, Russia, Azerbaijan and Saudi Arabia, the extraction and processing of barite is insufficient or completely absent to meet domestic demand.

Project profitability

<table>
<thead>
<tr>
<th>Year</th>
<th>US$ thousands</th>
<th>EBITDA margin, %</th>
</tr>
</thead>
<tbody>
<tr>
<td>2020</td>
<td>4,326</td>
<td></td>
</tr>
<tr>
<td>2022</td>
<td>13,009</td>
<td></td>
</tr>
<tr>
<td>2024</td>
<td>15,845</td>
<td></td>
</tr>
<tr>
<td>2030</td>
<td>17,883</td>
<td></td>
</tr>
<tr>
<td>2034</td>
<td>19,934</td>
<td></td>
</tr>
<tr>
<td>2038</td>
<td>21,926</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year</th>
<th>Revenue, US$ thousands</th>
<th>EBITDA margin, %</th>
</tr>
</thead>
<tbody>
<tr>
<td>2020</td>
<td>4,326</td>
<td></td>
</tr>
<tr>
<td>2022</td>
<td>13,009</td>
<td></td>
</tr>
<tr>
<td>2024</td>
<td>15,845</td>
<td></td>
</tr>
<tr>
<td>2030</td>
<td>17,883</td>
<td></td>
</tr>
<tr>
<td>2034</td>
<td>19,934</td>
<td></td>
</tr>
<tr>
<td>2038</td>
<td>21,926</td>
<td></td>
</tr>
</tbody>
</table>
Mining and smelting industry

Construction of a metallurgical complex for the production of pig iron in Mangystau Oblast

Project overview:
The project involves construction of a complex for the production of pig iron, with ROMELT technology. Iron ore mining and crushing will be carried out at the Beskempir deposit. The processing complex with the ROMELT technology, to which iron ores are going to be transported after crushing, will be located on the SEZ “Seaport Aktau”.

Product: Intermediate pig iron
Production process:
Mining – open-pit; Processing – ROMELT, liquid phase recovery with energetic coals.
Initiator: Technogran Aktobe LLC.
Location: Mangystau district, Mangystau Oblast.
Consumer market: China.
Annual production capacity: 240 thousand tonnes of pig iron.

Project implementation assumptions:

Deficiency of ferrous scrap. In Kazakhstan, there is currently a shortage of ferrous scrap caused by its export ban. Since the ban in 2014, the volume of domestic consumption of ferrous scrap has decreased by 50-60% compared with 2011.

Rich resource base. The Beskempir deposit, located in the Mangistau Oblast in the central part of the Karatau ridge, is the largest iron ore deposit, the reserves of which are approved under the State Reserves Committee of the Republic of Kazakhstan in category C2, amounted to 13,812 thousand tons. Iron ore is characterized by a high iron content and the absence of impurities. Also, the Mangistau oblast is rich in natural gas reserves.

Production technology. ROMELT technology for ore processing is based on direct iron reduction technology without an enrichment stage, which has a number of economic advantages in the production of pig iron.

Key investment indicators

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amount of investments, US$ thousands</td>
<td>172,340</td>
</tr>
<tr>
<td>Project NPV, US$ thousands</td>
<td>152,771</td>
</tr>
<tr>
<td>IRR, %</td>
<td>27.4%</td>
</tr>
<tr>
<td>EBITDA margin, %</td>
<td>51%</td>
</tr>
<tr>
<td>Payback period, years</td>
<td>5.7</td>
</tr>
<tr>
<td>Discounted payback period, years</td>
<td>7.2</td>
</tr>
</tbody>
</table>

Project location: Mangystau district, Mangystau Oblast

Deposit reserves and its provision

<table>
<thead>
<tr>
<th>Site</th>
<th>Provisi on, years</th>
<th>Reserves, thousand tonnes</th>
<th>Content, Fe, %</th>
</tr>
</thead>
<tbody>
<tr>
<td>On-balance reserves, C2</td>
<td>23</td>
<td>13,811.64</td>
<td>43.88</td>
</tr>
<tr>
<td>North</td>
<td>5,760.19</td>
<td>40.39</td>
<td></td>
</tr>
<tr>
<td>Central 1</td>
<td>5,608.23</td>
<td>46.67</td>
<td></td>
</tr>
<tr>
<td>Central 2</td>
<td>1,424.06</td>
<td>46.89</td>
<td></td>
</tr>
<tr>
<td>Central 3</td>
<td>1,019.15</td>
<td>44.12</td>
<td></td>
</tr>
<tr>
<td>Off-balance reserves</td>
<td>22</td>
<td>13,696.26</td>
<td>40.19</td>
</tr>
<tr>
<td>Total</td>
<td>45</td>
<td>27,507.9</td>
<td>42.04</td>
</tr>
</tbody>
</table>

Project profitability

<table>
<thead>
<tr>
<th>Year</th>
<th>EBITDA margin, %</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>51%</td>
</tr>
<tr>
<td>4</td>
<td>51%</td>
</tr>
<tr>
<td>5</td>
<td>51%</td>
</tr>
<tr>
<td>6</td>
<td>51%</td>
</tr>
<tr>
<td>7</td>
<td>52%</td>
</tr>
<tr>
<td>17</td>
<td>51%</td>
</tr>
<tr>
<td>18</td>
<td>49%</td>
</tr>
<tr>
<td>24</td>
<td>53%</td>
</tr>
</tbody>
</table>
Construction of a metallurgical complex for the production of pig iron in Aktobe Oblast

Project description:
The project involves construction of a complex for the production of pig iron, through beneficiation and processing of iron-bearing ores from nearby deposits in Aktobe Oblast.

Product: intermediate pig iron

Initiator: Altyn plc.

Location: Shalkar district, Aktobe Oblast

Consumer markets: China, Russia, Kazakhstan

Annual production capacity:
- 826 thousand tonnes of pig iron;
- 800 thousand tons of granulated slag.

Key investment indicators

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amount of investments, US$ thousands</td>
<td>497,047</td>
</tr>
<tr>
<td>Project NPV, US$ thousands</td>
<td>653,709</td>
</tr>
<tr>
<td>IRR, %</td>
<td>55.2%</td>
</tr>
<tr>
<td>EBITDA margin, %</td>
<td>66%</td>
</tr>
<tr>
<td>Payback period, years</td>
<td>5.1</td>
</tr>
<tr>
<td>Discounted payback period, years</td>
<td>5.5</td>
</tr>
</tbody>
</table>

Market prerequisites:

Existence of a rich resource base. Aktobe Oblast has a number of deposits with reserves of iron ore. Moreover, Aktobe region borders with Karaganda and Kostanay Oblasts, which have the greatest amount of iron ore deposits across Kazakhstan.

Positive price dynamics. After a downturn in 2014-2015, the last two years have shown prices for pig iron returning to a positive trend. According to the forecasts of market participants, prices for this metal will continue to move in a positive trend and will stabilize in the near future.

Potential for pig iron exporting. Currently, in Kazakhstan, the export of pig iron is underdeveloped. In particular, exports to China are completely non-existent. Moreover, the import of pig iron in Russia and China is growing rapidly, thereby creating exporting potential for producers in Kazakhstan.

Projected growth in demand for cast iron.
According to the forecasts of the International Steel Association, the global demand for steel (product obtained from pig iron processing) will increase by 3.9% and 1.4% in 2018 and 2019, respectively. Thus, taking into account the specifics of the iron and steel market, the growth in demand for pig iron is also expected.

Developed railway infrastructure. In the village of Shalkar (location of the metallurgical complex) there is a railway station named "Shalkar". A significant competitive advantage of the Shalkar station lies within its direct railway access towards China, Russia, as well as towards the seaport of Kuryk, through which maritime shipping across the Caspian Sea is carried out.

Project location: Shalkar district, Aktobe Oblast
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

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investment amount, US$ thousands</td>
<td>418,986</td>
</tr>
<tr>
<td>Project NPV, US$ thousands</td>
<td>36,668</td>
</tr>
<tr>
<td>IRR</td>
<td>14.9%</td>
</tr>
<tr>
<td>EBITDA margin</td>
<td>24%</td>
</tr>
<tr>
<td>Payback period, years</td>
<td>9.4</td>
</tr>
<tr>
<td>Discounted payback period, years</td>
<td>16.3</td>
</tr>
</tbody>
</table>

Project location:
Aktobe Oblast, Shalkar district

Kokbulak deposit reserves

<table>
<thead>
<tr>
<th>Class</th>
<th>Reserves, million tonnes</th>
<th>Fe, %</th>
<th>P2O5, %</th>
<th>Sulphur, %</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Central zone</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>163.1</td>
<td>41.3</td>
<td>1.67</td>
<td>0.06</td>
</tr>
<tr>
<td>C1</td>
<td>198.1</td>
<td>37.8</td>
<td>1.48</td>
<td>0.09</td>
</tr>
<tr>
<td>Total</td>
<td>361.2</td>
<td>39.4</td>
<td>1.57</td>
<td>0.08</td>
</tr>
<tr>
<td></td>
<td>North zone</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C1</td>
<td>561.9</td>
<td>42.1</td>
<td>1.46</td>
<td>0.06</td>
</tr>
<tr>
<td>Total</td>
<td>611.2</td>
<td>38.1</td>
<td>1.39</td>
<td>0.06</td>
</tr>
<tr>
<td></td>
<td>South zone</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C2</td>
<td>295.9</td>
<td>35.2</td>
<td>1.38</td>
<td>0.09</td>
</tr>
<tr>
<td>Total</td>
<td>295.9</td>
<td>35.2</td>
<td>1.38</td>
<td>0.09</td>
</tr>
<tr>
<td></td>
<td>Off-balance</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C1</td>
<td>410.7</td>
<td>26.6</td>
<td>0.99</td>
<td>0.11</td>
</tr>
<tr>
<td>C2</td>
<td>238.1</td>
<td>28.3</td>
<td>1.09</td>
<td>0.1</td>
</tr>
<tr>
<td>Total</td>
<td>648.8</td>
<td>27.2</td>
<td>1.03</td>
<td>0.11</td>
</tr>
</tbody>
</table>

Project profitability

<table>
<thead>
<tr>
<th>Year</th>
<th>Revenue, US$ thousands</th>
<th>EBITDA margin, %</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>292,913</td>
<td>12%</td>
</tr>
<tr>
<td>5</td>
<td>417,748</td>
<td>23%</td>
</tr>
<tr>
<td>6</td>
<td>506,980</td>
<td>21%</td>
</tr>
<tr>
<td>7</td>
<td>545,098</td>
<td>20%</td>
</tr>
<tr>
<td>8</td>
<td>554,925</td>
<td>18%</td>
</tr>
<tr>
<td>9</td>
<td>596,006</td>
<td>15%</td>
</tr>
<tr>
<td>10</td>
<td></td>
<td>10%</td>
</tr>
<tr>
<td>11</td>
<td></td>
<td>5%</td>
</tr>
<tr>
<td>12</td>
<td></td>
<td>0%</td>
</tr>
</tbody>
</table>
Mining and metallurgical complex

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

Key investment indicators

<table>
<thead>
<tr>
<th>Index</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investment, US$ thousands</td>
<td>550,727</td>
</tr>
<tr>
<td>Project NPV, US$ thousands</td>
<td>421,198</td>
</tr>
<tr>
<td>IRR, %</td>
<td>25.9%</td>
</tr>
<tr>
<td>EBITDA returns, %</td>
<td>38%</td>
</tr>
<tr>
<td>Payback period, years</td>
<td>6.8</td>
</tr>
<tr>
<td>Discounted payback period, years</td>
<td>8.8</td>
</tr>
</tbody>
</table>

Project Profitability

![Project Profitability Graph]

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.

Estimation of resources according to JORC

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

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

Production of copper pipes

**Project overview:**
Construction of a copper pipes production plant

**Investment amount:** US$ 59,345 thousand

**Products:** copper pipes with external diameter of 6-46 mm as per ASTM standard

**Location:**
Special Economic Zone Saryarka, Karaganda city

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

**Target markets:** Kazakhstan, Russia, China, Belarus, Ukraine and Austria

**Suppliers:** local suppliers of raw materials, foreign equipment suppliers

**Consumers:** companies operating in the fields of gas supply, heat supply and automotive industry

**Market prerequisites:**
- *Import substitution* – Kazakhstan does not have copper pipes production plant. Demand in the domestic market is fully covered by imported goods.
- *Export potential.* Kazakhstan’s geographical location and the high demand for copper pipes in China, Russia, Ukraine and Belarus demonstrates opportunity to boost sales.
- *Stable growth of raw materials production.* In 2016, Kazakhstan produced 408,435 tonnes of refined, unprocessed and unalloyed copper (+ 3.5% compared to 2015).

**Key investment indicators**

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investment amount, US$ thousands</td>
<td>59,345</td>
</tr>
<tr>
<td>Project NPV, US$ thousands</td>
<td>22,587</td>
</tr>
<tr>
<td>IRR, %</td>
<td>21.4%</td>
</tr>
<tr>
<td>EBITDA margin, %</td>
<td>19%</td>
</tr>
<tr>
<td>Payback period, %</td>
<td>6.4</td>
</tr>
<tr>
<td>Discounted payback period, years</td>
<td>9.6</td>
</tr>
</tbody>
</table>

**Plant location**

Special economic zone provides a special legal regime and preferences to its residents, such as, provision of land plots for the secondary land use (sublease) and infrastructure facilities for lease (sublease) to the persons engaged in ancillary services. Additionally, businesses in the special economy zone receive the exemption from taxes and custom payments until 2036.

Kazakhstan’s geographical location provides convenient access to markets in neighboring countries, which expands export potential for the produced products. The high demand for copper pipes in China, Russia, Ukraine, Belarus and Austria demonstrates opportunity to boost sales.
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.

Key investment indicators

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investment amount, US$ thousands</td>
<td>23,308</td>
</tr>
<tr>
<td>Project NPV, US$ thousands</td>
<td>6,795</td>
</tr>
<tr>
<td>IRR, %</td>
<td>23.3%</td>
</tr>
<tr>
<td>EBITDA margin, %</td>
<td>27%</td>
</tr>
<tr>
<td>Payback period, years</td>
<td>5.1</td>
</tr>
<tr>
<td>Discounted payback period, years</td>
<td>7.7</td>
</tr>
</tbody>
</table>

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.
**Project description:**
Construction of a plant to produce aluminum foil. Number of jobs created - 135.

**Location:**
Pavlodar oblast, Pavlodar, Pavlodar Special Economic Zone.

**Initiator:**
Pavlodar SEZ, which is looking for an investor with experience in the aluminum foil production.

**Commercial products and capacities:**
- Packaging foil - 6,019 tons
- Pharmaceutical strip - 6,019 tons
- Blister foil - 2,257 tons
- Cooking foil - 752 tons

**Sales markets:** Kazakhstan, border regions of Russia, Uzbekistan, Tajikistan, Kyrgyzstan, Turkmenistan.

**Manufacturing process:**
1. Melt slabs and pour ingots. Roll ingots into a strip billet and then roll foil from a strip billet.
2. Roll the finished foil onto the core and rewind the foil into a roll on the rewinding machine.

**Key investment indicators**

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investment amount, US$ thous.</td>
<td>19,098</td>
</tr>
<tr>
<td>Project NPV, US$ thous.</td>
<td>38,208</td>
</tr>
<tr>
<td>IRR, %</td>
<td>28.9%</td>
</tr>
<tr>
<td>EBITDA margin, %</td>
<td>27.01%</td>
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<tr>
<td>Payback period, years</td>
<td>6.3</td>
</tr>
<tr>
<td>Discounted payback period, years</td>
<td>7.8</td>
</tr>
</tbody>
</table>

**Investment structure**
- Construction and assembly work: $1.4 million (7%)
- Machinery and equipment: $16.3 million (86%)
- Initial working capital: $1.4 million (7%)

**Market prerequisites:**
**Availability of a raw material and cheap energy resources.** Kazakhstan has a rich resource base and is the largest producer of aluminum and alumina in the world. The SEZ and the region, which is historically industrial, has a built infrastructure. There is a surplus of electricity generated by the Ekbastuz GRES-1, respectively, low prices for energy resources.

**Geographic proximity to aluminum suppliers.** Potential aluminum suppliers for the Project are located in close geographic proximity (40 km), which reduces transportation risks and associated overhead costs.

**Favorable location.** The region where the production is located is distinguished by an extensive transport and logistics infrastructure. Also, location in the Pavlodar Special Economic Zone will ensure obtaining investment preferences.

**Project profitability**

<table>
<thead>
<tr>
<th>Year</th>
<th>Revenue, US$ thous.</th>
<th>EBITDA margin, %</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>4,119</td>
<td>14%</td>
</tr>
<tr>
<td>5</td>
<td>9,049</td>
<td>27%</td>
</tr>
<tr>
<td>8</td>
<td>13,980</td>
<td>27%</td>
</tr>
<tr>
<td>11</td>
<td>19,870</td>
<td>27%</td>
</tr>
<tr>
<td>15</td>
<td>28,590</td>
<td>27%</td>
</tr>
</tbody>
</table>

**Financing structure**
- Initiator equity: 14.7% ($2.81 million)
- Participation of the Investor from 15.3% ($2.92 million)
- Debt financing subject to collateral: 70% ($13.37 million)
- Participation of the Fund (KIDF or KCM): 14.7% ($2.81 million)

The proposed financing structure is indicative, the final financing and project participation structures will be determined based on the results of negotiations with the Investor.
Construction of an aluminium can production plant in Pavlodar

Metallurgy

Project description:
Investment project stipulates the construction of a plant to produce 520.4 million aluminium cans per year in the Pavlodar SEZ. The number of jobs created is 50.

Location:
The Pavlodar special economic zone is in the city of Pavlodar, Pavlodar Oblast.

Initiator:
JSC Pavlodar SEZ

Proposed sales and market size:
Domestic market. The main product sales channels are beer, energy drink and mineral water producers. Secondary channels include juice, soda, premium class and other beverage producers. Direct sales to producers as well as sales through intermediary services are assumed.

The plant is due to be commissioned in 2023 and reach stable production of 520 million cans from 2026. 25% of the demand for 0.5 litre cans will be achieved in plant operating year one, with the figure rising to 60-70% of the market for all categories 4 years later.

Key investment indicators

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investment amount, US$ thous.</td>
<td>25,863</td>
</tr>
<tr>
<td>Project NPV, US$ thous.</td>
<td>34,217</td>
</tr>
<tr>
<td>IRR, %</td>
<td>18%</td>
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<tr>
<td>EBITDA margin, %</td>
<td>11.12%</td>
</tr>
<tr>
<td>Payback period, years</td>
<td>8.13</td>
</tr>
<tr>
<td>Discounted payback period, years</td>
<td>10.54</td>
</tr>
</tbody>
</table>

Investment structure

- Machinery and equipment: 78.3%
- Construction and assembly work: 5.9%
- Initial working capital: 15.7%
- Others: 0.1%

Market prerequisites:
Lack of similar industries in Kazakhstan.
The absence of direct competitors in the market will make it possible to gain a large market share and implement an import substitution strategy. Due to the lack of domestic production, the bulk of aluminum cans is imported, which leads to high prices for them in the country. Analysis of aluminum container imports for all substances shows that on average imports amounted to 5,716 thousand tonnes per year between 2015 and 2019.

Logistic advantage.
Modern transportation routes link the oblast with other countries and regions of Kazakhstan and Russia on South-Siberian and Mid-Siberian rail, aircraft, pipeline and river routes. A viable multisector industrial complex whose industrial potential has been defined by major export-focused production entities has been created in Pavlodar Oblast.

Project profitability

![Graph showing project profitability]

Financing structure

- Participation of the private equity fund (KIDF, KCM, SKI): 14.7% ($3.8 mlion)
- Debt financing subject to collateral participation of Investor: 70% ($18.1 mlion)
- Participation of investor from 15.3% ($3.9 mlion)

The proposed financing structure is indicative, the final financing and Project participation structures will be determined based on the results of negotiations with the investor.
Construction of a hydrometallurgical plant for the production of cathode nickel and cobalt

Product
Annual capacity:
• Cathode nickel – 6,220 tonnes;
• Cathode cobalt – 250 tonnes;

Project
The project provides for the construction of a hydrometallurgical plant for the production of cathode nickel and cobalt on the basis of the large Belogorskoye deposit. The company intends export up to 100% of its products, mainly to China.

Company
The project initiator is Belogorskoye LLP, whose core activity is mining of other non-ferrous metal ores. The Initiator has license No. 326-EL dated 1 October 2019 for the exploration of solid minerals at the Belogorskoye deposit until 26 November 2025 (four blocks: M-44-91-10v-5a-17, 18, 22, 23).

Market
• Over the last 5 years, China has been the world’s leader in nickel consumption. At the end of 2021, the volume reached 1,682 thousand tonnes, which is 59% of the world indicator. Nickel consumption in China continuously increased from 1.2 million tonnes in 2017 to 1.7 million tonnes in 2021 at a CAGR of 9.2%.
• The target market (China) is the world leader (about 50%) in stainless steel production consuming 1.2 million tonnes of nickel (2021) and production of batteries for electric vehicles, with nickel consumption of 277 thousand tonnes.
• Global cobalt consumption increased from 128 thousand tonnes in 2017 to 175 thousand tonnes in 2021, at a CAGR of 8.1%. Demand for cobalt is expected to grow further steadily due to the global transition to electric vehicles and is projected to approach 317 thousand tonnes in 2026.

Project investment attractiveness:
Investments – US$ 99,935 thousand
NPV – US$ 53,773 thousand
IRR – 28.0%
Payback period – 5.0 years

What is the project’s attractiveness?
• Subsoil use right for exploration. The Initiator is a subsoil user with a license for the exploration of solid minerals (nickel and cobalt) at the Belogorskoye deposit No. 326-EL dated 1 October 2019.
• Estimation of deposit reserves. Belogorskoye is one of the richest nickel-cobalt deposits in Central Asia. The reserves were recognized in Kazakhstan’s state balance sheet in 2019. The deposit has 48 thousand tonnes of approved nickel reserves in C2 category. The balance reserves and non-commercial reserves of the deposit exceed 80 thousand tonnes of nickel and 3 thousand tonnes of cobalt.
• Geographic location. The project has an advantageous location in terms of geographical proximity to China, the largest consumer of metals.

Investment proposal
The project requires investment of US$ 99,935 thousand, of which:
• 70% (US$ 69,954 thousand) – debt financing subject to collateral;
• 30% (US$ 29,980 thousand) – investor participation.

The proposed financing structure and state support measures are indicative. The final financing structure and Project interests will be determined based on the results of negotiations with the investor.
Mining and processing of rare earth metal ores from the Kundybai deposit

Product
Annual capacity:
• Ore containing rare-earth elements – 3 million tonnes;

Project
This investment project (the “Project”) envisages the development of the Kundybai rare earth element deposit. Due to the intermittent location of the four ore bodies, the deposit will be mined by three separate quarries. It is planned to use an opencast method of ore extraction.

Company
The project initiator is Kundybai Mining JSC, whose core activity is conducting geological exploration and surveys without scientific research and development. The initiator is in the process of obtaining a license for the production of solid minerals (REM) at the Kundybai deposit (four quarries with a geological allotment area of 31.2 sq. km).

Market
• China showed an average annual positive growth rate of REM production of 12.5% from 2017 (105 thousand tonnes) to 2021 (168 thousand tonnes). According to the plan of the Ministry of Natural Resources of China, quotas for mining and smelting will increase by 20% and amount to 202 thousand tonnes and 194 thousand tonnes, respectively.
• Between 2017 and 2021, the Chinese government has taken a number of measures to limit the export of raw materials containing REM to localize the production of highly processed products from REM. As a result, China increased its share in global exports of REM processed products from 50% (5.5 thousand tonnes) in 2017 to 64% (8.8 thousand tonnes) in 2021.
• The level of global mine production of REM has been continuously growing from 132 thousand tonnes in 2017 to 280 thousand tonnes in 2021, demonstrating a rapid CAGR of 20.7%.

Project investment attractiveness:
Investments – US$ 1,439 thousand
NPV – US$ 16,100 thousand
IRR – 28.4%
Payback period – 6.7 years

What is the project’s attractiveness?
• Estimation of deposit reserves. The reserves were placed on the state balance sheet in 2012. Kundybai is among the richest REM deposits in Central Asia. The deposit’s assets include 25 thousand tonnes of approved reserves of REM oxides in C2 category. The volume of ore reserves with an average REM content of 0.051% is 49 million tonnes.
• Developed infrastructure. The deposit is located 50 km southwest of Zhitikara, near which the A-23 highway of republican significance passes, and is partially connected to the city by a field road with a total length of 50-70 km. There is a railway station. There are no large settlements, protected natural and cultural objects within the boundaries of the contract territory.
• Favorable conditions for mining. The physical and geological properties of the ore from the Kundybai deposit make it possible to avoid drilling and blasting. Soft, dense or loose rocks are removed directly from the massif using an opencast method.

Investment proposal
The Project requires investment of US$ 1,439 thousand, of which:
• 70% (US$ 1,007 thousand) – debt financing subject to collateral;
• 30% (US$ 432 thousand) – investor participation.

The proposed financing structure and state support measures are indicative. The final financing structure and Project interests will be determined based on the results of negotiations with the investor.
Mining of the Atygay gold deposit with production of a Doré bar

**Product**

Annual capacity:
- Gold in Doré bars – 84 thousand ounces per year;
- Gold-bearing ore - 2 million tonnes per year.

**Project**

The project envisages the construction of a gold processing plant on the basis of one of the largest gold deposits in Kazakhstan – Atygay Gold deposit with production of Doré bars. An open pit mining method will be used for mining gold ore, which is then subject to gravity beneficiation.

**Company**

The project initiator is Atygay Gold Mining LLP, whose core activity is geological exploration and surveys. The Initiator has license No. 29-ML dated 2 September 2021 for mining solid minerals at the Atygay deposit (Northern section until 2046).

**Market**

- Doré bar production in Kazakhstan increased from 16.9 tonnes in 2013 to 35.2 tonnes in 2021, at a CAGR of 10%.
- The volume of net purchases of gold by the National Bank of Kazakhstan increased from 300 tonnes in 2017 to 402 tonnes in 2021 at a CAGR 8%.
- A steady growth in Doré bar production in Kazakhstan coincided with commissioning in 2013 of Tau-Ken Altyyn refined gold production plant in the capital of Kazakhstan and gradual increase towards its project production capacity (25 tonnes) in 2019-2020. However, its capacity may increase further to 70 tonnes per year.

**What is the project’s attractiveness?**

- **Availability of subsoil use rights for mining.** The Initiator is a subsoil user with license No. 29-ML for mining solid minerals (gold) at the Atygay deposit (Northern section until 2046) dated 2 September 2021.
- **Estimation of deposit reserves.** An estimate of the deposit reserves according to the Kazakhstan standard KAZRC was received from the Committee of Geology. The reserves were entered on the state balance sheet in 2021. Atygai is one of the richest gold deposits in Central Asia. The deposit has 16 tonnes of approved reserves in C1+C2 categories. The total resources/reserves according to the estimate exceed 100 tonnes.
- **Homogeneous ore.** Low-sulphide ores of the Atygai deposit are monometallic with the only commercial component in the form of free gold. This circumstance makes it possible to achieve 89% recovery of the precious metal in the production of Doré bars, which is higher than that of competitors in Kazakhstan.

**Investment proposal**

The Project requires investment of US$ 69,295 thousand, of which:
- 70% (US$ 48,506 thousand) – debt financing subject to collateral;
- 30% (US$ 20,789 thousand) – investor participation.

The proposed financing structure and state support measures are indicative. The final financing structure and Project interests will be determined based on the results of negotiations with the investor.

**Project investment attractiveness:**

<table>
<thead>
<tr>
<th>Year</th>
<th>Revenue, US$ thousand</th>
<th>EBITDA margin, %</th>
</tr>
</thead>
<tbody>
<tr>
<td>2024</td>
<td>3,565</td>
<td>31%</td>
</tr>
<tr>
<td>2025</td>
<td>3,666</td>
<td>34%</td>
</tr>
<tr>
<td>2026</td>
<td>3,765</td>
<td>34%</td>
</tr>
<tr>
<td>2027</td>
<td>3,866</td>
<td>31%</td>
</tr>
<tr>
<td>2028</td>
<td>3,966</td>
<td>31%</td>
</tr>
<tr>
<td>2029</td>
<td>4,066</td>
<td>32%</td>
</tr>
<tr>
<td>2030</td>
<td>4,166</td>
<td>32%</td>
</tr>
<tr>
<td>2031</td>
<td>4,266</td>
<td>32%</td>
</tr>
<tr>
<td>2032</td>
<td>4,366</td>
<td>32%</td>
</tr>
<tr>
<td>2033</td>
<td>4,466</td>
<td>32%</td>
</tr>
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<td>2034</td>
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<tr>
<td>2037</td>
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</tr>
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<td>2044</td>
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<td>32%</td>
</tr>
<tr>
<td>2045</td>
<td>5,666</td>
<td>32%</td>
</tr>
</tbody>
</table>

**Revenue, US$ thousand**

<table>
<thead>
<tr>
<th>Year</th>
<th>Investment proposal</th>
<th>Project profitability</th>
</tr>
</thead>
<tbody>
<tr>
<td>2024</td>
<td>69,295</td>
<td>31%</td>
</tr>
<tr>
<td>2025</td>
<td>70,191</td>
<td>34%</td>
</tr>
<tr>
<td>2026</td>
<td>72,941</td>
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<tr>
<td>2027</td>
<td>75,791</td>
<td>32%</td>
</tr>
<tr>
<td>2028</td>
<td>78,641</td>
<td>32%</td>
</tr>
<tr>
<td>2029</td>
<td>81,491</td>
<td>32%</td>
</tr>
<tr>
<td>2030</td>
<td>84,341</td>
<td>32%</td>
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<tr>
<td>2031</td>
<td>87,191</td>
<td>32%</td>
</tr>
<tr>
<td>2032</td>
<td>89,941</td>
<td>32%</td>
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<td>32%</td>
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<td>120,191</td>
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<td>2044</td>
<td>122,941</td>
<td>32%</td>
</tr>
<tr>
<td>2045</td>
<td>125,691</td>
<td>32%</td>
</tr>
</tbody>
</table>

**Investment proposal**

- NPV – US$ 114,458 thousand
- IRR – 31.2%
- Payback period – 5.95 years
Industrial diamond mining and beneficiation

Product
Annual capacity:
• Industrial diamond concentrate – 3,661 tonnes

Project
The project envisions the construction of a mining and processing complex in the Zerendy district of Akmola region for the development of the Kumdykol deposit, which is one of the largest deposits of industrial diamonds in the world. To develop the deposit, it is planned to use open pit mining of diamond-bearing ore, which is subsequently subject to the process of gravity concentration.

Company
The project initiator is Qazaq Diamonds Ltd., whose core activity is provision of services facilitating the mining of other minerals. The Initiator has license No. 40-ML dated 2 June 2022 for mining solid minerals at the Kumdykol deposit (until 2 June 2047).

Market
• The global market is seeing an increase in demand for rough diamonds from businesses engaged in diamond cutting, processing and polishing. Sales volume has increased from 9 million carats in 2020 to 14 million carats in 2021 (55%).
• The volume of world export of industrial diamonds has risen from US$ 1.46 billion in 2020 to US$ 2.01 billion in 2021, reaching CAGR of 8.3%.
• Owing to the strength of Kazakhstani diamonds that is 1.8-2.0 times higher than that of synthetic diamonds, there is an opportunity to occupy significant share in the import structure of relevant project in China, USA and Turkey.

Project investment attractiveness:
Investments – US$ 19,500 thousand
Project NPV – US$ 26,928 thousand
IRR – 54.3%
Payback period – 3.3 years

What is the project’s attractiveness?
• Availability of subsoil use rights for mining. The Initiator is a subsoil user with a license for mining solid minerals at the Kumdykol deposit (until 2 June 2047) (Contract No. 40-ML dated 2 June 2022).
• Development of a priority sector of the economy. The project is being implemented within the framework the State Programme for Industrial and Innovative Development of Kazakhstan for 2020-2025, under which diamond powder is included in the list of priority goods.
• Characteristics of the Kumdykol deposit. Kumdykol is a unique deposit with an average carat grade per tonne of 22. For comparison, the global average carat grade per tonne is 9. In general, the deposit is one of the largest in the world with reserves of 2.4 billion carats, which significantly exceeds the reserves of the leading diamond producers.

Investment proposal
The Project requires investment of US$ 19,500 thousand, of which:
• 100% (US$ 19,500 thousand) – investor participation

The proposed financing structure and state support measures are indicative. The final financing structure and Project interests will be determined based on the results of negotiations with the investor.
Machinery construction and metallurgy
Refrigeration equipment manufacturing

Commercial products
The manufacturing capacity is 4,500 units per year. Planned product range:
• Refrigerator M3 Bar - 900 units;
• Refrigerator M5 – 1,350 units;
• Refrigerator M7 – 2,250 units.

Project description
This investment project (the "Project") envisages the construction of a plant for the manufacturing of refrigeration equipment upon analogue of the Briskly plant (Leningrad region, Vyborg) with a capacity of 4,500 units per year. The Project is planned to be implemented in the Special Economic Zone Astana - New City in Nur-Sultan.

Company
KazFrost LLP was registered in 2022. The main activity is the manufacturing of electrical household appliances. The company was established to implement the Project for the manufacturing of refrigeration equipment jointly with Briskly LLC.

Market
• In 2021, the refrigeration and freezing equipment market was valued at $1.9 billion, up 12% from $1.7 billion in 2020. However, in the period between 2017 and 2021, the compound annual rate of decline was -6%. The refrigeration and freezing equipment market is projected to reach $1.4 billion by 2028, with a CAGR of 4%.
• In 2021, the manufacturing of heat exchangers, refrigeration and air conditioning equipment was 1,095 units, which is -94% less than in 2020 (17,100 units). The compound annual decline rate in the manufacturing of refrigeration equipment in the period from 2017 to 2021 was -22%.

Investment attractiveness of the project:
Investment – US$ 7,049 thousand
Project NPV – US$ 9,487 thousand
IRR – 27.8%
Payback period – 5.66 years

What is the attractiveness of the project?
• Favourable location. The Project is to be implemented in the SEZ Astana - New City, Nur-Sultan. Participation in the SEZ has a number of advantages: the right to change the deadline for paying VAT on imported goods, the availability of developed infrastructure, proximity to labor resources, the provision of utilities and logistics services, etc.
• The Initiator’s experience. The project will be implemented jointly with the Russian company Briskly LLC. As part of the Project, Briskly will supply refrigeration preforms for the manufacturing of refrigeration equipment. In the future, it is planned that Briskly will become a member of the Company.

Investment proposal
The Project requires investment of US$ 7,049 thousand, of which:
• 70 % (US$ 4,934 thousand) – debt financing subject to collateral
• 30 % (US$ 2,115 thousand) – investor participation.
The proposed financing structure and state support measures are indicative. The final financing structure and Project interests will be determined based on the results of negotiations with the investor.
Polymer-coated rolled metal production

Annual capacity:
- rolled metal with polymer coating thickness 0.65 mm – 25,000 tonnes;
- rolled metal with polymer coating thickness 0.45 mm – 25,000 tonnes;
- rolled metal with polymer coating thickness 0.3 mm – 10,000 tonnes.

Project
The Project envisages the construction of a zinc-coated rolled metal coating plant. The capacity of a plant is 60 thousand tonne/year. The Project is due to be realised on a 4-hectare site in special economic zone Saryarka, Karagandy region.

Polymer-coated rolled metal is cold-rolled steel with primer and polymer layers at its base.

Company
Karaganda PolymerMetall LLP was established for the implementation of the project. The main activity of the company is metal treatment and metal coating.

Market
- Polymer-coated rolled metal imports into Kazakhstan averaged 57 thousand tonnes in 2020. Imports in 2020 reached 64 thousand tonnes, of which 61% came from Russia.
- According to MarketLine, the Kazakhstan construction sector is due to grow to 21 billion USD by 2024. The positive trend in construction is the driver of the increase in demand for steel products, including polymer-coated rolled metal.

Project investment attractiveness:
Investment – 13,668 USS thousand
Project NPV – 20,349 USS thousand
IRR – 30.2%
Payback period – 6.3 years

What is the project’s attractiveness?
- Import substitution. Only one enterprise currently produces polymer rolled metal in Kazakhstan. The Project will help supply local construction and industrial sector enterprises with raw materials and reduce import dependence.
- Geographical location. The Project is well located from the perspective of production capability and raw materials base access (the zinc-coated rolled metal supplier is JSC ArcelorMittal Temirtau in Karaganda Oblast).
- Increase in construction work volume. Total construction and assembly work in Kazakhstan has grown 41% since 2016 to 4.9 trillion tenge in monetary terms. Further increases are expected against the backdrop of greater subsidy programmes. This should lead to increased demand for civil engineering product, including polymer-coated rolled metal.

Investment proposal
The Project requires investment of US$ 13,668 thousand, of which:
- 70% (9,568 thousand USD) – debt financing subject to collateral;
- from 30% (4,100 thousand USD) – investor participation.

The proposed financing structure and state support measures are indicative. The final financing structure and Project interests will be determined based on the results of negotiations with the investor.
Project description:
Construction of a modern foundry in the West Kazakhstan Oblast. The production will first of all satisfy the need for good casting of the region's subsoil users. The geography of consumers covers West Kazakhstan Region, Atyrau and Aktobe regions of the Republic of Kazakhstan, as well as border regions of the Russian Federation (Samara and Orenburg regions).

Location:
West Kazakhstan Oblast.
Initiator: KazArmaprom LLP

Commercial products and capacities:
The production program plans mass casting in the amount of up to 7,000 tons per year (35% of the production capacity), small-batch up to 7,400 tons per year (37%), single orders up to 5,600 tons (28%). It is planned to reach its full designed capacity in 2025.

Sales markets:
The Company's products are planned to be sold to the market of Eurasian Economic Union, CIS and non-CIS countries (India, Indonesia and other countries that are geographically significantly remote from Europe).

Key investment indicators

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investment amount, US$ thous.</td>
<td>65,662</td>
</tr>
<tr>
<td>Project NPV, US$ thous.</td>
<td>20,569</td>
</tr>
<tr>
<td>IRR, %</td>
<td>18.6%</td>
</tr>
<tr>
<td>EBITDA margin, %</td>
<td>53.3%</td>
</tr>
<tr>
<td>Payback period, years</td>
<td>7.7</td>
</tr>
<tr>
<td>Discounted payback period, years</td>
<td>13.8</td>
</tr>
</tbody>
</table>

Investment structure

- **Machinery and equipment**: 81% $53.0 million
- **Construction and assembly work**: 14% $9.1 million
- **Working capital**: 3% $2.4 million
- **Marketing program**: 2% $1.2 million

Market prerequisites:

**Constant demand for products.**
Isolation valve is one of the most common types of pipeline valves that are in demand in the mining, energy, and cement industries.

**Favorable geographical location.**
The foundry is planned to be built in the West Kazakhstan Oblast. There is a railway connection between Uralsk and the cities of Saratov and Orenburg. In addition, the Western Europe – Western China international highway and the Samara-Shymkent highway also pass through the Oblast.

**Industry experience.**
The strength of the project is the experience of KazArmaprom LLP in the foundry and assembly of valves. The Company's current location area, including production and engineering areas, is 13 ha. The number of current employees is 430 (375 production, 55 administrative).

Project profitability

<table>
<thead>
<tr>
<th>Year</th>
<th>Revenue, US$ million</th>
<th>EBITDA margin, %</th>
</tr>
</thead>
<tbody>
<tr>
<td>2023</td>
<td>14.5</td>
<td>50.5%</td>
</tr>
<tr>
<td>2025</td>
<td>30.6</td>
<td>53.3%</td>
</tr>
<tr>
<td>2027</td>
<td>33.8</td>
<td>53.3%</td>
</tr>
<tr>
<td>2029</td>
<td>36.6</td>
<td>53.6%</td>
</tr>
<tr>
<td>2031</td>
<td>39.2</td>
<td>53.3%</td>
</tr>
<tr>
<td>2033</td>
<td>41.7</td>
<td>53.2%</td>
</tr>
</tbody>
</table>

Financing structure

- **Initiator equity** 15% ($9.9 million)
- **Participation of the Fund (KIDF, KCM, SKI)** 7.35% ($4.8 million)
- **Debt financing subject to collateral** 70% ($46.0 million)
- **Participation of the Investor from 7.65% ($5.0 million)**

The proposed financing structure is indicative, the final financing and Project participation structures will be determined based on the results of negotiations with the investor.
Description of the Project
This investment Project provides for the construction of a ferroalloy plant in Kyzylorda

Production and annual capacity
- Shop 1 - 42,000 tonnes of ferrosilicon per year;
- Shop 2 - 120,000 tonnes of ferrosilicon per year.

Project goals
- Low aluminum ferrosilicon production;
- Obtaining high-quality, export-oriented, competitive products using advanced proven production technologies;
- Meeting local and global demand for ferrosilicon through the production and subsequent sale of products in the markets of Kazakhstan, Europe, Southeast Asia, North and South America.

Initiator:
National Center on Complex Processing of Mineral Raw Materials of the Republic of Kazakhstan, «RSE NCCPMRM»

Key investment indicators

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investment, USD thousands</td>
<td>242,264</td>
</tr>
<tr>
<td>Project NPV, USD thousands</td>
<td>277,539</td>
</tr>
<tr>
<td>IRR, %</td>
<td>29.2%</td>
</tr>
<tr>
<td>EBITDA returns, %</td>
<td>52%</td>
</tr>
<tr>
<td>Payback period, number of years from the start of production</td>
<td>6.1</td>
</tr>
<tr>
<td>Discounted payback period, number of years from the start of production</td>
<td>7.6</td>
</tr>
</tbody>
</table>

Location of the Project:
Site of the Industrial Zone, Kyzylorda, Kyzylorda Oblast, Republic of Kazakhstan

Market assumptions:

Growth in demand for ferrosilicon. According to the AlloyConsult analytical agency, global demand for (CAGR 2.7% from 2014 to 2028) ferrosilicon will reach 9.5 million tonnes by 2026.

Persistent steel demand. High rates of historical production growth and the strategic importance of the further development of industries, which use steel as raw materials, create a steady demand for the products manufactured under the Project. According to the forecasts of the International Steel Association, the global demand for steel and steel products will increase by 1.4% in 2019. According to Lucintel forecasts, steel demand is projected to grow. Compound annual growth rate (CAGR) will be 1.6% in the period from 2019 to 2024, and revenue will be about 68.4 billion US dollars, which will also contribute to the rise of ferrosilicon demand.

Provision of raw materials. The company concluded long-term contracts for the main raw material base for the production of ferrosilicon, fixing prices for a long-term period, which, in turn, helps to maintain low production costs.

Project profitability

Technological process:

1st stage – Dosing of raw materials
2nd stage – Loading charging material into furnace bins
3rd stage – Alloy smelting
4th stage – Alloy release
5th stage – Casting
6th stage – Crushing and fractionation of the alloy

Ferrosilicon Plant
Description of the Project:
This investment project provides for the construction of a plant for the production of refractory products in the Karagandy city.

Production and annual capacity:
- 15,000 tons of refractory products per year

Project objectives:
- creation of an effective integrated business for the production of refractory products and their implementation in the domestic market;
- obtaining high-quality, export-oriented products using advanced, domestic, patented production technology;
- application of domestic technology for the production of competitive products that facilitate import substitution.

Initiator:
Republican State Enterprise “National Center for the Integrated Processing of Mineral Raw Materials of the Republic of Kazakhstan” (“RSE National Center IPMRM”)

Key Investment Indicators

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investment, USD thousands</td>
<td>7,763</td>
</tr>
<tr>
<td>Project NPV, USD thousands</td>
<td>5,405</td>
</tr>
<tr>
<td>IRR, %</td>
<td>25.0%</td>
</tr>
<tr>
<td>EBITDA returns, %</td>
<td>17-32%</td>
</tr>
<tr>
<td>Payback period, number of years from the start of production</td>
<td>5.0</td>
</tr>
<tr>
<td>Discounted payback period, number of years from the start of production</td>
<td>6.9</td>
</tr>
</tbody>
</table>

Market prerequisites
Import dependence of the country. Demand for refractory products in the country doubles their production. Domestic consumption is met through imports mainly from Russia and China. The share of imports in domestic consumption in 2018 was 51%. The demand for refractory products increases due to their use in ferrous and non-ferrous metallurgy, energy and the chemical industry.

Unique technology. The technology of RSE NC IPMRM using chemically active mixtures allows the use of chemical energy in the system itself, which in turn accelerates the processes of solid-phase sintering, improves quality and reduces cost.

Stable growth in steel demand. High rates of growth in the world of steel production and related industries create a steady demand for products. Lucintel forecasts that global demand for steel and steel products will increase in 2019-2024 with a CAGR of 1.6%.

Location of the Project
Karagandy city, Karagandy oblast, Republic of Kazakhstan

Project profitability

Technical process

- I stage – Mixing raw materials
- II stage – 2 stage pressing (I-10-15 MPA, II-150-160 MPA)
- III stage – drying and firing in a tunnel oven (1300-1350°C)

Clay (Grinding and drying up to 100 microns and 1% moisture)
Slag of metallurgical production (Grinding up to 100 microns)
Fireclay bricks fight (Grinding up to 100 microns)
**Project description:**
This investment project provides for the launch of production of long products at the Aktau Foundry, carried out as part of a comprehensive reengineering program.

**Production capacity:**
180,000 tones/year

**Project objectives:**
• Creation of an efficient integrated business for long product production and its sale on domestic and foreign markets;
• Obtaining high quality, competitive products using advanced approved production technologies corresponding to the world class level of the long products manufacturing.

**Products:** rebar, I-beam, structural channel, angle.

**Initiators:** ALZ LLP and BCC Invest.

**Market background:**

**Growth in consumer demand for long products.** According to Metal Expert forecasts, in the non-residential construction sector, the main drivers of demand will be actively initiated government programs and measures to stimulate industrial production and investment. In the conservative scenario, demand is expected to grow by 3-5%.

**Import substitution.** Growth in consumer demand has sharpened competition between domestic producers and suppliers from the Russian Federation. Also, in Kazakhstan there are no enterprises producing a full range of long products.

**Export Development.** Over the past five years, Kazakhstan mainly exported rebars (among long products). In the structure of exports, the share of Tajikistan in the total volume of exports of rebars is 73% (86,663 tons); Russian Federation and Kyrgyzstan account for 11% (13,217 tons) and 10% (12,031 tons), respectively.

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**Key investment indicators**

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investment amount, US$ thousands</td>
<td>79,348</td>
</tr>
<tr>
<td>Project NPV, US$ thousands</td>
<td>59,687</td>
</tr>
<tr>
<td>IRR, %</td>
<td>15.9%</td>
</tr>
<tr>
<td>EBITDA margin, %</td>
<td>19%</td>
</tr>
<tr>
<td>Payback period, years</td>
<td>9.7</td>
</tr>
<tr>
<td>Discounted payback period, years</td>
<td>16.4</td>
</tr>
</tbody>
</table>

**Project location:**
Mangystau oblast, Aktau, Industrial area

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**Project profitability**

![Graph showing revenue and EBITDA margin over years]

**Technology process:**
- Furnace-charge preparation
- Furnace-charge loading into the furnace
- Steel desulfurization
- Steel deoxidation
- Drainage of steel into the intermediate ladle
- Steel casting into CCM(a) mold
- Pulling the ingots with the dummy bar
- Workpiece cooling

**Final product**
**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**

<table>
<thead>
<tr>
<th>Index</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investment amount, US$ thousands</td>
<td>24,215</td>
</tr>
<tr>
<td>Project NPV, US$ thousands</td>
<td>20,292</td>
</tr>
<tr>
<td>IRR, %</td>
<td>25.9%</td>
</tr>
<tr>
<td>EBITDA margin, %</td>
<td>16%</td>
</tr>
<tr>
<td>Payback period, years</td>
<td>7.1</td>
</tr>
<tr>
<td>Discounted payback period, years</td>
<td>9.5</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Housing and public utilities</td>
<td>Heating mains</td>
<td>Steel pipes are used in house construction and infrastructure projects. They are used in communication systems, overpasses, water and gas pipelines etc.</td>
<td>6.7</td>
</tr>
<tr>
<td></td>
<td>Water pipelines</td>
<td></td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>Gas pipelines</td>
<td></td>
<td>16.2</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td>36.9</td>
</tr>
</tbody>
</table>

*Gas and oil trunk lines are not considered, since their diameter exceeds the diameter of the produced pipes.*
Construction of a storage battery plant Kainar-A LLP

Commercial products
Annual capacity: 1.2 million lead-acid batteries per year

Project description
The Project envisages to build lead-acid battery production plant Kainar-A LLP in the SEZ in the Beles village in West-Kazakhstan region with a production capacity of 3.6 million batteries per year.

Company
The main activity of Kainar-A LLP is the production, promotion and sale of lead-acid storage batteries for consumers located in the west of Kazakhstan and in Europe. The company is an affiliated company of Kainar-AKB LLP, the main manufacturer of lead-acid batteries in the Republic of Kazakhstan.

Market
• The global market for automotive lead-acid batteries in 2020 amounted to US$ 16.9 billion. This figure is projected to reach US$ 23.7 billion by 2028. According to research by Insight Partners, the growing number of passenger cars around the world is driving the growing demand for lead-acid batteries.
• In the period 2016-2020, the average annual production of electric lead-acid batteries in Kazakhstan amounted to 2,323 thousand units. Compound annual growth rate of production for the analyzed period was 6.6%. Today, the only large manufacturer of lead-acid batteries, Kainar-AKB LLP (more than 95% of the total production), operates in the Republic of Kazakhstan. In this regard, the dynamics of changes in domestic production is due to the volume of production in Kainar-AKB LLP.

Investment attractiveness of the project:
• Initiator’s Experience. Kainar-AKB LLP has extensive experience in the production of storage batteries since 1975, and is the only manufacturer of these products in the Republic of Kazakhstan. Kainar-AKB LLP has a number of contracts with European consumers, which contribute 60% of the company’s revenue. Kainar-AKB LLP has a number of representations and partnerships overseas, including in target countries such as Russia, Italy, Germany, Poland, Georgia, Armenia, Azerbaijan, Ukraine and Belarus.
• Geographical location. The project has an advantageous location in terms of proximity to the targeted client base and receiving a number of benefits and preferences in the status of a SEZ resident.
• State support. The project is included in the list of priority sectors for the provision of state support, within the framework of the programs of which it is possible to receive a number of benefits and preferences.

Investment proposal
The Project requires investment of US$ 48,379 thousand, of which:
• 70% (US$ 33,865 thousand) – debt financing subject to collateral;
• 30% (US$ 14,514 thousand) – investor participation.

The proposed financing structure and state support measures are indicative. The final financing structure and Project interests will be determined based on the results of negotiations with the investor.
Production of personal protective equipment (gas masks)

Commercial products
Annual capacity:
- OM-90 – 25 thousand units;
- CM-6 – 25 thousand units.

Project description
The Project envisages the production of modern, global standard, military and civil gas masks in Kokshetau, Akmola Oblast. Proposed annual production capacity will be 50 thousand units.

Company
The Project contractor is, whose core activities include producing Russian-developed aviation industry units, machinery and automation equipment for civil and military aircraft.

Market
- According to BIS Research, the global personal protective equipment market was valued at 4.9 billion USD in 2019, and is expected to reach 8.2 billion USD by 2025.
- The main supplier of breathing masks in 2020 was Russia, accounting for 56% of imports into Kazakhstan, with total supplies reaching 3,926 thousand USD. In 2019, the share of imports from Russia amounted to 41% (4,439 thousand USD).
- Local production in Kazakhstan does not cover demand for breathing masks, making the country import dependent.

Investment attractiveness of the project:
Investment – US$ 3,236 thousand
Project NPV – US$ 3,072 thousand
IRR – 20.8%
Payback period – 6.48 years

What is the attractiveness of the project?
- License. The Company holds a license to develop, repair and produce ammunition, arms and military technology, spare parts, components and accessories, special materials and equipment to produce them.
- Personnel qualifications. Given the Company’s profile and its many years of experience in the aircraft and defence industries, production capacity and the qualifications of current personnel will aid gas mask production without having to hire overseas specialist.

Investment proposal
The Project requires investment of US$ 3,236 thousand, of which:
- 70% (US$ 2,265.2 thousand) – debt financing subject to collateral;
- 30% (US$ 970.8 thousand) – Investor participation.
The proposed financing structure and state support measures are indicative. The final financing structure and Project interests will be determined based on the results of negotiations with the investor.
Construction of a plant for household appliances

Commercial products
- Hob – 185 thous. units
- Oven – 185 thous. units
- Kitchen stove Ottima 50 G – 85 thous. units
- Kitchen stove Apetito F90G – 42 thous. units.

Project description
The project envisages the construction of a factory for the production of cookers in partnership with Artel (Uzbekistan) with a capacity of 500,000 units of finished products per year. The project is to be implemented in the Special Economic Zone in Turkestan on a land plot of 22 ha.

Company
“Orbis Kazakhstan” Group is a diversified company, bringing together dozens of enterprises and organizations in various sectors of the economy. Production of the cookers is planned in partnership with Artel, a leader in the production of household appliances and electronics in Central Asia. The company currently manufactures over twenty categories of home appliances, including air conditioners, microwave ovens, mini ovens, gas and electric cookers, etc.

Market
- As of 2020, the kitchen appliances market was valued at USD 250.6 billion, an increase of 5.6% from 2019. The kitchen appliances market is projected to reach a value of USD 378 billion by 2027, at a compound annual growth rate of 6% over the period 2020-2027.
- In 2020, the volume of manufactured household appliances in value terms reached 800 million tenge, a decrease of 15% compared to 2019. Compound annual growth rate was 3.6% over in period from 2016 to 2020. The main driver of the household appliances market in the Republic of Kazakhstan is the growth in the commissioning of residential buildings. The total area of residential buildings commissioned has reached 15 million sq. m, an increase of 17% compared to 2019.

Investment attractiveness of the project:
Investment – US$ 65,424 thousand
Project NPV – US$ 11,053 thousand
IRR – 20.4%
Payback period – 6.7 years

What is the attractiveness of the project?
- Project location. Turkestan region has an extensive road transport and logistics infrastructure: the region has highways of republican and regional significance with access to the regions of Uzbekistan (Tashkent), Kyrgyzstan (Bishkek) and the cities of Kazakhstan (Shymkent, Taraz, Almaty, Kyzylorda, Zhezkazgan). The engineering infrastructure (electricity, gas supply and water supply) has been connected to the land plot.
- Flexible pricing policy. Household appliances are mainly imported to Kazakhstan. Manufacturing in Kazakhstan will significantly reduce the cost of production, as expenses on transport, taxes and customs duties will decrease.

Investment proposal
The Project requires investment of US$ 65,424 thousand, of which:
- 78.76% (US$ 51,528 thousand) – debt financing subject to collateral;
- 21.24% (US$ 13,896 thousand) – own funds.

The proposed financing structure and state support measures are indicative. The final financing structure and Project interests will be determined based on the results of negotiations with the investor.
Manufacturing of lift equipment

Annual capacity:
- cargo-passerger elevators – 275 units
- disabled lifts – 98 units
- modernization of elevators - SKD – 123 units.

Project
This investment project (the “Project”) provides for the manufacturing of lifts and wheelchair lifts at the production sites of Kazlift LLP. Kazlift has been operating since 2018; all the necessary infrastructure and engineering lines have been installed. The total area of the plant is 2,280 sq. m.

Company
Spetsmash Astana LLP is a joint venture between Kazlift (share – 35% and Kazakhstan Engineering National Company JSC (share – 65%).

Main activity: other professional, scientific and technical activities, not included in other categories.

Under the Project, in the distribution of functional responsibilities between the participants, commercial and administrative issues were allocated to the competence of Spetsmash Astana LLP.

Market
- The global lift market is estimated at US$ 119 billion in 2019. The lift market is projected to reach US$ 183 billion by 2027. The main driver is the recovery and growth of the construction sector in the world.
- The main demand for lifts is covered by imported equipment sold through distributors. In 2020, Kazakhstan imported 6,227 lifts and skip lifts.
- The volume of lift manufacturing in Kazakhstan averages 391 units, however, the lift manufacturing cycle in Kazakhstan is incomplete.

Project investment attractiveness:
- Investment – 3,371 USS thousands
- Project NPV – 13,567 USS thousands
- MIRR – 29.8%
- Payback period – 1.5 years

What is the project’s attractiveness?
- **Initiator’s experience.** The client portfolio of Kazlift includes national companies from NWF Samruk-Kazyna JSC group, Kazakhstan Mortgage Company JSC, as well as construction organizations.
- **Availability of a developed infrastructure.** LGS Kazakhstan Elevator Group, a subsidiary of Kazlift, provides equipment for the lift manufacturing.
- **Branded products and compliance with standards.** The products of Kazlift, included in the register of domestic manufacturers, have been certified for compliance with the National Standard of the Republic of Kazakhstan for installation and operation of lifts, escalators, travelators and wheelchair lifts and has a certificate of origin of goods form CT-KZ.

Investment proposal
The Project requires investment of US$ 3,371 thousand, of which:
- 30 % (US$ 1,011 thousand) – debt financing subject to collateral;
- from 70 % (US$ 2,360 thousand) – Investor participation.

The proposed financing structure and state support measures are indicative. The final financing structure and Project interests will be determined based on the results of negotiations with the investor.
Production of pumping equipment, pipeline fittings and asynchronous electric motors
Mechanical engineering

**Project idea:**
Construction of a new plant for the production of pumping equipment, pipeline fittings and asynchronous electric motors. Project implementation will create 125 jobs.

**Project location:**
SEZ Ontustik, Shymkent, Republic of Kazakhstan.

**Project Initiator:**
Karlskrona LC AB LLP

**Production capacity:**
- UPP (submersible borehole pumps) – 7,368 pcs.;
- CHP (cantilever pumps) – 1,474 pcs.;
- CNP (split casing pump) – 737 pcs.;
- APSU (pressure boosting pumping stations) – 1,474 pcs.;
- CHMP (horizontal multistage pumps) – 737 pcs.;
- Pipeline fittings – 14,737 pcs.;
- Asynchronous motors – 14,737 pcs.;
- Submersible borehole motors – 737 pcs.;
- Foundry products – 15,000 tons.

**Sales market:**
Initiator plans to sell products mainly through direct sales in the territory of Kazakhstan through the conclusion of offtake contracts, as well as to export about 40% of the volume to Russia, the countries of Central Asia and the Middle East.

**Investment attractiveness of the Project**

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investment amount, US$ thousand</td>
<td>64,959</td>
</tr>
<tr>
<td>Project NPV, US$ thousand</td>
<td>33,287</td>
</tr>
<tr>
<td>IRR, %</td>
<td>23.5%</td>
</tr>
<tr>
<td>EBITDA margin, %</td>
<td>39%</td>
</tr>
<tr>
<td>Payback period, years</td>
<td>6.3</td>
</tr>
<tr>
<td>Discounted payback period, years</td>
<td>9.9</td>
</tr>
</tbody>
</table>

**Investment structure**

- Construction and assembly work: $9.0 million (13.9%)
- Machinery and equipment: $51 million (78.5%)
- Initial working capital: $4.96 million (7.6%)

**Prerequisites for the Project implementation**

**Location**
SEZ Ontustik provides tax preferences, and has all the necessary infrastructure for the successful implementation of the Project: access to railways and highways, all engineering communications.

**Import substitution opportunity.**
A significant part of the demand for mechanical engineering products is covered by the import. For instance, in 2019, the import volume of centrifugal pumps was 587 thousand units, while the number of domestic sales was only 11.4 thousand units.

**Off-take contracts.**
NWF Samruk Kazyna JSC has developed the concept of off-take contracts, under which domestic producers receive guaranteed long-term orders from the national companies of the fund.

**Project’s profitability**

<table>
<thead>
<tr>
<th>Year</th>
<th>Revenue</th>
<th>EBITDA margin</th>
</tr>
</thead>
<tbody>
<tr>
<td>2022</td>
<td>22,571</td>
<td>40.0%</td>
</tr>
<tr>
<td>2024</td>
<td>36,363</td>
<td>38.8%</td>
</tr>
<tr>
<td>2026</td>
<td>40,848</td>
<td>38.9%</td>
</tr>
<tr>
<td>2028</td>
<td>45,907</td>
<td>39.0%</td>
</tr>
<tr>
<td>2030</td>
<td>49,928</td>
<td>39.1%</td>
</tr>
</tbody>
</table>

**Financing structure**

- Initiator equity: 20% ($13 million)
- Participation of the Fund (KIDF or KCM): 4.9% ($3.18 million)
- Debt financing subject to collateral: 70% ($45.47 million)
- Participation of the Investor: 5.1% ($3.31 million)

The proposed financing structure is indicative, the final financing and Project participation structures will be determined based on the results of negotiations with the Investor.
Project idea:
The project envisages the expansion of kitchen appliances production in Taraz, Zhambyl Oblast. It is planned to create about 300 jobs.

Project location:
Taraz, Zhambyl oblast

Project Initiator:
AlimaDelux LLP. The main activity of AlimaDelux LLP is household appliances manufacturing (production of household and electrical appliances). The company’s production base is an industrial complex consisting of a production and storage facility with a total area of 11 hectares. The company produces a wide range of household gas, gas-electric (combined) and electric stoves, as well as built-in kitchen appliances under the brand name “Alima Delux”.

Production capacity and sales market:
The target group of the Company’s products consumers (gas stoves, gas heating boilers, refrigerators, air conditioners, heaters and electric ovens) are enterprises specialised in the sale of household appliances. The project involves the sale of products in the domestic and foreign markets.

Investment attractiveness of the Project

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investment amount, US$ thousand</td>
<td>7,190</td>
</tr>
<tr>
<td>Project NPV, US$ thousand</td>
<td>6,400</td>
</tr>
<tr>
<td>IRR, %</td>
<td>34.4%</td>
</tr>
<tr>
<td>EBITDA margin, %</td>
<td>13.8%</td>
</tr>
<tr>
<td>Payback period, years</td>
<td>4.0</td>
</tr>
<tr>
<td>Discounted payback period, years</td>
<td>5.5</td>
</tr>
</tbody>
</table>

Investment structure

| Buildings and structures         | 16.2% |
| Machinery and equipment         | 50.7% |
| Initial working capital         | 33.1% |
| Total                            | $1.2 million |
| Total                            | $3.6 million |
| Total                            | $2.4 million |

Market prerequisites:
Favourable location.
Zhambyl Oblast has a developed transport hub with access to all regions of the country and neighbouring countries (Russia, China, Uzbekistan and Kyrgyzstan). On the territory of Zhambyl Oblast, there are 25 railway communications with 50 routes connecting the oblast with all regions of Kazakhstan, Russia (7 railway connections), Kyrgyzstan (6 railway connections) and Uzbekistan (1 railway connection).

High quality products.
The company has already made a name for itself in the market as a supplier of quality equipment. The accumulated experience, high technology and high-quality spare parts and parts for assembly create all conditions for creating high-quality products.

Imports reduction.
Household appliances are mainly imported to Kazakhstan. Manufacturing in Kazakhstan will significantly reduce the cost of production, as expenses on transport, taxes and customs duties will decrease.

Project's profitability

<table>
<thead>
<tr>
<th>Year</th>
<th>Revenue, USD million</th>
<th>EBITDA margin, %</th>
</tr>
</thead>
<tbody>
<tr>
<td>2022</td>
<td>19.3</td>
<td>15.2%</td>
</tr>
<tr>
<td>2024</td>
<td>21.1</td>
<td>14.6%</td>
</tr>
<tr>
<td>2026</td>
<td>23.3</td>
<td>14.1%</td>
</tr>
<tr>
<td>2028</td>
<td>25.3</td>
<td>13.7%</td>
</tr>
<tr>
<td>2030</td>
<td>26.9</td>
<td>13.3%</td>
</tr>
<tr>
<td>2032</td>
<td>28.0</td>
<td>13.0%</td>
</tr>
<tr>
<td>2034</td>
<td>29.3</td>
<td>12.2%</td>
</tr>
</tbody>
</table>

Financing structure

- Initiator equity 1% ($0.08 million)
- Participation of the Fund (KIDF, KCM, SKI) 14% ($1.0 million)
- Debt financing subject to collateral 70% ($5.0 million)
- Participation of the Investor from 15% ($1.1 million)

The proposed financing structure is indicative, the final financing and Project participation structures will be determined based on the results of negotiations with the investor.
Project idea:
Launch of a factory with a research and development centre for development and manufacture of aids for the blind and vision-impaired, with a capacity of 14.5 thousand units per year.

The successful implementation of the Project will create an efficient business for the production of iad, solve the problems of providing the domestic market with high-quality competitive products, and create about 53 new jobs in Nur-Sultan, which will partially solve the problem of employment of the visually impaired.

Project location:
Nur-Sultan

Project Initiator:
Sezual LLP

Production capacity:
Reaching full capacity is planned for the 10th year from the date of launch, after which production levels will be stable at the level of 14,5 thousand units per year. The list of the manufactured of products includes:
- Braille machines – 12 thous. units/year;
- SEZUAL sonar apparatus– 2.5 thous. units/year.

Sales market:
- Domestic market of Kazakhstan (25% of finished products);
- Export to countries of near and far abroad, including Russia, USA, UAE, EU, Japan, etc. (75%).

Investment attractiveness of the Project

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investment amount, US$ thousand</td>
<td>3,229</td>
</tr>
<tr>
<td>Project NPV, US$ thousand</td>
<td>11,430</td>
</tr>
<tr>
<td>IRR, %</td>
<td>28.5%</td>
</tr>
<tr>
<td>EBITDA margin, %</td>
<td>31%</td>
</tr>
<tr>
<td>Payback period, years</td>
<td>7.3</td>
</tr>
<tr>
<td>Discounted payback period, years</td>
<td>10.0</td>
</tr>
</tbody>
</table>

Investment structure

- Buildings, construction and assembly work 65% $2.1 mln
- Machinery and equipment 31% $0.999 mln
- Purchase of transportation assets 2% $0.075 mln
- Other costs 2% $0.065 mln

Prerequisites for implementation of the Project

- Product is patent protected. The Company holds Kazakhstan Patent No. 4186 for the “Electronic Braille Readers” utility model.
- Contemporary experience and innovation. The Initiator has tested prototypes with positive results.
- Non-competitive conditions. As the Company product is recognised as innovative, there are no direct equivalents capable of being recognised as functional competition.
- Extensive product range and application area. Access to resources, state support and the use of innovative production technology will help increase production capacity and diversify product range.

Project’s profitability

- US$ mln
- 2022: 1.8
- 2023: 4.9
- 2024: 5.7
- 2025: 6.4
- 2026: 7.3
- 2027: 8.2
- 2028: 9.1
- 2029: 10.8
- 2030: 12.4

Financing structure

- Debt financing subject to collateral 70% ($2.3 mln)
- Participation of the Investor from 30% ($0.969 mln)

The proposed financing structure and state support instruments are indicative, the final financing and Project participation structure will be determined based on the results of negotiations with the investor.
Project idea: The Project envisages finding a strategic partner to develop current cable and conductor production at the JSC Kazenergokabel plant. Successful implementation of the Project will provide:

- The creation of new types of cable and conductor products to achieve more effective production;
- An increase in product sales and expand the geography of product sales;
- Ensure Kazakhstan consumer demand is fully met by local production.

Project location: Northern industrial district of Pavlodar
Project Initiator: JSC Kazenergokabel
Production capacity: In 2027, the plant intends to achieve full production capacity of 60 thousand km of cable and conductor products per year.
Sales market: In addition to domestic sales, the Company exports its products to Russia, Uzbekistan, Kyrgyzstan, Ukraine and Israel.

Investment attractiveness of the Project

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investment amount, US$ thousand</td>
<td>5,000</td>
</tr>
<tr>
<td>Project NPV, US$ thousand</td>
<td>14,042</td>
</tr>
<tr>
<td>IRR, %</td>
<td>38%</td>
</tr>
<tr>
<td>EBITDA margin, %</td>
<td>4.3%</td>
</tr>
<tr>
<td>Payback period, years</td>
<td>4.2</td>
</tr>
<tr>
<td>Discounted payback period, years</td>
<td>4.94</td>
</tr>
</tbody>
</table>

Investment structure

- Working capital: 100% $5 mln

Prerequisites for implementation of the Project

Sector experience. JSC Kazenergokabel is a large fast-growing producer of cable and conductor products in Kazakhstan, accounting for 19.4% of the local market. JSC Kazenergokabel has been certified by the KEMA international certification body (the Netherlands).

Plant equipment is capable of producing all standard types of power, control and telephone cable and installation wires. The plant has renovated production, administrative, warehouse and other facilities; as well as built and commissioned its own boiler station.

Own production of aluminium wire rod. After the Initiator commissioned its own aluminium wire rod production shop, the Company fully abandoned the import of raw materials from Russia, which helped reduce the cost of production.

Project’s profitability

<table>
<thead>
<tr>
<th>Year</th>
<th>EBITDA margin, %</th>
</tr>
</thead>
<tbody>
<tr>
<td>2020</td>
<td>1.7%</td>
</tr>
<tr>
<td>2022</td>
<td>2.7%</td>
</tr>
<tr>
<td>2024</td>
<td>3.8%</td>
</tr>
<tr>
<td>2026</td>
<td>4.7%</td>
</tr>
<tr>
<td>2028</td>
<td>5.3%</td>
</tr>
<tr>
<td>2030</td>
<td>5.3%</td>
</tr>
<tr>
<td>2032</td>
<td>5.3%</td>
</tr>
<tr>
<td>2034</td>
<td>4.7%</td>
</tr>
<tr>
<td>2035</td>
<td>1.7%</td>
</tr>
</tbody>
</table>

Financing structure

- Debt financing subject to collateral: 70% (5.5 mln)
- Participation of the Investor from 30% ($1.5 mln)

The proposed financing structure and state support instruments are indicative, the final financing and Project participation structure will be determined based on the results of negotiations with the investor.
Project idea:
Creation of a manufacturing line with a capacity of 3 thousand electric motors per year on the territory of an existing motor overhaul plant.

Successful implementation of the Project will create an effective integrated business for the production of electric motors, provide the domestic market with high-quality competitive products, as well as create about 50 new job places in Aktau.

Project location:
Industrial zone of Aktau

Project Initiator:
KERNEU LLP

Production capacity:
Reaching full capacity of 3,000 units per year is planned for the 9th year from the start of production, after which production levels will be stable at the level of 3000 units per year. The list of the manufactured products includes:
• Electric motors – 2,130 units per year;
• Traction motors – 870 units per year.

Sales market:
• Domestic market of Kazakhstan (55% of finished products);
• Exports to near-abroad countries, including Russia, Belarus, Azerbaijan, etc. (45%).

Investment attractiveness of the Project

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investment amount, US$ thousand</td>
<td>28,000</td>
</tr>
<tr>
<td>Project NPV, US$ thousand</td>
<td>28,092</td>
</tr>
<tr>
<td>IRR, %</td>
<td>25.9%</td>
</tr>
<tr>
<td>EBITDA margin, %</td>
<td>23%</td>
</tr>
<tr>
<td>Payback period, years</td>
<td>7.5</td>
</tr>
<tr>
<td>Discounted payback period, years</td>
<td>10.5</td>
</tr>
</tbody>
</table>

Investment structure

- Buildings and structures: 16% ($5.0 million)
- Machinery and equipment: 73% ($23 million)
- Initial working capital: 11% ($3.5 million)

Prerequisites for implementation of the Project

Local manufacturing content. Basic materials and a part of components are available in Kazakhstan. A demand for electric motors from the oil and gas sector, mining industry and transport engineering and energy enterprises is mainly covered by imports. Local production will reduce the final cost of electric motors, providing consumers with quality and timely warranty service.

Relevant industry experience and established customer base. The Company’s accumulated experience in the overhaul of electric motors of the world’s leading manufacturers and other electrical equipment allowed the Company to establish long-term relationships with key consumers. The offtake programme of Samruk Kazyna NWF JSC aimed at supporting domestic producers allows the Company to conclude guaranteed long-term orders with national companies, ensuring uninterrupted manufacturing.

Project’s profitability

![Graph showing profitability over years]

Financing structure

- Initiator equity: 2.5% (US$0.69 mln)
- Participation of funds (KIDF, KCM, SKI): 13.5% (US$3.8 mln)
- Debt financing subject to collateral: 70% (US$19.6 mln)

The proposed financing structure and state support instruments are indicative, the final financing and Project participation structure will be determined based on the results of negotiations with the investor.
Chemistry and petrochemistry
Construction of a second branch of the Beineu-Bozoi-Shymkent main gas pipeline

Project description
- The purpose of the Project is to build a second branch of the Beineu-Bozoi-Shymkent (“BBS”) main gas pipeline.
- The second branch will cross Mangistau, Aktobe, Kyzylorda and Turkestan Oblasts. The second branch will help maintain current supply volumes to China, and also ensure a gas supply to the southern regions of the Republic of Kazakhstan, including generating stations with a flexible generation mode (including a combined cycle plant with a capacity of 1,000 MW in the Turkestan region) and other industrial enterprises.
- The gas pipeline is scheduled to be commissioned at the end of 2025. The majority of commercial gas will be received from the Kashagan gas processing plant.
- The first gas pipeline branch currently has capacity of 15 billion m³/year, and is operating at 108% of that capacity. BBS gas pipeline 2 will follow the same route as BBS gas pipeline 1, which allows the Project to make use of infrastructure already in place, fine-tuned production and operating processes.

Project participants
- The initiator JSC “NC “QazaqGaz” – the national gas and gas supply operator. It is a vertically integrated national gas company operating along the entire chain from exploration and production to the sale of final products. The company has many years of practical experience in similar projects.

What is the attractiveness of the project?
- **Stable raw material base and a strategic partner** - North Caspian Operating Company (NCOC), an international consortium of 7 largest oil and gas companies in the world, which is the operator of the Kashagan field, the richest of the 3 largest oil and gas fields in Kazakhstan. Long-term arrangements are in place for the continuous supply of associated gas from the Kashagan field (NCOC).
- **Transportation tariff regulation.** During the implementation of the Project, an individual Gas pipeline transportation tariffs are provided, calculated in accordance with the Order of the Minister of National Economy of the Republic of Kazakhstan On the Approval of Tariff Calculation Rules and are approved by the authorized body, which ensures a return on investment.
- **Growth in commercial gas production.** The majority of natural gas produced in Kazakhstan is an associated product from oil production, which is why commercial gas production is dependent on oil production levels. The Kazakhstan Ministry of Energy has predicted that commercial gas production in the country will increase to 42 billion m³ per year by 2030. The largest commercial gas producers in Kazakhstan are KPO, NCOC, TCO, JSC Ozenmunaiga Project description.

Historical and forecast production of commercial gas in RK, billion m³

<table>
<thead>
<tr>
<th>Year</th>
<th>Production, billion m³</th>
<th>Change, %</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>3.6</td>
<td>-20%</td>
</tr>
<tr>
<td>2018</td>
<td>3.3</td>
<td>20%</td>
</tr>
<tr>
<td>2019</td>
<td>3.2</td>
<td>-3.6%</td>
</tr>
<tr>
<td>2020</td>
<td>2.9</td>
<td>7.9%</td>
</tr>
<tr>
<td>2021</td>
<td>2.6</td>
<td>7.2%</td>
</tr>
<tr>
<td>2022F</td>
<td>2.5</td>
<td>4.5%</td>
</tr>
<tr>
<td>2030F</td>
<td>2.0</td>
<td>0%</td>
</tr>
</tbody>
</table>

- **The growth of domestic consumption of commercial gas in Kazakhstan**, which, according to the forecast of the Ministry of Energy of the Republic of Kazakhstan, will reach 27.7 billion m³ by 2025, and by 2030 the figure will exceed 35 billion m³, compared with 18.6 billion m³ in 2021. The growth of domestic consumption of commercial gas is facilitated by the implementation of the country’s gasification program developed by the Ministry of Energy of the Republic of Kazakhstan. Over the past 5 years, gasification of the population has increased from 8.6 million to 11 million people.
- **Growing demand for gas in China.** According to EIU forecasts, gas consumption in China will grow in 2022-2031, with a CAGR of 4.5%.

**Technical parameters of the projected main gas pipeline**

<table>
<thead>
<tr>
<th>Index</th>
<th>Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length</td>
<td>1,449.5 km</td>
</tr>
<tr>
<td>Pressure</td>
<td>9.8/7.4 Mpa</td>
</tr>
<tr>
<td>Diameter</td>
<td>1,067 mm</td>
</tr>
<tr>
<td>Capacity</td>
<td>over 7 billion m³/year</td>
</tr>
</tbody>
</table>

**Project profitability**

<table>
<thead>
<tr>
<th>Project profitability</th>
<th>Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>2022</td>
<td>0%</td>
</tr>
<tr>
<td>2023</td>
<td>0%</td>
</tr>
<tr>
<td>2024</td>
<td>0%</td>
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<td>2025</td>
<td>0%</td>
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<tr>
<td>2026</td>
<td>0%</td>
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<tr>
<td>2027</td>
<td>0%</td>
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<tr>
<td>2028</td>
<td>0%</td>
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<td>2029</td>
<td>0%</td>
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<td>2030</td>
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<tr>
<td>2053</td>
<td>0%</td>
</tr>
<tr>
<td>2054</td>
<td>0%</td>
</tr>
</tbody>
</table>

**Financial plan and Project payback**

<table>
<thead>
<tr>
<th>Name</th>
<th>Indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investment</td>
<td>2,286.4 million USD</td>
</tr>
<tr>
<td>Project NPV</td>
<td>109,765 thousand USD</td>
</tr>
<tr>
<td>IRR</td>
<td>11.6%</td>
</tr>
<tr>
<td>WACC</td>
<td>10.72%</td>
</tr>
<tr>
<td>EBITDA margin (2025-2054)</td>
<td>76%</td>
</tr>
<tr>
<td>Payback period</td>
<td>11.2 years</td>
</tr>
<tr>
<td>Discounted payback period</td>
<td>25.1 years</td>
</tr>
</tbody>
</table>
Ammonia-carbamide complex

Products
Planned sales, by product type are as follows:
• ammonium nitrate – 500,000 tonnes/year;
• carbamide – 577,500 tonnes/year;
• ammonia – 108,000 tonnes/year.
The Company plans to sell its product both domestically and export it to Western Europe, South-East Asia, the USA, Mexico and Brazil.

Project
• The aim of the Project is to construct an ammonia-carbamide complex in Mangistau Oblast in Aktau’s industrial zone No. 6, adjoining JSC KazAzot operating territory.
• It will help increase production to meet domestic demand and also guarantee the export of ammonia and ammonium nitrate.
• The Project also stipulates production diversification, introducing a new product for Kazakhstan – carbamide. New production will create 913 permanent and 1,500 temporary jobs.

Project Initiator
• JSC KazAzot is the only plant in Kazakhstan producing ammonia and ammonium nitrate and is the main supplier for the majority of agricultural producers.
• The Company ships its products to over 15 Eurasian countries.
• The Company has a vertically-integrated production process, from the production of feedstock to its advanced processing, and also produces the majority of electricity it needs itself.

Global market
• According to Grand View Research, in 2030, the global nitrogen fertiliser market was worth 94.02 billion USD.
• In 2021, over 44% of nitrogen fertiliser across the world was used to grow cereals and grain crops.

What is the attractiveness of the project?
• Source of raw materials. The Company produces natural gas from its own Shagyrly-Shomyshty field. It also has a contract in place with the Ministry of Energy to explore and produce hydrocarbons at the Kosbulak field. Gas production from its own field significantly reduces ammonia and nitric acid cost of production.
• Developed infrastructure and overseas brand awareness. The planned complex will be built on the JSC KazAzot site, which will help it benefit from completed and already developed infrastructure, including a fleet of ammonia transportation rail tankers, and well-developed production and operating processes. Company product is well known overseas, and is registered in the EU, Russia, Ukraine, Georgia and Azerbaijan.

Investment proposal
The Project requires financing of 1,386,157 thousand USD, of which:
• 90% (1,247,541 thousand USD) is investor financing;
• 10% (138,616 thousand USD) is own funds of JSC KazAzot.

The proposed financing structure and state support measures are indicative. The final financing structure and participation in the Project will be determined based on joint talks with the investor.
Construction of a second branch of the Beineu-Zhanaozen main gas pipeline

Project description
- The purpose of the Project is to build a second branch of the Beineu-Zhanaozen main gas pipeline ("BS2")
- This branch, which will cross three administrative districts of Mangistau Oblast, is supposed to improve gas supply reliability and guarantee the supply of additional natural gas to population centres and industrial enterprises in Mangistau Oblast (including MAEK-Kazatomprom LLP – main provider of electricity in region).
- The implementation of the Project will help to increase the energy security of the region and increase the productivity of main gas pipelines to meet the growing demand for natural gas in the region. It is planned to reach the design capacity in 2023. It is projected that gas will be supplied to BS2 gas pipeline 2 by reverse transportation from CAC gas pipeline.
- Due to the planned increase in gas consumption in Mangistau Oblast, the first branch of the Beineu-Zhanaozen and Zhanaozen-Akttau main gas pipelines are unable to supply the required additional gas. BS2 gas pipeline 2 will follow the same route as BS2 gas pipeline 1, which allows the Project to make use of infrastructure already in place.

Project participants
- JSC Intergas Central Asia is the national main gas pipeline operator and is responsible for operating and maintaining the country’s gas transportation system. It has many years of practical experience in similar projects.
- It is part of JSC National Company QazaqGaz (a vertically integrated national gas company with operations across the entire production chain, from geological exploration to end product sales).

What is the attractiveness of the project?
- Stable raw material supply. The Project plans to use a reverse gas transportation process in BS2 gas pipeline already in place from the Central Asia-Central gas pipeline.
- Regulated transportation tariffs. The Project stipulated an individual gas pipeline transportation tariff calculated in accordance with the Order of the Minister of the National Economy On the Approval of Tariff Calculation Rules and is approved by the authorised body, thus ensuring investment payback.
- Growth in commercial gas production. The majority of natural gas produced in Kazakhstan is an associated product from oil production, which is why commercial gas production is dependent on oil production levels. The Kazakhstan Ministry of Energy has predicted that commercial gas production in the country will increase to 42 billion m³ per year by 2030. The largest commercial gas producers in Kazakhstan are KPO, NCDC, TCO, JSC Ozenmunaigas, Kazakhoil LLP and JV Kazgermunai LLP.

Technical parameters of the projected main gas pipeline

<table>
<thead>
<tr>
<th>Index</th>
<th>Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length</td>
<td>308 km</td>
</tr>
<tr>
<td>Diameter</td>
<td>1,020 mm</td>
</tr>
<tr>
<td>Capacity</td>
<td>5.8 billion m³/yr</td>
</tr>
</tbody>
</table>

Project profitability

<table>
<thead>
<tr>
<th>mln USD</th>
<th>0</th>
<th>10</th>
<th>25</th>
<th>50</th>
<th>100</th>
<th>150</th>
</tr>
</thead>
<tbody>
<tr>
<td>%</td>
<td>0%</td>
<td>10%</td>
<td>30%</td>
<td>60%</td>
<td>80%</td>
<td>110%</td>
</tr>
</tbody>
</table>

| EBITDA Margin, % | 0% | 10% | 30% | 60% | 80% | 110% |

Project investment attractiveness:
Investment – 412.68 million USD
Project NPV – 15,487 thousand USD
IRR – 12.35%
WACC – 10.72%
EBITDA margin (2023-2052) – 43.15%
Discounted payback period – 16.93 years

Historical and forecast production of commercial gas in RK, billion m³

<table>
<thead>
<tr>
<th>Year</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022F</th>
<th>2030F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Billion m³</td>
<td>31.0</td>
<td>33.3</td>
<td>31.3</td>
<td>30.5</td>
<td>29.4</td>
<td>29.6</td>
<td>42.2</td>
</tr>
</tbody>
</table>

- Growth in commercial gas demand in the Mangistau Oblast. According to the Ministry of Energy, electricity consumption in the Kazakhstan western energy zone (including Mangistau Oblast) will increase from 14.4 billion kWh in 2021 to 18 billion kWh in 2027, which will result in increased demand for commercial gas.
Project description

- The idea of the Project is to build a loop line (reserve gas pipeline) to the Makat-North Caucasus gas pipeline to create a reliable gas supply to major industrial enterprises in the city of Atyrau and Atyrau Oblast, and also to prevent emergencies.
- The planned reserve gas pipeline (loop line) of the Makat-North Caucasus gas pipeline is due to operate parallel to the existing Makat-North Caucasus gas pipeline in the section from the Makat CC to the Redut CC. It will cross the Makat, Kzylykogin and Makhambet Districts of Atyrau Oblast and the oblast centre, Atyrau.
- The construction of a reserve gas pipeline will also guarantee a gas supply to the National Industrial Petrochemical Technopark SEZ in Atyrau Oblast, where a gas chemical complex is currently being built. The current condition of the main Makat-North Caucasus gas pipeline, according to an in-line inspection, is unsatisfactory, with over 7 thousand defective sections requiring replacement. The loop line section is 130 km long and its diameter is 1,020 mm.
- When Project reaches design capacity in 2023, the pipeline will have capacity to transport 7.5 billion m³ of gas per year.

What is the attractiveness of the project?

- Stable raw material supply. Commercial gas will be fed to the Makat-North Caucasus gas pipeline loop line from the Tengiz field through the Central Asia-Centre gas pipeline. Associated gas reserves at the field have been estimated at 1.8 trillion m³.
- Regulated transportation tariffs. The Project stipulated an individual gas pipeline transportation tariff calculated in accordance with the Order of the Minister of the National Economy On the Approval of Tariff Calculation Rules and is approved by the authorised body, thus ensuring investment payback.
- Complete infrastructure. The Makat-North Caucasus gas pipeline loop line will operate in parallel to the Makat-North Caucasus gas pipeline route, which allows the Project to make use of ready infrastructure, operating and production processing already up and running.
- Innovative gas transportation approaches. Parent company JSC NC QazaqGaz has many years of gas transportation experience, owns operational infrastructure and has qualified staff capable of implementing innovative systems to increase gas pipeline capacity and its functional characteristics.
- Growing demand for gas in Atyrau Oblast. Atyrau Oblast is one of the leaders in electricity consumption in Kazakhstan, registering 6,256 million kWh in 2020. It is expected that electricity consumption for the entire western power zone (which incorporates Atyrau Oblast) will grown on average by 3.7% per year until 2027, mostly thanks to the construction of new strategically important enterprises, for example the gas chemical complex currently under construction. All initiatives and projects, in conjunction with projects to extend gasification in the region, will increase demand for gas.
Construction of TPP-2 and TPP-3 gas infrastructure in Almaty

Project
• The Project assumes the construction of a 64-km second branch of the Almaty-Baiserke-Talgar 2 gas pipeline combined with the required infrastructure in the Almaty agglomeration to meet the city’s gas needs.
• The main consumers will be new 600 mW and 450 mW power stations at Almaty TPP-2 and TPP-3 sites, respectively. Planned capacity, which should be reached in 2027, will be approximately 1.75 billion m3/year.
• Commercial gas in the Almaty-Baiserke-Talgar 2 gas pipeline will come from branch C of the Kazakhstan-China gas pipeline along a 10-km junction 12-22 km to the north-east of the village of Otegen Batyr, at the Almaty TPP-3 site. The planned Almaty-Baiserke-Talgar gas pipeline will run parallel to the current 1st branch, which is connected to the BGR-TBA gas pipeline.

Project participants
Project’s Initiator JSC NC QazaqGaz - national operator of the country in the field of gas and gas supply. The Company is a vertically-integrated national gas company with operations across the entire production chain, from geological exploration to end product sales. It has many years of practical experience in similar projects.

Investment proposal
The Project requires financing of 219.4 million USD, of which:
• 80% (175.5 million USD) is investor financing:
  - from 20% (43.9 million USD) is Company equity.
The proposed financing structure and state support measures are indicative. The final financing structure and participation in the Project will be determined based on joint talks with the investor.

Project’s attractiveness
• Positive ecological effect. In 2021, Almaty TPP-2 and TPP-3 were responsible for 34.5% of the city’s pollutant emissions. The Minister of Ecology has predicted that the Project will reduce heating source emissions by 80%-90%.
• Growing demand for gas in Almaty and Kazakhstan. The country’s largest city consumes the most electricity (5,600 million kWh or 6.1% of the total for the country) and thermal energy (5,616 Gcal or 6.3% of the total for the country) generated by thermal power plants. The approved government programme to transition TPP-2 and TPP-3 to gas will ensure stable demand for commercial gas. According to the forecast of the Ministry of Energy of the Republic of Kazakhstan, domestic consumption of commercial gas will reach 27.7 billion m3 by 2025, m. and by 2030 the figure will exceed 35 billion m³, compared with 18.6 billion m³ in 2021.
• Regulated transportation tariffs. The Project stipulated an individual gas pipeline transportation tariff calculated in accordance with the Order of the Minister of the National Economy On the Approval of Tariff Calculation Rules and is approved by the authorised body, thus ensuring investment payback.

Historical and forecast production of commercial gas in RK, billion m3

<table>
<thead>
<tr>
<th>Year</th>
<th>Production, billion m3</th>
<th>Change, %</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>31.0</td>
<td></td>
</tr>
<tr>
<td>2018</td>
<td>33.3</td>
<td>-7.3%</td>
</tr>
<tr>
<td>2019</td>
<td>33.1</td>
<td>-0.6%</td>
</tr>
<tr>
<td>2020</td>
<td>32.5</td>
<td>0.7%</td>
</tr>
<tr>
<td>2021</td>
<td>29.4</td>
<td>-3.6%</td>
</tr>
<tr>
<td>2022F</td>
<td>29.6</td>
<td></td>
</tr>
<tr>
<td>2030F</td>
<td>42.2</td>
<td></td>
</tr>
</tbody>
</table>

Investment proposal
- Sales, million USD
- EBITDA margin, %

KAZAKH INVEST. Investment proposal
July 2022

Project location

Project profitability

Project investment attractiveness:
Investment – US$ 219,389 thousand
NPV – US$ 17,591 thousand
IRR – 10.6%
Payback period – 10.6 years
Discounted payback period – 27.1 years
Construction of the Kashagan Gas Processing Plant

Project
- The plan for the Project is to expand (stages IIA & IIB) a gas processing plant currently under construction (stage I), implemented by JSC NC QazaqGaz, to produce commercial gas products from oil gas supplied from Kashagan field.
- The plan is to export all commercial gas, LPG and condensate predominantly to China, while up to 100% of sulphur will be sold in Kazakhstan. Product sale target groups will be basinised rubber producers, road construction enterprises and other organisations. Further expansion and Project development with respect to launching ethane and stable gas petroleum will help increase Company income levels and client base significantly. A 360 ha site held under a long-term lease by the Company (until 2032) has been allocated for the Project in the Makat District of Atyrau Oblast, approximately 60 km to the north-east of Atyrau or 33 km to the north of the Bolashak OPF. The current Atyrau-Iskene station highway is 6.2 km from the gas processing plant. The main Atrakhan-Mangyshlak water conduit is 25 km from the plant. A new railway branch will be created from the sidings at the Iskene station.

Project participants
Project’s Initiator JSC NC QazaqGaz- national operator of the country in the field of gas and gas supply. The Company is a vertically-integrated national gas company with operations across the entire production chain, from geological exploration to end product sales. It has many years of practical experience in similar projects.

Investment proposal
To implement stages IIA and IIB of the Project, it is proposed to create a joint venture on a parity basis of 50%/50% in the form of an LLP or JSC with the right to veto for the Company (similar to a golden share). At the same time, it is proposed to reimburse the investor’s funds invested for the Company (50% of capital expenditures) by directing to the investor 50%-80% of the Company’s profit share generated by the Project, until the entire amount is fully reimbursed at face value. The Company is considering the possibility of joint and separate financing of stages IIA and IIB. The proposed financing structure is indicative.

Project’s attractiveness
- Stable raw materials base and strategic partner. The plant is located in close proximity (12.5 km) to the source of raw materials. A long-term agreement is in place for an uninterrupted associated gas supply (10 billion m³ per year) from the Kashagan field (NCOC). The International consortium of 7 major oil and gas companies of the world North Caspian Operating Company (NCOC) is a strategic partner of the Project, as well as the operator of the Kashagan field, the richest of the 3 largest oil and gas fields in Kazakhstan. The Project will enable NCOC (main supplier of raw materials) to increase annual oil production by 1.15 million tonnes at the Kashagan field.
- Production necessity for gas processing facilities. The majority of natural gas produced in the country is associated natural gas from oil production, which is why commercial gas production levels are directly dependent on oil production. The Kazakhstan Ministry of Energy has predicted that commercial gas production in the country will increase to 42 billion m³ per year by 2030. Implementation of the project will help increase production by 6 billion m³.
- Growing commercial gas consumption in Kazakhstan, which according to the Kazakhstan Ministry, will reach 27.7 billion m³ by 2025, and 35 billion m³ by 2030 compared to 18.6 billion m³ in 2021. The Ministry of Energy’s gasification programme has helped domestic consumption growth. In the last five years, the number of people connected to the gas supply rose from 8.6 million to 11 million.
- Increasing demand for gas in China. According to EU, gas consumption in China will grow in 2022-2031 with CAGR of 4.5%. China will increase gas imports to meet its own growing needs, mostly from imports through Central Asian pipelines.
Construction of a treatment plant for the disposal of petroleum waste from oil fields

**Products**
Company’s key services include treatment of the following: disposal volume – 60,000 tonnes. The company has the opportunity to further expand disposal capacity if the volume of orders increases.

**Project**
This investment project ("Project") aims to improve the production infrastructure of a partially commissioned treatment plant for the disposal of petroleum industrial waste.

**Company**
Eco Oil Trade LLP has a permit for environmental emissions for objects of categories I, II and III issued by Kazakhstan’s Ministry of Ecology, Geology and Natural Resources, with an annual volume of pollutant emissions not exceeding 33.35 tonnes until 2026 inclusive.

The Initiator is ready to sell a 70% stake in the Company for US$ 4.5 million.

**Market**
- **Oil growth in OECD.** According to the EIU, oil demand growth between 2022 and 2031 will be supported mainly by non-OECD countries, especially in Asia, while consumption will either stagnate or decline in high-income OECD countries. Growth will be higher in industrialized countries driven by rapid economic growth, strong car market penetration and rising per capita incomes.
- **Oil sludge in the Republic of Kazakhstan.** The level of "resources" of oil sludge, including the volumes that existed at the beginning of the year, as well as the amount of waste generated during the year and received from other persons, increased in the Republic of Kazakhstan from 68 thousand tons in 2016 to 460 thousand tons at the end of 2020. (nearly sevenfold growth with a CAGR of 61%).

**Investment attractiveness of the project:**
- **Investment – US$ 3,358 thousand**
- **NPV – US$ 6,250 thousand**
- **IRR – 44.4%**
- **Payback period – 4.3 years**

**What is the attractiveness of the project?**
- **Infrastructure in place.** At the moment, the Company has a fenced land lease with the right to purchase and extend, with the main equipment installed and auxiliary facilities erected. There are permits to connect to infrastructure facilities.
- **Positive environmental changes.** According to Kazakhstan’s Ministry of Ecology, pollution by crude oil and petroleum products is observed in the country on an area of more than 1.5 million hectares. A large share of pollution, both of soil and environment, falls on Atyrau Oblast - 59%, Aktobe Oblast - 19%, West Kazakhstan Oblast - 13% and Mangystau Oblast - 9%. The Project implementation would contribute to the improvement of the unfavorable environmental situation in the western regions.
- **Unique mobile equipment.** The mobile disposal equipment installed at the plant (in containers) can be used for utilization of petroleum waste resistant to separation of raw materials (emulsions) both at its own landfill and at the customer’s site.

**Investment proposal**
The Project requires investment of US$ 3,358 thousand, of which:
- 70% (US$ 2,351 thousand) – debt financing subject to collateral;
- 30% (US$ 1,007 thousand) – investor participation.

The proposed financing structure and state support measures are indicative. The final financing structure and Project interests will be determined based on the results of negotiations with the investor.
Modernisation and relaunch of a synthetic detergents plant in Shakhtinsk Chemistry

Project description:
reconstruction and launch of a synthetic detergents plant in with a capacity of 60 thousand tonnes of laundry detergent per year.
Number of jobs created from 50 to 310.
Location:
Shakhtinsk, Karaganda Oblast.
Initiator:
Shakhtinsk Chemical Plant LLP.
Commercial products and capacities:
Laundry detergent B category - 21,000 tonnes/year;
Laundry detergent C category - 9,000 tonnes/year.
Sales markets:
Kazakhstan, Uzbekistan.
Manufacturing process:

Key investment indicators

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investment amount, US$ thous.</td>
<td>2,059</td>
</tr>
<tr>
<td>Project NPV, US$ thous.</td>
<td>9,627</td>
</tr>
<tr>
<td>IRR, %</td>
<td>31.7%</td>
</tr>
<tr>
<td>EBITDA margin, %</td>
<td>9%</td>
</tr>
<tr>
<td>Payback period, years</td>
<td>6.9</td>
</tr>
<tr>
<td>Discounted payback period, years</td>
<td>8.2</td>
</tr>
</tbody>
</table>

Sales, US$ thousand

<table>
<thead>
<tr>
<th>Year</th>
<th>US$ thousand</th>
</tr>
</thead>
<tbody>
<tr>
<td>2022</td>
<td>10,436</td>
</tr>
<tr>
<td>2024</td>
<td>21,542</td>
</tr>
<tr>
<td>2026</td>
<td>37,799</td>
</tr>
<tr>
<td>2028</td>
<td>51,690</td>
</tr>
<tr>
<td>2030</td>
<td>54,857</td>
</tr>
<tr>
<td>2032</td>
<td>57,103</td>
</tr>
<tr>
<td>2034</td>
<td>61,029</td>
</tr>
</tbody>
</table>

EBITDA margin, %

<table>
<thead>
<tr>
<th>Year</th>
<th>EBITDA margin, %</th>
</tr>
</thead>
<tbody>
<tr>
<td>2022</td>
<td>5%</td>
</tr>
<tr>
<td>2024</td>
<td>8%</td>
</tr>
<tr>
<td>2026</td>
<td>9%</td>
</tr>
<tr>
<td>2028</td>
<td>10%</td>
</tr>
<tr>
<td>2030</td>
<td>10%</td>
</tr>
<tr>
<td>2032</td>
<td>9%</td>
</tr>
<tr>
<td>2034</td>
<td>9%</td>
</tr>
<tr>
<td>PPP</td>
<td>9%</td>
</tr>
</tbody>
</table>

Market prerequisites:

Modern equipment. The plant is equipped with a continuous line of the Italian company Ballestra for laundry detergent production by the tower method. The production process of the line complies with Western European standards.

Own laboratory and computer technology. The plant has its own laboratory and provides for the automation of control processes for complex chemical processes, which make it possible to ensure the quality control at every production stage in terms of the chemical composition and purpose of products.

Government support. The production of soap, detergents and cleaning and polishing products is included in the list of priority investment projects of the manufacturing industry.

Project profitability

Investment structure

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buildings and structures</td>
<td>51%</td>
<td>$1.1 mln</td>
</tr>
<tr>
<td>Purchase machinery and equipment</td>
<td>49%</td>
<td>$1.0 mln</td>
</tr>
</tbody>
</table>

Debt financing subject to collateral
70% ($1.44 mln)

Participation of the Investor from 30% ($0.62 mln)

*Buy out of a stake in an operating company up to 49% is possible.

The proposed financing structure is indicative, the final financing and Project participation structures will be determined based on the results of negotiations with the Investor.
**Project description:**
Organisation in Kazakhstan of a new import-substituting production in the chemical industry and covering domestic demand with local products. The project envisages the construction of a sodium sulphite plant with a capacity of 10 thousand tonnes per year.

**Location:**
- Taraz city, Taraz Chemical Park SEZ
- Stepnogorsk (alternative)

**Initiator:**
The Project initiator is a group of individuals with 38 years of experience (Abilai Moldagulov and Zhalsak Prnazarov) in the chemical industry and experience in CHEM-plus LLP, the operator of projects Glyphosate Production, Production of Caustic Soda and Chlorine and Production of Phosphorus Trichloride.

**Commercial products and capacities:**
sodium sulphite - 10,000 tonnes per year.

**Sales markets:** Domestic market and export to neighbouring countries (EEU countries).

**Key investment indicators**

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investment amount, US$ thous.</td>
<td>8,233</td>
</tr>
<tr>
<td>Project NPV, US$ thous.</td>
<td>8,348</td>
</tr>
<tr>
<td>IRR, %</td>
<td>21.1%</td>
</tr>
<tr>
<td>EBITDA margin, %</td>
<td>42%</td>
</tr>
<tr>
<td>Payback period, years</td>
<td>6.8</td>
</tr>
<tr>
<td>Discounted payback period, years</td>
<td>8.6</td>
</tr>
</tbody>
</table>

**Project profitability**

- Revenue, USD million
- EBITDA margin, %

**Financing structure**

- **Initiator equity** 5% ($0.4 million)
- Participation of the Fund (KIDF or KCM) 12% ($1.0 million)
- Debt financing subject to collateral 70% ($5.8 million)
- Participation of the Investor from 13% ($1.1 million)

The proposed financing structure is indicative, the final financing and Project participation structures will be determined based on the results of negotiations with the Investor.
Expansion of an operating paint and varnish factory in Almaty
Chemistry

Project description:
The construction of a new unit at the currently operating factory belonging to Concern Bakarassov LLP to produce varnish and paint in Almaty so as to extend its product range. Number of jobs created – 71.

Location:
Spasskaya Street 68, Turksib District, Almaty.

Initiator:
Concern Bakarassov LLP.

Commercial products and capacities:
- putty – 15,000 tonnes,
- filler – 300 tonnes,
- polyurethane adhesive – 258 tonnes and coloured paint – 48.5 tonnes.

Sales markets: Kazakhstan, Russia.


Key investment indicators

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investment amount, US$ thous.</td>
<td>4,232</td>
</tr>
<tr>
<td>Project NPV, US$ thous.</td>
<td>4,694</td>
</tr>
<tr>
<td>IRR, %</td>
<td>21.8%</td>
</tr>
<tr>
<td>EBITDA margin, %</td>
<td>22.8%</td>
</tr>
<tr>
<td>Payback period, years</td>
<td>8.5</td>
</tr>
<tr>
<td>Discounted payback period, years</td>
<td>12.1</td>
</tr>
</tbody>
</table>

Investment structure

- **Buildings and structures**: 47% $2.0 mln
- **Purchase machinery and equipment**: 53% $2.2 mln

Market prerequisites:

**Company brand recognition.** Brand recognition is a sign of customer awareness of new Company products and their advantages. Potential customers are also more loyal to new Company products if they are aware of a brand.

**Existing demand.** Potential customers would be such companies as BI Story LLP, Bazis Construction LLP, Construction Company Azimut LLP and other construction companies and commercial centers.

**Product innovation.** The Initiator is planning to produce ready-to-use putty with a wide area of use as an alternative to dry mixtures that require additional time and costs to use. Kazakhstan producers make ready-to-use putty for interiors and facades.

Project profitability

<table>
<thead>
<tr>
<th>Year</th>
<th>Revenue, US$ thous.</th>
<th>EBITDA margin, %</th>
</tr>
</thead>
<tbody>
<tr>
<td>2022</td>
<td>2,514</td>
<td>10%</td>
</tr>
<tr>
<td>2025</td>
<td>4,822</td>
<td>19%</td>
</tr>
<tr>
<td>2028</td>
<td>8,345</td>
<td>25%</td>
</tr>
<tr>
<td>2031</td>
<td>12,175</td>
<td>28%</td>
</tr>
<tr>
<td>2034</td>
<td>13,098</td>
<td>27%</td>
</tr>
</tbody>
</table>

Project financing scheme

- **Initiator equity**: 15% ($0.635 mln)
- **Debt financing subject to collateral**: 35% ($1.48 mln)
- **Participation of the Investor from 50% ($2.12 mln)

The proposed financing structure is indicative, the final financing and Project participation structures will be determined based on the results of negotiations with the Investor.
Construction of a complex for the production of caustic soda, hydrochloric acid and coagulants in the territory of the SEZ "NIPT"

Project overview:
Construction of a chemical complex for the production of caustic soda, hydrochloric acid and coagulants using specialized technologies in the territory of the SEZ "NIPT" in the Atyrau Oblast.

Commercial products and annual output:
- Sodium hydroxide 48%: 30 thousand tonnes per year;
- Calcium hypochlorite: 16.5 thousand tonnes per year;
- Ferric chloride 40%: 5 thousand tonnes per year;
- Hydrochloric acid 35%: 8.5 thousand tonnes per year;
- PAC-17 (aluminum oxychloride): 2 thousand tonnes per year.

Initiator:
Global Chemical LLP

Project location: SEZ "NIPT", Atyrau Oblast

Consumer markets: Domestic market, China, Russia

Key investment indicators

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investment, US$ thousands</td>
<td>70,000</td>
</tr>
<tr>
<td>Project NPV, US$ thousands</td>
<td>55,646</td>
</tr>
<tr>
<td>IRR, %</td>
<td>22.2%</td>
</tr>
<tr>
<td>EBITDA returns, %</td>
<td>49%</td>
</tr>
<tr>
<td>Payback period, amount of years</td>
<td>6.1</td>
</tr>
<tr>
<td>Discounted payback period, amount</td>
<td>8.8</td>
</tr>
</tbody>
</table>

Market assumptions:

Growing demand for caustic soda
According to forecasts of the analytical agency Grand View Research, by 2024 the volume of the world market of caustic soda will exceed US$ 46 billion.

Growing demand for hydrochloric acid and coagulants
Demand for hydrochloric acid and coagulants, according to Grand View Research, the global market will exceed US$ 160 million (CAGR 5.8%) and US$ 2.63 billion dollars (CAGR 2.4%), respectively.

Raw materials availability
The main raw material for the production of caustic soda is plain salt, the supplier of which will be TUZ LLP. Salt supplies will be 27 thousand tonnes per year for a period of operation of 20 years. Also, an important raw material for the production of soda is technical water, the supplier of which will be the Association “Su Arnasy Kazakhstan”.

Project profitability

Technological flows during Project implementation period

Gas chemical complex

Salt → Technological process of production → Chlorine

- Sodium hydroxide
- Hydrochloric acid 35%
- Ferric chloride 40%
- Oxichloride aluminum 17%
- Calcium Hypochlorite
Construction of a new complex for the production of nitrogen mineral fertilizers in Aktau

Project overview:
Construction of a new complex for the production of class 2 ammonia, on the territory of the existing ammonia and ammonium nitrate production plant in Aktau, Republic of Kazakhstan.

Commercial products and annual output:
300 thousand tonnes of liquid class 2 ammonia per year.

Initiator:
The Project is initiated by KazAzot JSC ("Initiator"), an industrial enterprise in Mangystau Oblast, the only producer of ammonium nitrate and ammonia.

Project location:
Mangystau Oblast, Aktau.

Consumer markets:
domestic market, Ukraine, as well as possible supplies to China, Turkey, Russia and Europe.

Market assumptions:
Growing demand for fertilizers
According to the report of Grand View Research Inc. it is expected that by 2025 the world demand for fertilizers will reach US$ 178.26 billion (CAGR 3.4%).

Import substitution
Kazakhstan is import-dependent on ammonia, the annual import of which amounted to 20-30 thousand tonnes. Imported ammonia is used by agricultural enterprises as a nitrogen fertilizer.

Raw materials availability
A new complex for the processing of natural gas into nitrogen mineral fertilizers will be built in close proximity to the current plant of KazAzot JSC.

Export potential
By increasing the production of ammonia, Kazakhstan can increase its share of exports to Turkey, China, Russia, as well as to Europe, which are one of the main consumers of ammonia on the world market.

Key investment indicators

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investment, US$ thousands</td>
<td>344,571</td>
</tr>
<tr>
<td>Project NPV, US$ thousands</td>
<td>79,986</td>
</tr>
<tr>
<td>IRR, %</td>
<td>14.0%</td>
</tr>
<tr>
<td>EBITDA returns, %</td>
<td>63%</td>
</tr>
<tr>
<td>Payback period, amount of years from the start of production</td>
<td>9.7</td>
</tr>
<tr>
<td>Discounted payback period, amount of years from the start of production</td>
<td>20.1</td>
</tr>
</tbody>
</table>

Project profitability

![Project profitability graph]

Technological flows during Project implementation period

Natural gas → Desulfurization → Reforming → CO conversion → Ammonia synthesis → Ammonia → Methanation → CO2 removal
Project overview:
This investment project provides for the construction of a plant for the production of household chemicals with a capacity of 18,500 thousand liters per year (the "Project").

Initiator: "Aurora Holding" Group of Companies

Commercial products:
- Dishwashing detergents;
- Glass spray;
- Cleaning product for kitchen;
- Cleaning products for plumbing;
- Cosmetics;
- Detergents for clothes and textiles.

Output capacity: 18,500 thousand liters/year

Project location: Industrial zone, Alatau district, Almaty city

Market assumptions:
Growing demand – The average annual growth rates for certain products of this industry range from 3% to 8% per year. The detergent market was estimated at $ 27.4 bln in 2017 and, according to forecasts by Allied Market Research, it will reach US$ 40.5 bln by 2025. The global market of hair care products was estimated by Mordor Intelligence at US$ 91.95 bln in 2017 and is expected to reach US$ 112.57 bln by 2023.

Availability of customer base – The company has a large customer base: its main customers are large retail chains, supermarkets, grocery stores, hotel complexes and educational institutions.

Import substitution – According to the comments of representatives of "Aurora Holding", the market of household chemicals of the Republic of Kazakhstan depends on import for 95%. For this reason, the dynamics of price increases in this industry can vary from 7% to 14% per year.

Key investment data

<table>
<thead>
<tr>
<th>Index</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investment, US$ thousands</td>
<td>23,479</td>
</tr>
<tr>
<td>Project NPV, US$ thousands</td>
<td>13,946</td>
</tr>
<tr>
<td>IRR, %</td>
<td>20.6%</td>
</tr>
<tr>
<td>EBITDA returns, %</td>
<td>18%</td>
</tr>
<tr>
<td>Payback period, years</td>
<td>7.2</td>
</tr>
<tr>
<td>Discounted payback period, years</td>
<td>11.5</td>
</tr>
</tbody>
</table>

Project profitability

![Graph showing project profitability]

Commercial products

<table>
<thead>
<tr>
<th>Product name</th>
<th>Volumes at full capacity, thous. liters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dishwashing liquid</td>
<td>7,806</td>
</tr>
<tr>
<td>Glass spray</td>
<td>1,498</td>
</tr>
<tr>
<td>Kitchen cleaning products</td>
<td>1,000</td>
</tr>
<tr>
<td>Cleaning products for plumbing</td>
<td>3,758</td>
</tr>
<tr>
<td>Cosmetics</td>
<td>3,886</td>
</tr>
<tr>
<td>Detergents for linen and textiles</td>
<td>556</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>18,500</strong></td>
</tr>
</tbody>
</table>
Chemistry and petrochemistry

Construction of a plant for the assembly and production of non-electric initiation systems and emulsion explosives

**Project overview:**
This investment project provides for the construction of a plant for the assembly and production of non-electric initiation systems and a mobile plant for the production of emulsion explosives ("Project").

This project is considered as innovative, since there is a construction of the first plant in Kazakhstan for the full-cycle production of NEIS.

**Commercial products and annual output:**
- emulsion explosives ("EE"): 24 thousand tonnes per year;
- non-electric initiation systems ("NEIS"): 50 million units per year.

**Initiator:**
Nitro-Kazakhstan LLP

**Project location:** Karaganda Oblast, Satpayev

**Consumer markets:**
domestic market, Russia and Uzbekistan.

### Key investment indicators

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investment, US$ thousands</td>
<td>47,669</td>
</tr>
<tr>
<td>Project NPV, US$ thousands</td>
<td>238,209</td>
</tr>
<tr>
<td>IRR, %</td>
<td>72.94%</td>
</tr>
<tr>
<td>EBITDA returns, %</td>
<td>62.4%</td>
</tr>
<tr>
<td>Payback period, amount of years from the start of production</td>
<td>3.93</td>
</tr>
<tr>
<td>Discounted payback period, amount of years from the start of production</td>
<td>4.22</td>
</tr>
</tbody>
</table>

**Project location:** Karaganda Oblast, Satpayev

### Market assumptions:

**Growing demand for explosives** The total market for explosives in Kazakhstan is estimated at US$ 150 million per year. The total consumption of explosives equals to about 300,000 tonnes per year. Along with the development of new fields, consumption is expected to grow by 7-10% annually.

**Import substitution** Today in Kazakhstan there is no production of NEIS. All components used in the production of NEIS are manufactured abroad. In Kazakhstan there are only assembly shops of NEIS. The launch of the plant for the production of NEIS will help reduce import dependence on other countries. According to the results of 2018, the import of NEIS in Kazakhstan amounted to 1,635 tonnes in the amount of about US$ 18 million.

**Exporting potential** Production of explosives and NEIS in the Karaganda Oblast will allow covering the country’s MMC market, as well as exporting products while increasing volumes to Turkey, Russia, Uzbekistan and Kyrgyzstan.

### Project profitability

![Graph showing project profitability]

**Types of NEIS:**
- Single layer NEIS;
- Two-layer NEIS;
- Two-layer NEIS reinforced with industrial thread.

**Types of EE:**
- NPGM-100 Type A (for overburden and non-sulphide ores);
- NPGM-100 Type B (for sulphide ores).

**Other services:**
Blasting and drilling operations

July 2019

KAZAKH INVEST:
Investment Proposal
Production of ammonium sulfate

**Products**
Annual capacity: 100 thousand tons (50% domestic market, 50% export)

**Project**
Within the framework of the Project, it is planned to build a complex for the production of ammonium sulfate with a capacity of 100 thousand tons per year on the basis of the sulfuric acid plant of SSAP LLP in Stepnogorsk. Ammonium sulfate is mainly used in agriculture as a mineral fertilizer.

**Company**
SSAP LLP is the operator of the sulfuric acid plant in Stepnogorsk, launched in 2015 within the framework of state programs for industrial and innovative development and development of the chemical industry in the Republic of Kazakhstan in 2010-2014. SSAP LLP founders are United Chemical Company LLP (90.11%) and JSC NC Kazatomprom (9.89%).

**Market**
- According to IFA, in 2019, the total consumption of mineral fertilizers in the world reached 192.9 million tons of active substance. Over the past five years (2016-2020), world exports and imports of ammonium sulfate have shown growth dynamics, the average annual growth rate of exports for the specified period reached 2.7%, import growth - 3.3%.
- During the period 2014-2018, Kazakhstan saw an increase in the production of ammonium sulfates, the average annual growth rate of production reached 11.6%. Average annual ammonia sulphate import growth in 2016-2020 was 51.7%.

**Project investment attractiveness**
- Investment – 12,000 thousand USD
- Project NPV – 10,895 thousand USD
- IRR – 38.0%
- Payback period – 4.7 years

**What is the project’s attractiveness?**
- **Availability of own raw material base.** 81,911 tonnes of 93% sulphuric acid is required to produce 100,000 tonnes of ammonia sulphate. The Initiator will guarantee the required raw materials (sulphuric acid) from its plant to produce required output.
- **Developed infrastructure and own source of electricity.** The project will be implemented in an industrial zone with the necessary infrastructure for functioning. A Siemens steam turbine is installed on the territory of the sulfuric acid plant.
- **Experience of the Initiator.** The Initiator is the operator of the sulfuric acid plant with a design capacity of 180 thousand tons of products per year. Effective relationships are in place with suppliers of raw materials (Tengizchevroil), equipment (Desmet Ballestra S.p.A.) and technology (Monsanto Enviro-Chem Systems, Inc.).

**Investment proposal**
The Project requires investment of 12,000 thousand USD, of which:
- 70 % (8,400 thousand USD) – debt financing subject to collateral;
- from 30 % (3,600 thousand USD) – investor participation

The proposed financing structure and state support measures are indicative. The final financing structure and participation in the Project will be determined based on the results of negotiations with the investor.
Project overview

Construction of a gas-chemical complex for the production of methanol with annual volume of 350,000 metric tons in the West Kazakhstan region.

It’s planned to reach the following purposes:

- Creating an effective integrated business for the production of methanol and its sale on the market of Kazakhstan and the EU;
- Creation of 152 permanent jobs.

Project location: country district Beles, Baiterek region, West Kazakhstan region.

Project Initiator

Limited Liability Partnership “Zhaik Petroleum Ltd” is the project developer and operator. The company activities include the processing of natural gas and methanol production.

Output capacity: Production of 350,000 metric tons of methanol class AA per a year;

Consumer markets: domestic market of Kazakhstan (62%) and the Russian market (38%). The Initiator has signed off-take contracts with ANPZ LLP and Ektokhim LLC.

Key Project indicators

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investment, US$ thousands</td>
<td>166,100</td>
</tr>
<tr>
<td>Project NPV, US$ thousands</td>
<td>127,522</td>
</tr>
<tr>
<td>IRR, %</td>
<td>22.4%</td>
</tr>
<tr>
<td>EBITDA returns, %</td>
<td>43%</td>
</tr>
<tr>
<td>Payback period, years</td>
<td>6.3</td>
</tr>
<tr>
<td>Discounted payback period, years</td>
<td>9.3</td>
</tr>
</tbody>
</table>

Investment structure

<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction and assembly work</td>
<td>39%</td>
<td>$63.9 million</td>
</tr>
<tr>
<td>Machinery and transportation</td>
<td>42%</td>
<td>$70.3 million</td>
</tr>
<tr>
<td>Other capital expenditures</td>
<td>19%</td>
<td>$31.9 million</td>
</tr>
</tbody>
</table>

Market assumptions

Growing demand

According to a report by Market Research Future® (WantStats Research And Media Pvt. Ltd.), the global methanol market is expected to reach $ 61 billion by 2023. Methanol is widely used as an alternative fuel in internal combustion engines due to its efficiency and cost-effectiveness.

Import substitution

Kazakhstan is 100% import dependent on methanol, the annual consumption of which is at least 25 thousand tons. Imported methanol is used by gas industry enterprises as a method to combat the formation of hydrates. The need to import methanol (raw materials) at high prices determines the price non-competitiveness of Kazakhstan’s final products and enterprises.

Raw materials availability

The plant will be built in the West Kazakhstan region, bordering the Aktobe and Atyrau regions, the country’s oil and gas centers. Negotiations are currently underway with potential suppliers of raw materials Zhaikmunai LLP and KazTransGas Aimak JSC.

Project profitability

![Graph showing project profitability over years]

<table>
<thead>
<tr>
<th>Year</th>
<th>US$ thousands</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year 3</td>
<td>128,199</td>
</tr>
<tr>
<td>Year 5</td>
<td>127,801</td>
</tr>
<tr>
<td>Year 15</td>
<td>159,983</td>
</tr>
<tr>
<td>Year 20</td>
<td>176,864</td>
</tr>
<tr>
<td>Year 24</td>
<td>196,971</td>
</tr>
</tbody>
</table>

Financing structure

- Participation of the Initiator 40%: $66.44 million
- Debt financing subject to collateral 60%: $99.66 million

The proposed financing structure is indicative, the final financing and Project participation structures will be determined based on the results of negotiations with the Investor.
Project overview:
Construction of a plant for the production of base oil components from natural gas

Raw materials:
natural gas - 1.0 bln normal cubic meters per year

Commercial products and output capacity:
• 280 thousand tons of base oil components (paraffin) per year;
• 110 thousand tons of diesel and gasoline fractions per year;
• 10 thousand tons of liquefied petroleum gas per year.

Initiator: Company group “Condensate”
Project location: Aksai city, WKO.
Consumer markets: Kazakhstan, China, EU

Market assumptions:
Growing demand – According to the report of Grand View Research, Inc., it is expected that by 2024 the global base oil market will reach 40.47 billion US$. Growing demand for base oils is a key driver of growth in demand for products manufactured.

Availability of customer base – The patent holder of the gas chemical production technology of base oil components is the Chinese corporation Shanxi Lu’an Group (a minority shareholder of Cathay Biotech). The main part of the base oil components will be delivered to the plant of Shanxi Lu’an Group factory located south of Shanghai, as well as to the EU. The fractions of gasoline and diesel fuel can be used in its production cycle by the “Condensate” JSC or other oil refineries in the country.

Raw materials availability – Reserves of the Karachaganak oil and gas condensate field amount to 1.35 trillion cubic meters of gas and 1.2 billion tons of oil and gas condensate. The resources of this field in the amount of 8.5 billion cubic meters per year are processed at the Orenburg Gas Processing Plant, and WKO consumers have a priority right to purchase natural gas from these resources.

Key investment data

<table>
<thead>
<tr>
<th>Index</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investment, US$ thousands</td>
<td>820,744</td>
</tr>
<tr>
<td>Project NPV (in Scenario 2 with price of natural gas 60 US$/thous. m3), US$ thousands</td>
<td>266,538</td>
</tr>
<tr>
<td>IRR, %</td>
<td>17.01%</td>
</tr>
<tr>
<td>EBITDA returns, %</td>
<td>58-63%</td>
</tr>
<tr>
<td>Payback period, years</td>
<td>8.2</td>
</tr>
<tr>
<td>Discounted payback period, years</td>
<td>13.8</td>
</tr>
</tbody>
</table>

Project location:
Production site Sulusay, Aksai city, West Kazakhstan Oblast

Production plant

Nur-Sultan
Almaty
Shymkent

Shymkent
Project overview:
Construction of a gas chemical complex for processing natural gas and methanol using specialized technologies, where gas is primarily processed into methanol, and methanol, subsequently, processed into olefins.

Commercial products and annual output:
• AA class methanol: 1,800 thousand tonnes per year;
• Olefins: 600 thousand tonnes per year (propylene - 360 thousand tonnes, ethylene - 240 thousand tonnes).

Initiator:
WestGasOil LTD, an industrial enterprise in the West Kazakhstan Oblast, which is engaged in large-scale gas chemical projects.

Project location: Mangystau Oblast, Aktau

Consumer markets: domestic market, Europe, Russia.

Key investment indicators

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investment, US$ thousands</td>
<td>1,800,000</td>
</tr>
<tr>
<td>Project NPV, US$ thousands</td>
<td>1,068,605</td>
</tr>
<tr>
<td>IRR, %</td>
<td>21.2%</td>
</tr>
<tr>
<td>EBITDA returns, %</td>
<td>63%</td>
</tr>
<tr>
<td>Payback period, amount of years from the start of production</td>
<td>6.9</td>
</tr>
<tr>
<td>Discounted payback period, amount of years from the start of production</td>
<td>9.7</td>
</tr>
</tbody>
</table>

Project profitability

Market assumptions:
Growing demand for methanol and olefins
According to a report by Market Research Future® (WantStats Research And Media Pvt. Ltd.), the global methanol market is expected to reach US$ 61 billion by 2023. Global imports of propylene are growing at an average rate of 2.2% per year, while ethylene imports are growing at an average rate of 4.2% per year.

Import substitution
Over the past five years, Kazakhstan imported about 24 thousand tonnes of methanol per year, despite the fact that import volumes grow by an average of 14% per year. Production of domestic products will reduce the volume of gas and chemical imports.

Export potential
Besides sales, products will also be exported. The external market is attractive for sales due to the growing demand and availability of cheap raw materials, which opens up significant prospects for the organization of export of the Project’s products.
Investment project

This investment project (the "Project") envisages the construction in Pavlodar region of a plant to produce sand-lime bricks from fly ash from local power plants with a capacity of 100 million bricks. The purpose of the Project is the utilisation and added-value processing of industrial waste and the related reduction of environmental pollution. The plant is due to be built in Solnechny village, Ekibastuz district, Pavlodar region in close proximity to the source of raw materials, ash dumps of Ekibastuz Power Plant-2. The average ash collection from this power plant is about 1 million tonne per year. The production of 100 million units of bricks will require about 350 thousand tonnes of ash annually.

The plant will consist of two production blocks with a total area of 39,800 sq. m and auxiliary facilities with a total area of 62,600 sq. m.

Company

The project initiator is APATIT LLP established in 2015. Management of the APATIT LLP has experience in launching a mineral fertilisers plant and a plant for the production of construction products from sand and gravel.

Market

Growing demand. The last five years have seen positive changes in the Kazakhstan construction sectors, which by 2021 reached 5.5 trillion tenge. A growing population will increase the volume of non-residential and residential buildings under construction, along with vehicle highways and utilities (for example, water and gas supplies). According to Marketline forecasts, the Kazakhstan construction sector in 2021-2025 will grow at an average annual rate of 4.3%.

What is the attractiveness of the project?

• Favourable location of production and adequacy of the raw material base. The plant has a convenient location due to its proximity to the raw material base and to the main transport hubs. The average ash collection from Ekibastuz Power Plant-2 in the disposal area is about 1 million tonne per year, while the annual requirement of the project is 350 thousand tons of ash.

• Low cost of production. Location near the power plant reduces the overall cost of electricity. The use of secondary steam from the power plant for the operation of the autoclave section will make it possible to eliminate capital expenditures for the construction of individual boiler houses. Automation of production using WKB Systems GmbH technology will reduce labor costs (up to 50 staff members).

Investment proposal

The Project requires investment of US$ 29,851 thousand (100% investor participation).

The proposed financing structure and state support measures are indicative. The final financing structure and Project interests will be determined based on the results of negotiations with the investor.
Production of granite building materials

**Products**
Production and sales will be as follows: granite slabs – 1,000 m3; granite tiles – 25,000 m3; granite paving stones – 1,000 m3; granite kerb stones – 1,000 m3; granite strips – 1,000 m3; granite steps – 500 m3; Skala granite tiles – 5,000 m3; granite balustrades – 500 m3; callipers – 500 m3; and granite breccia – 500 m3.

**Project**
The aim of this investment project ("Project") is the construction of a plant to produce 36,000 m3 of granite building materials per year in the Zharmin District of Abai Oblast. The Abai Oblast Zharmin District Akimat has leased out a 10 ha site for 10 years for plant construction purposes. Likewise, the Initiator holds a license to produce building stone at a 133.9 ha site at the Karakultass District of Abai Oblast until 30 March 2030.

**Company**
The Project Initiator is Yer-Dauren LLP BIN 160240002361. The Company currently operates a children’s day-care centre, but is planning to change its activity type. Legal address: Dostyk Street 181, Kaltabatau village, Zharmin District, Abai Oblast. Chief executive: Daulet Maratovich Koshenov.

**Market**
- **New market sales.** Available resources and the use of innovative processing techniques will help increase production capacity and diversify product range, which should aid new market entry and development.
- **Demand for building materials.** The last five years have seen positive changes in the Kazakhstan construction sectors, which by 2021 reached 5.5 trillion tenge.

**Investment attractiveness of the project:**
- Investment – 30,434 thous. USD
- NPV – 19,608 thous. USD
- IRR – 38.8%
- Payback period – 5.1 years

**What is the attractiveness of the project?**
- The Company has its own source of raw materials with granite reserves in excess of 17 million m3 (A2+B+C1), which helps reduce the cost of production, and ensure the quality of plant product at a competitive price.
- Advantageous production location. The plant has a strategic location thanks to its proximity to a source of raw materials (Karakultass building stone deposit in the Zharmin District of Abai Oblast), a national highway (A-3) and the Karakultass railway station. The plant’s location means it is able to serve more attractive regional markets to the east and north of Kazakhstan and in Russian and Chinese border towns.

**Investment proposal**
The Project requires investment of 30,434 thous. USD, of which:
- 70% (21,304 thousand USD) - debt financing subject to collateral;
- 30% (9,130 thousand USD) - investor participation.

The proposed financing structure and state support measures are indicative. The final financing structure and Project interests will be determined based on the results of negotiations with the investor.
Creation of a cluster for the production of materials on the basis of the Baiterek limestone deposit

Products
Annual capacity:
• 100 thousand tonnes of quicklime;
• 345.6 thousand silicate bricks;
• 6,912 m² of paving slabs and curbs.

Project
This investment project (hereinafter the "Project") plans to create a cluster for the production of building materials on the basis of the Baiterek limestone deposit located in the Shieki district of Kyzylorda Oblast.

The sales market for the products is Kazakhstan. Target groups for product distribution are:
• construction companies;
• mining and metallurgical cluster enterprises;
• population of Kyzylorda and Turkestan oblasts and other regions of Kazakhstan.

The plan is to start production in the 4th quarter 2022 and run the full capacity in 2029.

Company
The project initiator is Tabigi Tas Kyzylorda LLP, whose core activities are extraction of limestone, gypsum and chalk. The Project initiator has the right to extract limestone from the deposit until 2035.

Market
• In 2020, the global lime market amounted to US$ 41.93 billion and the volume of production reached 420 million tonnes. According to Fortune Business Insights, the global lime market will grow from US$ 42.64 billion in 2021 to US$ 51.04 billion in 2028 with a CAGR of 2.6%.

What is the project’s attractiveness?
• Own raw material base will allow to reduce the production cost, operating expenses and transportation costs, as well as to ensure the proper quality control of products. The Initiator has a subsoil use right based on a contract for the commercial extraction of limestone at the Baiterek 1, Baiterek 2 and Baiterek 3 sites of the limestone deposit until 2035.
• High quality of limestone. The average content of carbonates in limestone from the Baiterek deposit is 96-98%, which makes it possible to use raw materials for the production of lime and building materials without prior expensive refining procedures.
• Stable demand for products. The scope of construction in Kyzylorda Oblast shows a positive trend (CAGR of 9.2% over 2016-2020). The average volume of the construction market in the region reached US$ 264 million for the period 2016-2020.

Investment proposal
The Project requires investment of US$ 8,314 thousand, of which:
• 70% (US$ 5,820 thousand) – debt financing subject to collateral;
• from 30% (US$ 2,494 thousand) - investor participation.

The proposed financing structure and state support measures are indicative. The final financing structure and Project interests will be determined based on the results of negotiations with the investor.

Project profitability

<table>
<thead>
<tr>
<th>Year</th>
<th>Revenue, US$ thousand</th>
<th>EBITDA margin,%</th>
</tr>
</thead>
<tbody>
<tr>
<td>2021</td>
<td>6,462</td>
<td>39%</td>
</tr>
<tr>
<td>2022</td>
<td>6,926</td>
<td>39%</td>
</tr>
<tr>
<td>2023</td>
<td>7,586</td>
<td>41%</td>
</tr>
<tr>
<td>2024</td>
<td>8,036</td>
<td>42%</td>
</tr>
<tr>
<td>2025</td>
<td>10,666</td>
<td>44%</td>
</tr>
<tr>
<td>2026</td>
<td>11,107</td>
<td>44%</td>
</tr>
<tr>
<td>2027</td>
<td>11,392</td>
<td>44%</td>
</tr>
</tbody>
</table>

Investment - US$ 8,314 thousand
NPV - US$ 9,909 thousand
IRR – 32.5%
Payback period – 4.8 years

NPV – Net Present Value
IRR – Internal Rate of Return
PPP – Payback Period

KAZAKH INVEST. Investment proposal
December 2021
XPS tile and polystyrene lagging production

Commercial products
Production of thermal insulation tiles from extruding XPS polystyrene foam is due to start in 2023, and planned capacity will be reached from 2024. Production capacity is 200 thousand m³.

Project description
The Project envisages the construction of a plant to produce 200 thousand m³ of thermal insulation tiles from extruding XPS polystyrene foam per year. The Project is due to be realised in the Astana Technopolis Special Economic Zone in Nur-Sultan. Makwool LLP was created to realise a project to produce XPS thermal insulation materials.

Market
- In 2020, global revenue from thermal insulation material sales increased 0.7% year-on-year to 27.8 billion USD. According to Mordor Intelligence, the CAGR for the thermal insulation material market in 2020-2025 will be 4.45%.
- Average annual domestic consumption of thermal insulation materials was 74.8 thousand tonnes in 2016-2020. Domestic production for the same period averaged 70.5 thousand tonnes. Production and consumption growth was due to the development of the real estate market in Kazakhstan. In 2020, the volume of exports and imports of thermal insulation materials in the country amounted to 14 tonnes and 2.4 thousand tonnes, respectively.

Investment attractiveness of the project:
Investment – US$ 18,025 thousand
Project NPV – US$ 5,443 thousand
IRR – 22.1%
Payback period – 7.64 years

What is the attractiveness of the project?
- **High product quality.** XPS is known for being chemically durable, durable under high compression, water and vapour tight, as well as resistant to mould and fungus. Thus, XPS not only guarantees thermal insulation, but also acts as an effective barrier to a number of other destructive and negative factors.
- **Geographical location.** The Project is economically viable from a production capability perspective. The Nur-Sultan municipal agglomeration has a well-developed road and transportation and logistics infrastructure, including national and regional roads leading to Russia (Chelyabinsk and Yekaterinburg) and Kazakhstan cities, such as Petropavlovsk, Karaganda, Pavlodar and Aktobe.

Investment proposal
The Project requires investment of US$ 18,025 thousand, of which:
- 70 % (US$ 12,617.5 thousand) – debt financing subject to collateral;
- 30 % (US$ 5,407.5 thousand) – Investor participation.

The proposed financing structure and state support measures are indicative. The final financing structure and Project interests will be determined based on the results of negotiations with the investor.
Construction of a cement plant in Aktobe region

Commercial products
Cement - daily capacity of 3,600 tonnes
Cement clinker - daily capacity of 3,000 tonnes

Project description
The present investment project plans to build a cement plant with a daily capacity of 3,600 tonnes and a cement clinker with a daily capacity of 3,000 tonnes in the Bayganinsky District of Aktobe Oblast. The Bayganinsky District Akimat has issued a decree whereby the initiator received, until 30 September 2029, land plots of 199.16 hectares, 98.54 hectares and 0.8742 hectares where it plans to extract chalk, clay and marl. The availability of raw materials in the immediate vicinity of the cement plant allows savings on transportation costs and overhead costs which contributes to higher production efficiency.

Company
The project initiator is Aktobe Cement LLP established in 2018.

Market
• The global cement market, estimated at 5 billion tonnes in 2020, is projected to reach 5.8 billion tonnes by 2027, with a CAGR of 2.2% over the 2020-2027 period.
• According to the Kazakhstan Statistics Committee, 10,809 thousand tonnes of Portland cement were produced in 2020. Average annual production growth rate for the period 2016-2020 reached 5.3%.

Investment attractiveness of the project:
Investment – US$ 119,415 thousand
Project NPV – US$ 67,362 thousand
IRR – 23.0%
Payback period – 8.7 years

What is the attractiveness of the project?
• Own raw material base will allow reducing production costs and transportation costs.
• Favorable production location. The location of the plant makes it possible to take a foothold on the most attractive regional markets of western Kazakhstan and neighbouring cities of Russia.
• Demand for building materials. In 2020, the growth in the construction industry amounted to 11.2%, the area of commissioned housing increased by 16.8% compared to 2019.
• Price differential. In 2020, the difference between the average price of cement in the western regions of Kazakhstan and the southern regions of Russia is about KZT 200 per 50 kg. The difference with the average price for cement in Uzbekistan is about KZT 160 per 50 kg.

Investment proposal
The Project requires investment of US$ 119,415 thousand, of which:
• 70% (US$ 83,590.5 thousand) – debt financing subject to collateral;
• from 30% (US$ 35,824.5 thousand) – investor participation.
The proposed financing structure and state support measures are indicative. The final financing structure and Project interests will be determined based on the results of negotiations with the investor.
Construction of a brick factory in North Kazakhstan Region

Commercial products
Annual production: 45 million units of ceramic brick of grade M-125

Project description
This investment project envisages the construction of a ceramic brick factory with a capacity of 50 million units/year in Petropavlovsk, North Kazakhstan region. The factory will be built on a 27-hectare site in the city’s industrial zone. It is expected that for the Project implementation the Mayor’s Office of North Kazakhstan Region will allocate a clay deposit free of charge.

Company
KyzylZharTas LLP is a project company for the implementation of the brick factory construction project. The company is part of the Zaman Group. The group is represented by enterprises of the mining, metallurgical and machine-building industries, manufacturing enterprises, financial sector organizations and large breeding farms.

Market
• According to Fitch Solutions forecasts, the market size of the global construction industry is expected to reach US$ 5,460 billion in 2022, of which 53.4% or US$ 2,914 billion will go to emerging economies.
• According to MarketLine forecasts, the market size of the construction industry will amount to US$ 21,623 million in 2024, increasing at CAGR of 6% for the period of 2021-2024.

Investment attractiveness of the project:
Investment – US$ 14,425 thousand
Project NPV – US$ 3,976 thousand
IRR – 21.6%
Payback period – 6.5 years

What is the attractiveness of the project?
• Availability of own raw material base and railway infrastructure will reduce manufacturing costs, operating expenses and transportation costs, as well as ensure the proper quality of products. The Group has subsoil use rights to grade B3 brown coal at Sarykol deposit. The plant has a railway line from Ushkulun station to Sarykol station in Bayanaul district of Pavlodar region.
• Stable demand for products. There is a growing demand for products on the market driven by the development of the real estate market due to an increase in the supply of primary and secondary housing, implemented state programmes and an increase in the population welfare.

Investment proposal
The Project requires investment of US$ 14,425 thousand, of which:
• 70% (US$ 10,097 thousand) – debt financing subject to collateral;
• from 30% (US$ 4,328 thousand) – investor participation;
The proposed financing structure and state support measures are indicative. The final financing structure and Project interests will be determined based on the results of negotiations with the investor.
Manufacturing of SPC floor covering

Annual capacity:
- Floor covering thickness 3.5 mm – 1,275 thousand sq. m
- Floor covering thickness 4.0 mm – 1,275 thousand sq. m
- Floor covering thickness 5.0 mm – 850 thousand sq. m
- Floor covering thickness 6.0 mm – 850 thousand sq. m

Domestic demand:
- Floor covering from PVC – over 22 million sq. m.

Project
This investment project envisages the construction of a SPC floor covering factory with a capacity of a 5 million sq. m/year. The factory will be built on a 4-hectare site.

The SPC (Stone Plastic Composite) flooring is an interlock high-density, calcium-polymer flooring that, with the development of technology, replaces other composite products of previous generations: HDF laminate and vinyl PVC tiles.

Company
Makwool LLP was created to implement the first SPC manufacturing project in Kazakhstan. The main activity of the company is wholesale of products made from concrete, cement, gypsum and similar materials.

Market
- According to Allied Market Global Industry Reports, the PVC flooring market was valued at US$ 12 billion in 2019 and is projected to grow to US$ 15 billion in 2027 with CAGR of 5.1%.
- The main demand for floor coverings made from PVC is covered by imported products sold through distributors. In 2020, Kazakhstan imported 15 million sq. m. CAGR of imports in 2016-2020 was 7%.

Project investment attractiveness:
- Investment – 10,689 thousand USD
- Project NPV – 42,502 thousand USD
- IRR – 39.4%
- Payback period – 4.5 years

What is the project’s attractiveness?
- **High quality products.** SPC floor coverings, in contrast to floor tiles, are more convenient for installation and cleaning. SPC coverings have increased water resistance and improved sound and thermal insulation properties.
- **Geographic location.** The project also has an advantageous economic location in terms of production capabilities and accessibility to the raw materials base: there are several large deposits of limestone (calcium carbonate) in Karaganda region.

Investment proposal
The Project requires investment of US$ 10,689 thousand of which:
- 70% (US$ 7,482.3 thousand) – debt financing subject to collateral;
- from 30% (US$ 3,206.7 thousand) – investor participation.

The proposed financing structure and state support measures are indicative. The final financing structure and Project interests will be determined based on the results of negotiations with the investor.
Production of sulphur cement products

Construction sector

Project idea:
Construction of sulphur concrete and/or sulphur asphalt concrete production plant. Project implementation will create more than 80 jobs.

Project location:
SEZ NIPT, Atyrau, Republic of Kazakhstan

Project initiator:
Kossan Petroleum LLP

Production capacity:
Sulphur concrete – up to 300 000 tonnes per year

Sales market:
Direct sales in Kazakhstan and export to the countries of Central Asia (Uzbekistan, Kyrgyzstan, Afghanistan and Tajikistan).

Advantages of sulphur concrete:
✓ Cost reduction resulting from a longer product life;
✓ Materials saving due to its recyclability;
✓ No costs associated with maintenance - products are not overgrown with water plant, there is no need for painting, treatment or other additional protection;
✓ Environmental friendliness in comparison with traditional alternatives - the production does not require the use of water, energy costs are reduced and emissions of CO² into the atmosphere are reduced;
✓ High strength;
✓ Corrosion resistance;
✓ Waterproof;
✓ Frost resistance and good adhesion.

Investment attractiveness of the Project

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investment amount, US$ thousand</td>
<td>10,540</td>
</tr>
<tr>
<td>Project NPV, US$ thousand</td>
<td>20,408</td>
</tr>
<tr>
<td>IRR, %</td>
<td>32.8%</td>
</tr>
<tr>
<td>EBITDA margin, %</td>
<td>27.1%</td>
</tr>
<tr>
<td>Payback period, years</td>
<td>6.2</td>
</tr>
<tr>
<td>Discounted payback period, years</td>
<td>7.5</td>
</tr>
</tbody>
</table>

Investment structure

- Construction and assembly work: $2.26 million (21%)
- Machinery and equipment: $4.65 million (44%)
- Initial working capital: $2.52 million (24%)
- Others: $1.11 million (11%)

Prerequisites for the Project implementation

Lack of similar facilities in Kazakhstan. This production is innovative for Kazakhstan. The lack of direct competitors in the market will make it possible to gain a large market share and implement an import substitution strategy.

Strength, moisture resistance and chemical resistance of sulphur concrete. Adding sulphur in the concrete production increases the material strength due to the close arrangement of sulphur molecules. For example, the compressive and flexural strength of sulphur concrete is 55-65 MPa and 10-15 MPa, for ordinary concrete - 15-25 and 6-9 MPa, respectively. Sulphur concrete has high moisture resistance and chemical resistance to aggressive environments. The use of sulphur concrete allows consumers to optimise costs as a result of a longer service life and increased interrepair cycle and the use of sulphur concrete for recycling.

Resources base. Negotiations were held with Tengizchevroil (TCO) on the supply of the main raw material - sulphur. An agreement was reached to provide up to 5 thousand tonnes of sulphur per month (quota).

Around 3.84 million tonnes or 96% of all sulphur in the country is produced annually in Atyrau Oblast, while TCO accounts for over 60% of that volume.

Projects profitability

<table>
<thead>
<tr>
<th>Year</th>
<th>2022</th>
<th>2024</th>
<th>2026</th>
<th>2028</th>
<th>2030</th>
<th>2032</th>
<th>2034</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue, mln USD</td>
<td>10.0%</td>
<td>28.2%</td>
<td>29.1%</td>
<td>29.1%</td>
<td>29.2%</td>
<td>29.2%</td>
<td>28.6%</td>
</tr>
<tr>
<td>EBITDA margin, %</td>
<td>4.8</td>
<td>15.9</td>
<td>19.4</td>
<td>21.3</td>
<td>22.7</td>
<td>23.7</td>
<td>24.8</td>
</tr>
</tbody>
</table>

Financing structure

- Initiator equity 1% ($0.11 million)
- Participation of the Fund (KIDF or KCM) 14.2% ($1.5 million)
- Debt financing subject to collateral 70% ($7.37 million)
- Participation of the Investor 14.8% ($1.56 million)

The proposed financing structure is indicative, the final financing and Project participation structures will be determined based on the results of negotiations with the investor.
Modernisation and expansion of the existing brick factory in Zhambyl Oblast

Building materials

Project description:
Modernisation and expansion of the existing brick factory by building a new facility and installing a new production line and special equipment. Number of jobs created – 30.

Location:
Zhaksylyk village, Ryskulov district, Zhambyl Oblast, Republic of Kazakhstan.

Initiator:
AiKo LLP is one of the main brick manufacturing enterprises in Zhambyl Oblast.

Commercial products and capacities:
Single bricks – 7,766,995 units.

Sales markets:
Kazakhstan.

Manufacturing process:

Market prerequisites:

Own raw materials base. The Initiator has subsoil use rights for loam mining (raw material for brick production) at Zhaksylyk deposit. Having own raw materials base allows reducing the production cost and transportation costs for raw materials, as well as ensuring sustained product quality.

Stable demand from construction companies and the private sector. The volume of construction work in Zhambyl Oblast has been growing steadily since 2016. The average volume of the construction work market reached US$ 360 million with CAGR at 6.6%. The Initiator has developed a client base of regular consumers of its products.

Competitive price. Comparative analysis of product prices in the region showed that the Initiator’s price is one of the lowest, which is a competitive advantage in the market economy conditions.

Key investment indicators

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investment amount, US$ thous.</td>
<td>1,685</td>
</tr>
<tr>
<td>Project NPV, US$ thous.</td>
<td>927</td>
</tr>
<tr>
<td>IRR, %</td>
<td>19.3%</td>
</tr>
<tr>
<td>EBITDA margin, %</td>
<td>49.7%</td>
</tr>
<tr>
<td>Payback period, years</td>
<td>6.6</td>
</tr>
<tr>
<td>Discounted payback period, years</td>
<td>10.3</td>
</tr>
</tbody>
</table>

Investment structure

- Construction and assembly work: 3% of $58 thous.
- Machinery and equipment: 97% of $1,627 thous.

Project profitability

Revenue, US$ thous.
EBITDA margin, %

The proposed financing structure is indicative, the final financing and Project participation structures will be determined based on the results of negotiations with the Investor.
Transport and logistics

Project profitability

What is the attractiveness of the project?

• Initiator’s experience. The company has its own technology for the manufacturing of charging stations and a staff of qualified IT specialists. To date, Adele Energy has sold 103 stations in Kazakhstan and 20 stations in Ukraine. Under the Project, the Company plans to manufacture upgraded versions of the current charging stations.

• Ecological aspects. The development of infrastructure for charging stations for electric vehicles in the country will lead to an accelerated transition of the population to electric vehicles, which will improve the environmental situation in cities.

Investment proposal

The Project requires investment of US$ 2,118 thousand, of which:

• 70% (US$ 1,483 thousand) – debt financing subject to collateral
• 30% (US$ 635 thousand) – investor participation.

The proposed financing structure and state support measures are indicative. The final financing structure and Project interests will be determined based on the results of negotiations with the investor.

Project

This investment project (the “Project”) envisages the launch of manufacturing and operation of charging stations for electric vehicles in Kazakhstan. It is planned to introduce two models of charging stations: Foton high-speed charging station with a direct current of 90, 120, 150 or 180 kW and Nova slow-speed charging station with an alternating current of 22 kW. The development and manufacturing of charging stations is planned in Nur-Sultan, the control of the stations is planned to be carried out remotely, through in-house software (“Software”) for managing the network of charging stations. A PPP option is being considered through the Zerde National Infocommunication Holding, with which a memorandum of cooperation has been signed and negotiations are underway to create a consortium.

Company

Adele Energy Group Ltd. develops, manufactures and operates charging stations for electric vehicles with its own software for managing a network of charging stations. So far, Adele Energy has sold 103 stations in Kazakhstan and 20 stations in Ukraine. Under the Project, the Company plans to manufacture upgraded versions of the current charging stations.

Market

• Global trends towards the transition to electric vehicles contribute to an increase in the number of electric vehicles in large cities of Kazakhstan, which in turn will lead to demand for an appropriate charging infrastructure. With the rapid transition of the population from internal combustion engines to electric vehicles, the Company may further become the main operator of charging stations for electric vehicles in the country.

Investment attractiveness of the project:

Investments – US$ 2,118 thousand
Project NPV – US$ 3,089 thousand
MIRR – 58%
Payback period – 6.4 years

Products

The volume of production and its sales are as follows: the sale of electricity by commercial chargers of type 1 from 53 MW per year; the sale of electricity by type 1 fast chargers (60 kW) from 241 MW per year; the sale of electricity by type 2 fast chargers (180 kW) from 241 MW per year.

Location

Adele Energy Group Ltd. develops, manufactures and operates charging stations for electric vehicles with its own software for managing a network of charging stations.

Kazakhstan

Almaty

Karaganda

Nur-Sultan

Shymkent

Kostanay

Location

Project profitability

Investment attractiveness of the project:

Investments – US$ 2,118 thousand
Project NPV – US$ 3,089 thousand
MIRR – 58%
Payback period – 6.4 years

Products

The volume of production and its sales are as follows: the sale of electricity by commercial chargers of type 1 from 53 MW per year; the sale of electricity by type 1 fast chargers (60 kW) from 241 MW per year; the sale of electricity by type 2 fast chargers (180 kW) from 241 MW per year.

Development, production and operation of stations for EVs with software for managing a network of charging stations

Investment proposal

The Project requires investment of US$ 2,118 thousand, of which:

• 70% (US$ 1,483 thousand) – debt financing subject to collateral
• 30% (US$ 635 thousand) – investor participation.

The proposed financing structure and state support measures are indicative. The final financing structure and Project interests will be determined based on the results of negotiations with the investor.

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• Global trends towards the transition to electric vehicles contribute to an increase in the number of electric vehicles in large cities of Kazakhstan, which in turn will lead to demand for an appropriate charging infrastructure. With the rapid transition of the population from internal combustion engines to electric vehicles, the Company may further become the main operator of charging stations for electric vehicles in the country.

Investment attractiveness of the project:

Investments – US$ 2,118 thousand
Project NPV – US$ 3,089 thousand
MIRR – 58%
Payback period – 6.4 years

Products

The volume of production and its sales are as follows: the sale of electricity by commercial chargers of type 1 from 53 MW per year; the sale of electricity by type 1 fast chargers (60 kW) from 241 MW per year; the sale of electricity by type 2 fast chargers (180 kW) from 241 MW per year.

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Market

• Global trends towards the transition to electric vehicles contribute to an increase in the number of electric vehicles in large cities of Kazakhstan, which in turn will lead to demand for an appropriate charging infrastructure. With the rapid transition of the population from internal combustion engines to electric vehicles, the Company may further become the main operator of charging stations for electric vehicles in the country.

Investment attractiveness of the project:

Investments – US$ 2,118 thousand
Project NPV – US$ 3,089 thousand
MIRR – 58%
Payback period – 6.4 years

Products

The volume of production and its sales are as follows: the sale of electricity by commercial chargers of type 1 from 53 MW per year; the sale of electricity by type 1 fast chargers (60 kW) from 241 MW per year; the sale of electricity by type 2 fast chargers (180 kW) from 241 MW per year.
Construction of a modern class A warehouse in the Almaty industrial zone

Commercial products
The planned capacity is 36,000 pallet storage spaces with an average capacity of 15,000 m3 of goods per day.

Project description
This investment project envisages the construction of a modern class A warehouse in the Almaty industrial zone, providing a full range of commercial storage and transportation services. Almaty Mayor's Office provided the initiator with a government land grant - a land plot of 5 hectares for a period of 49 years. The site is located on the first line from the highway.

Company
The project initiator is ETT Delivery LLP, representing the interests of Aramex International Franchise. Aramex is specialized in providing logistics services and has presence in more than 70 countries. The company owns about 600,000 sq. m of warehouse space and serves the largest transnational companies in the world. In Kazakhstan, the company has 40 employees, the branch and agency network are located in 16 cities.

Market
- The warehouse segment of the market was estimated at US$ 215.73 billion in 2019. It is projected to reach US$ 302.91 billion by 2027 with CAGR of 5.3%.
- In 2020, the cost of commissioned facilities in Kazakhstan was the lowest amount for the period in question (2017-2020) – KZT 9,769,959 thousand. The main factor behind the low indicator in 2020 was the spread of the COVID-19 pandemic, which led to the postponement of a number of projects to 2021.

Investment attractiveness of the project:
Investment – US$ 9,685 thousand
Project NPV – US$ 7,380 thousand
IRR – 28.2%
Payback period – 5.5 years

What is the attractiveness of the project?
- Quality of services provided. Warehouses meet modern logistics requirements, providing proper conditions for storing any type of goods.
- Convenient location. The location of the warehouse is as convenient as possible for the entry and exit of heavy vehicles.
- Availability of guaranteed contracts. At the moment the company has a guaranteed contract for 15,000 sq. m. mezzanine storage for clients from the fashion industry and equipment manufacturers.
- Experienced professionals. According to the terms of the franchise agreement with Aramex, the licensor company provides its own specialists to train staff.

Investment proposal
The Project requires investment of US$ 9,685 thousand, of which:
- 70% (US$ 6,780 thousand) – debt financing subject to collateral;
- from 30% (US$ 2,905 thousand) – investor participation.

The proposed financing structure and state support measures are indicative. The final financing structure and Project interests will be determined based on the results of negotiations with the investor.
Project description:
This investment project (hereinafter referred to as the “Project”) envisages the construction of a modern cargo terminal at the base of Aktobe International Airport, promising to become an aviation hub and a transport and logistics center connecting China, Russia and Europe.

Location:
The Project will be implemented in Aktobe on the basis of the existing airport Aktobe.

Field of concern:
Service of passenger air flows (through the placement of the existing airport under discretionary management):
• Aircraft;
• Passengers.
Air cargo services:
• Cargo planes;
• Transit cargo planes.

Key investment indicators:

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investment amount, US$ thous.</td>
<td>25,599</td>
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<tr>
<td>Project NPV, US$ thous.</td>
<td>15,091</td>
</tr>
<tr>
<td>IRR, %</td>
<td>14.5</td>
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<tr>
<td>EBITDA margin, %</td>
<td>32.9%</td>
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<tr>
<td>Payback period, years</td>
<td>10.3</td>
</tr>
<tr>
<td>Discounted payback period, years</td>
<td>16</td>
</tr>
</tbody>
</table>

Project profitability:

Market prerequisites:

Strategic location –
Aktobe Airport has the potential to become an international aviation bridge specializing in transit cargo and passenger traffic between China, the Russian Federation and the EU. The transport corridor Western Europe - Western China, which recreates the Silk Road, passes through the territory of Kazakhstan and through the city of Aktobe, in particular. The route is 8445 km of automobile and 11 500 km of railway, of which 2787 km and over 2000 km, respectively, run through Kazakhstan. The convenient location of the airport and proximity to key highways contribute to the development of multimodal transportation, which is an important factor for the success of the Project.

Growth of freight traffic from China –
The analysis of Lufthansa Consulting showed that in 2017 the international air traffic from China, geographically relevant for transit traffic through the Republic of Kazakhstan, was approximately 5 million tons. This requires the development of an appropriate infrastructure for the full service of a substantial share of the specified freight traffic. It is expected that the average annual growth rate of cargo traffic from China will be 4.5% -6.7% until 2030.

Current international agreements –
It should be noted that today there is an agreement between Kazakhstan and Beijing China-Russia united international logistics Co. Ltd on the development of air cargo from / to Kazakhstan and in transit through Kazakhstan. For the purposes of this agreement, cargo flows will be generated (35-90 tonnes per flight) from the territory of the PRC to the territory of the RK, as well as in transit through Kazakhstan, by aircraft.

Project location: Aktobe oblast, Aktobe city
Project description:
This investment project envisages the construction of a Trade and Transport Logistics Center “Bask” (hereinafter referred to as “TLC”) of interregional significance in the West Kazakhstan region (“WKR”) in the city of Uralsk.

Capacity:
- Cargo turnover of 800 thous. tons/year;
- The warehouse area is 10,000 sq. m;
- Camping area – 790 sq. m;
- Service stations (including shops) – 1026 sq. m;
- Gas Station – 1580 sq. m;
- TIR parking – 5600 sq. m;
- Auto parking – 625 sq. m.

Location: Republic of Kazakhstan, West-Kazakhstan region, Uralsk, the area of the chalk hills and microdistrict "Sarytau"

Services: storage of goods, terminal cargo handling, provision of open areas, warehouses, TIR parking, car refueling services (gas stations)

Initiator: “EurasianLogistics” LLP

Key investment indicators

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investment amount, US$ thous.</td>
<td>15,581</td>
</tr>
<tr>
<td>Project NPV, US$ thous.</td>
<td>5,367</td>
</tr>
<tr>
<td>IRR, %</td>
<td>18.1</td>
</tr>
<tr>
<td>EBITDA margin, %</td>
<td>37.8%</td>
</tr>
<tr>
<td>Payback period, years</td>
<td>7.2</td>
</tr>
<tr>
<td>Discounted payback period, years</td>
<td>12.1</td>
</tr>
</tbody>
</table>

Project location: West-Kazakhstan region, Uralsk

Market prerequisites:
Growth in the volume of wholesale, retail and foreign trade turnover
The growth in the volume of wholesale and retail trade in WKR in the period from 2017 to 2018 was 16% and 2%, respectively. Given the direct correlation between the increase in trade volumes and the growth in storage capacity of warehouses, an increase in demand in the warehouse rental sector is expected. In the period from 2016 to 2017, the WKR foreign trade turnover grew by 23% from 4,443 million US dollars in 2016 to 5,472 million US dollars in 2017.

Increasing freight turnover
The volume of cargo transportation in WKR for 2016-2018, is growing rapidly with an average CAGR of 10%.

Low competition in the field of transport and logistics in the West Kazakhstan region
Currently, there are no TLCs on the WKR market, which provide a full range of high-quality services. Due to the significant financial costs for the construction of the TLC and the lack of qualified personnel, competition for this type of service is not expected.

Favorable geographical location
The territory of the WKO is located in a strategic location in the oil and gas processing region. The region is bordered by the Russian Federation, also, it is adjacent to the Atyrau and Aktobe regions, which are the country’s oil and gas centers, and where the total population is over 1.5 million people. Within a radius of 200 km are the nearest four cities of the Russian Federation with a total number of more than 5 million people.

Project profitability

<table>
<thead>
<tr>
<th>Year</th>
<th>US$ thousands</th>
<th>Profitability, US$ thous.</th>
<th>EBITDA margin, %</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>6,266</td>
<td>36%</td>
<td>38%</td>
</tr>
<tr>
<td>5</td>
<td>7,623</td>
<td>36%</td>
<td>38%</td>
</tr>
<tr>
<td>10</td>
<td>8,263</td>
<td>38%</td>
<td>38%</td>
</tr>
<tr>
<td>15</td>
<td>9,456</td>
<td>38%</td>
<td>38%</td>
</tr>
<tr>
<td>20</td>
<td>10,578</td>
<td>38%</td>
<td>38%</td>
</tr>
<tr>
<td>24</td>
<td>11,672</td>
<td>39%</td>
<td>39%</td>
</tr>
</tbody>
</table>

Profitability, US$ thous. EBITDA margin, %
**Project description:**
This investment project provides for the construction and organization of roadside service along the roads of national and international importance.

**Project Goal:** Creation and development of a roadside service network on the country’s roads to improve transport infrastructure in the Republic of Kazakhstan and increase budget revenues, as well as improve the quality of transport services, ensure safe and uninterrupted traffic and increase the competitiveness of Trans-Kazakhstan transit routes.

**Services provided:**
Motels with 25 rooms, commercial and public service blocks with cafes, maintenance blocks (gas stations, service stations with a car wash), parking lots, engineering structures and networks in all regions and cities of the regional destination of Kazakhstan.

**Initiator:**
JSC “National company”KazAvtoZhol”

**Key investment indicators of one object**

<table>
<thead>
<tr>
<th>Index</th>
<th>Categories of motoway services</th>
<th>A and B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investment, US$ thousands</td>
<td>2,456</td>
<td>367</td>
<td>883</td>
<td></td>
</tr>
<tr>
<td>Project NPV, US$ thousands</td>
<td>2,045</td>
<td>319</td>
<td>167</td>
<td></td>
</tr>
<tr>
<td>IRR, %</td>
<td>26.12</td>
<td>28.41</td>
<td>17.10%</td>
<td></td>
</tr>
<tr>
<td>EBITDA return, %</td>
<td>18.4%</td>
<td>79.9%</td>
<td>13.1%</td>
<td></td>
</tr>
<tr>
<td>Payback period, years</td>
<td>5.12</td>
<td>4.81</td>
<td>6.98</td>
<td></td>
</tr>
<tr>
<td>Discounted payback period, years</td>
<td>7.35</td>
<td>6.67</td>
<td>13.84</td>
<td></td>
</tr>
</tbody>
</table>

**Types of roadside service points**
- For IB, IIIB, IIIB, IVG climatic subareas with usual geological conditions;
- For IVA, IVG climatic subareas with usual geological conditions;
- For IB, IB, IIIA, IIB, IVG climatic subareas with seismic activity of 7 points;
- For IB, IIIA, IIB, IVA, IVG climatic subareas with seismic activity of 8 points;
- For IB, IIIA, IIB, IVA, IVG climatic subareas with seismic activity of 9 points;

**Buildings and construction of the objects of category "A" and "B"**

<table>
<thead>
<tr>
<th>Name</th>
<th>Floors</th>
<th>Built-up area, sq. m</th>
<th>Total area, sq. m</th>
<th>Constr volume of the building, cub. m</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motel with 25 rooms</td>
<td>2</td>
<td>410</td>
<td>567</td>
<td>2,667</td>
</tr>
<tr>
<td>Block of commercial services with a cafe</td>
<td>1</td>
<td>850</td>
<td>616</td>
<td>3,584</td>
</tr>
<tr>
<td>Maintenance block with gas station building</td>
<td>1</td>
<td>370</td>
<td>275</td>
<td>1,437</td>
</tr>
<tr>
<td>Total</td>
<td>-</td>
<td>1,630</td>
<td>1,348</td>
<td>7,688</td>
</tr>
</tbody>
</table>

**Project profitability**

<table>
<thead>
<tr>
<th>Categories &quot;A&quot; and &quot;B&quot;</th>
<th>Year 2</th>
<th>Year 5</th>
<th>Year 7</th>
<th>Year 10</th>
<th>Year 20</th>
<th>Year 24</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue, US$ thous.</td>
<td>3,715</td>
<td>4,006</td>
<td>4,103</td>
<td>4,262</td>
<td>5,363</td>
<td>5,691</td>
</tr>
<tr>
<td>EBITDA margin, %</td>
<td>17%</td>
<td>17%</td>
<td>18%</td>
<td>19%</td>
<td>19%</td>
<td>19%</td>
</tr>
</tbody>
</table>

**Categories “C” and “D”**

<table>
<thead>
<tr>
<th>Categories &quot;C&quot; and &quot;D&quot;</th>
<th>Year 5</th>
<th>Year 8</th>
<th>Year 10</th>
<th>Year 20</th>
<th>Year 24</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue, cat. C, US$ thous.</td>
<td>17%</td>
<td>13%</td>
<td>13%</td>
<td>13%</td>
<td>13%</td>
</tr>
<tr>
<td>Revenue, cat. D, US$ thous.</td>
<td>78%</td>
<td>79%</td>
<td>79%</td>
<td>81%</td>
<td>81%</td>
</tr>
<tr>
<td>EBITDA margin, cat. C, %</td>
<td>14%</td>
<td>16%</td>
<td>17%</td>
<td>22%</td>
<td>25%</td>
</tr>
<tr>
<td>EBITDA margin, cat. D, %</td>
<td>78%</td>
<td>79%</td>
<td>79%</td>
<td>81%</td>
<td>81%</td>
</tr>
</tbody>
</table>

**Market prerequisites:**

**Growing demand for cars.** Over the past 10 years, the average annual increase in the number of cars in the country amounted to 5%. According to forecasts, the car fleet will grow from 4.3 million units in 2018 to 10 million units by 2050. The country has also increased passenger and cargo turnover in road transport. The average annual growth for these indicators over the past 5 years was 2.6% and 2.05%, respectively. At the same time, Project implementation will create pressure on informal road carried for their registration and subsequent streamlining of the transport industry.

**Transit potential.** The use of the territory of the Republic of Kazakhstan for the transit of goods between East and West is becoming increasingly attractive. The growth in transit by road over the past year amounted to 223%. Project implementation is necessary to extract the greatest benefits from transit flows and ensure high quality transport infrastructure for them.

**Extensive customer base.** In 2018, the share of cargo transportation by land was 30%, and the share of passenger turnover was 88%.

**October 2019**

KAZAKH INVEST: Investment offer
Healthcare and pharmaceuticals
Creation of a biopharmaceutical complex to develop and produce medicines

Products
Albumin - 3,833 thousand units, human albumin - 648 thousand units, aminosaliclyc acid - 945 thousand units, acetylsaliclyc acid - 473 thousand units, diclofenac - 473 thousand units, ipratropium bromide - 473 thousand units, potassium iodide - 945 thousand units, lincomycin - 473 thousand units, mitomycin - 648 thousand units, nitroglycerin - 473 thousand units, oxaliplatin - 175 thousand units, fludrocortisone - 473 thousand units.

Project description
The project plans the construction of a biopharmaceutical complex to develop and produce modern immunodepressants and immunomodulators; antiviral, anti-tumour, anti-inflammatory, hormonal and hemogenesis stimulators; blood substitutes, anti-hemophilic, anti-cholinergic, antiseptic, antioxidant, cardio-vascular and phlebology items. The factory is due to be built in Almaty’s Medeu District in the “Innovative Technology Park” SEZ.

Company
BioEurasia Scientific and Production Complex LLP, which was created to implement the Project and has no other operations.

Market
• The largest market in Central Asia. According to Fitch Solutions, the Kazakhstan pharmaceutical market is the largest in Central Asia in absolute terms. In 2021, total medicine sales in the country amounted to 1.71 billion USD. The Agency has predicted that medicine sales will increase in the next 5 years, with the market expanding with CAGR of 11.7% between 2022 and 2026, achieving market value of 2.98 billion USD in 2026.

Investment attractiveness of the project:
• Compliance with global standards. Company product will meet global GMP standards. Furthermore, the Company has its own specialists, certified GMP, GCP and GDR, many years of international experience in medicine production and experience in biotechnology.
• Own raw materials base. The BioEurasia LLP plant will produce active pharmaceutical substances in Kazakhstan without expensive imports, which will help reduce the cost of production.

Investment proposal
The Project requires financing of 63,978 thousand USD, of which:
• 70% (44,784 thou. USD) – debt financing (subject to collateral);
• from 30% (19,193 thou. USD) – investor participation.

The proposed financing structure and state support measures are indicative. The final financing structure and Project interests will be determined based on the results of negotiations with the investor.
Development and production of GMP-standard human vaccines

**Products**
Planned capacity from 2025 QIV should ensure the production of:
- the rabies vaccine – from 240 thousand doses per year;
- the tick encephalitis vaccine – from 870 thousand doses per year;
- the hepatitis A vaccine – from 870 thousand doses per year;
- immunoglobulin to prevent and treat tick encephalitis – from 60 thousand doses per year;
- horse blood plasma immunoglobulin to prevent and treat rabies – from 180 thousand doses per year.

**Project**
The idea behind this project (the “Project”) is to build a plant to develop and produce GMP-standard (Good Manufacturing Practice) human vaccines and immunoglobulin.

The Project will see the construction of a 5,300 m² plant on a 64 ha site owned by the Initiator. An office, production block and testing centre with a nursery to breed and keep laboratory animals for scientific and experimental work have already been built on the site.

**Company**
Antigen Scientific and Production Enterprise LLP produces biological and medicinal veterinary drugs.

The Company produces 30-50 million doses of preventative drugs and 20-30 million diagnostic tests every year, which it partially exports to Kyrgyzstan, Uzbekistan, Turkmenistan, Tajikistan, Azerbaijan, Armenia and Georgia.

**Market**
- **Growing demand.** The last five years have seen positive changes in the Kazakhstan construction sectors, which by 2021 reached 5.5 trillion tenge. A growing population will increase the volume of non-residential and residential buildings under construction, along with vehicle highways and utilities (for example, water and gas supplies). According to Marketline forecasts, the Kazakhstan construction sector in 2021-2025 will grow at an average annual rate of 4.3%.

**Investment attractiveness of the project:**
- **Investment – US$ 4,728 thousand**
- **Project NPV – US$ 36,602 thousand**
- **MIRR – 53%**
- **Payback period – 3.4 years**

**What is the attractiveness of the project?**
- **Compliance with global standards.** Company product will meet global GMP standards, which will incorporate modern control methods involving World Health Organisation reference strains.
- **Initiator experience.** The Company possesses an extensive intellectual and material base, and employs highly-qualified specialists. It is currently exporting a part of its product to Central Asian countries, Azerbaijan, Armenia and Georgia.

**Investment proposal**
The Project requires investment of US$ 4,728 thousand, of which:
- 70% (US$ 3,310 thousand) – debt financing subject to collateral
- 30% (US$ 1,419 thousand) – investor participation.

The proposed financing structure and state support measures are indicative. The final financing structure and Project interests will be determined based on the results of negotiations with the investor.
Expansion of existing medicine, as well as hip joint implant and knee prosthetic production

Products
When design capacity is achieved in 2026, annual output for the various products will be 2 million vials of Corvalolum, 800 thousand vials of Valocardin (500 thousand at 25 ml and 300 thousand at 50 ml), 708 packs of Ataluren, 2,153 packs of Enzalutamide, 1.2 million packs of Ompesol, 850 thousand packs of Esomeprazole in capsule form (600 thousand at 20 mg and 250 thousand at 40 mg), 10 million fluconazole 150 mg tablets. 5 thousand hip joint implants and 3 thousand knee prosthetics will be produced annually. All product will be sold domestically.

Project
The goal of this project (the “Project”) is to upgrade existing medicine production and expand output by producing hip joint implant and knee prosthetics.

Production is planned for an existing production site in the village of Erkin, Almaty Oblast. The Company possesses a 1 ha land plot and buildings and facilities covering an area of 5,000 m² (including, a medicine production block and implant production shop covering 2,500 m² and 500 m², respectively).

Implementation of the Project will help reduce the country’s dependence on medicine imports and artificial implants and prosthetics.

Company
Sultan LLP is a pharmaceutical production company and currently produces 20 types of medicines. It introduced GMP standards in 2017.

Market
• Range diversification and sales geography. As the technical production process for many medicines is similar to that used by the Company, once design capacity is achieved, the Company will be able to expand its range to cover a large target consumer group, and also expand its supply geography.

Investment attractiveness of the project:
Investment – 18,137 thousand USD
Project NPV – 19,944 thousand USD
IRR – 40.9%
Payback period – 2.82 years

What is the attractiveness of the project?
• Initiator experience. The Company owns an extensive intellectual and material base, and employs a team of highly-qualified people. It currently produces 20 different medicine items.
• Long-term supply agreements and reliable partners. The Company has entered into a 10-year long-term contract to supply hip joint implants and knee prosthetics with SK-Pharma. The Company’s partners include JSC AZTM, Ghalam LLP, JSC National Prosthetic and Orthopedics Centre and others.

Investment proposal
The Project requires investment of US$ 18,137 thousand, of which:
• 70% (US$ 12,696 thousand) – debt financing subject to collateral
• 30% (US$ 5,441 thousand) – investor participation.

The proposed financing structure and state support measures are indicative. The final financing structure and Project interests will be determined based on the results of negotiations with the investor.
Nephrocentre network upgrade and expansion

**Service**
Hemodialysis department - 155 thousand procedures
Inpatient and acute department - 7 thousand procedures and consultations, department of Nephrology - 12 thousand procedures and consultations

**Project description**
The project envisages to upgrade operational medical centres in cities across Kazakhstan, and also expand nephrocentre networks, which will involve repairing premises, upgrading and purchasing new medical equipment. The Project stipulates the expansion of medical centres in Karaganda (up to 550 m²), Aralsk (up to 300 m²), and the opening of a new nephrocentre branch in Karaganda at the 450 m² oblast clinical hospital, Petropavlovsk (up to 450 m²).

**Company**
B.B. Nura is a Kazakhstan network of nephrocentres that offers a full range of nephrological services. The first outpatient dialysis centre was opened in Karaganda in 2011. Within a decade, the number of centres across the country had grown to 20, allowing over 1,000 patients to receive treatment. All of the centres have been fitted with B.Braun Avitum AG haemodialysis equipment, Herco Wassertechnik water treatment system and LIKAMED haemodialysis chairs.

**Market**
• **Increase in capacity and new market expansion.** The rising geriatric population, increases in healthcare costs and increases in disposable income may help market growth. Kazakhstan does not currently have centres that provide a full range of nephrological services and in-patient post-transplant observation. The opening of new centers in the regions of Kazakhstan will allow us to occupy a niche and will help improve patient quality of life across the country.

**Investment attractiveness of the project:**
Investment – 5,117 thousand USD
Project NPV – 34,076 thousand USD
IRR – 58.6% 
Payback period – 3.6 years

**What is the attractiveness of the project?**
• Developed branch system and an extensive logistics chain. The Kazakhstan Nephrocentre Network B.B. NURA has been providing a full range of nephrological services since 2011. It currently has 24 nephrological centres operating in 8 cities of Kazakhstan, where over 1,000 patients receive treatment on over 200 “artificial kidney” machines
• Highly-qualified personnel and own equipment maintenance service. The company employs over 1,000 medical professionals who undergo constant vocational training in an effluent therapy training centre. Equipment from leading global manufacturers, such as B.Braun Avitum AG, Herco, LIKAMED and TeDeCo, is maintained by an onsite maintenance service.

**Investment proposal**
The Project requires investment of 5,117 thousand USD, of which:
• 70% (3,582 thousand USD) – debt financing subject to collateral
• from 30% (1,525 thousand USD) – investor participation.

The proposed financing structure and state support measures are indicative. The final financing structure and Project interests will be determined based on the results of negotiations with the investor.
Dialyzer unit production plant

Annual capacity:
Dialyzers – 1 million units/year.
All finished products will be sold domestically.

Project
The Project proposes the construction of a plant to manufacture dialysis units with capacity of 1 million units per year. The plant will be built in Aktobe Oblast on a 4 ha leased site. Production premises will cover an area of 3,100 m².

Company
Global Service Company XXI LLP. The Company has been selling imported dialysis units in Kazakhstan since 2018.

Market
• In Kazakhstan, dialysis unit production is a current issue due to the steady growth in the number of patients with terminal kidney disease and forced to undergo substitutive therapy – haemodialysis. According to the III National Congress of Kazakhstan Nephrologists, Dialysis Doctors and Transplantologists (Semei, September 2019), the number of patients on haemodialysis at the start of 2019 was 7,370.

• The dialysis unit production process in Kazakhstan is underdeveloped due to distances from raw material suppliers. Domestic demand for haemodialysis consumables is covered by imports. Official statistics on dialysis unit production in Kazakhstan are not kept.

Project investment attractiveness:
Investment – US$ 6,138 thousand
Project NPV – US$ 9,340 thousand
IRR – 34.7%
Payback period – 4.68 years

What is the project’s attractiveness?
• Low level of competition. The Project will supply medical institutions with domestic products and reduce import reliance, as dialysis units are currently not produced in Kazakhstan.

• State support. The Project is recognised as a priority sector for state support, which offers a range of concessions, preferences and land. The Initiator is planning to enter into a long-term agreement to supply medical items with SK-Pharmacy LLP within the framework of a 10-year programme to support domestic manufacturers.

Investment proposal
The Project requires investment of 6,138 thousand USD, of which:
• 30% (1,841 thousand USD) – investor participation;
• from 70% (4,297 thousand USD) – debt financing subject to collateral.

The proposed financing structure and state support measures are indicative. The final financing structure and Project interests will be determined based on the results of negotiations with the investor.
Nonwoven manufacturing

Commercial products

Project description
The project envisages the construction of a nonwovens plant with a capacity of 10,000 tonnes annually. Nonwovens are widely used in the production of personal protective equipment – disposable medical masks, gowns, sheets, overalls, etc. The production will be located in the Special Economic Zone in Pavlodar.

Company
Merusar and K LLP was founded in 2001. The company has many an extensive experience in the sale of medical products (sterile and non-sterile kits for medicine and cosmetology) to healthcare institutions across the country.

Market
• According to Mordor Intelligence, the world market for nonwovens will reach 61 billion USD by 2025. Average annual growth will be 6.68% in 2021-2025.
• The demand for nonwovens in Kazakhstan reached 53,465 tonnes in 2020, down 9% from the previous year. The shortage of nonwovens remains in the country, averaging 72% for the period between 2016 and 2020.

Investment attractiveness of the project:
Investment – US$ 43,591 thousand
Project NPV – US$ 18,272 thousand
IRR – 19.0%
Payback period – 7.6 years

What is the attractiveness of the project?
• **Local content.** Local production will allow occupying a significant niche in the market of disposable medical devices, reducing import dependence.
• **Initiator’s experience.** The company has an extensive experience in the sale of medical devices (sterile and non-sterile kits for medicine and cosmetology) to healthcare institutions across the country.
• **Consumer demand.** During the period from 2016 to 2020, there was an increase in demand for medical and hygiene products made from nonwovens.

Investment proposal
The Project requires investment of US$ 43,591 thousand, of which:
• 70% (30,513.7 thousand USD) – debt financing subject to collateral;
• from 30% (13,077.3 thousand USD) – investor participation.

The proposed financing structure and state support measures are indicative. The final financing structure and Project interests will be determined based on the results of negotiations with the investor.
Production of a cannabidiol-based antiepileptic drug

**Products**
During 2024–2026: CBD isolate – 461 kg/year; From 2027: cannabidiol-based antiepileptic drug – 46,076 packages/year.
Domestic demand: 68 thousand people suffering from epilepsy.

**Project idea**
The Project envisages the production of a cannabidiol-based antiepileptic drug at the Taraz Chemical Park SEZ in Dzhambul Oblast. Total complex area covers 7.5 thousand m². The construction of an industrial complex and laboratory is expected in accordance with international GMP standards.

**Company**
The initiator of the project is Rooftop Holdings LLP. The Initiator has a number of offers of scientific collaboration from global scientific research institutions such as Harvard Medical School International Phytomedicine and Medical Cannabis Institute and the Massachusetts Institute of Technology Whitehead Institute For Biomedical Research. The consulting partner for developing a strategy and clinical research is Cleveland Clinic Innovations.

**Market**
- According to research published by the World Health Organisation in 2019, around 50 million people suffer from epilepsy. Furthermore, according to the same research, roughly 80% of people with epilepsy live in low or medium income countries.
- In 2019, the global CBD market was valued at 6.74 billion USD. It is forecast to grow by 2025 to 18.35 billion USD with CAGR at 18.2% (2020-2025).

**Investment attractiveness of the project:**
Investment amount – US$ 14,246 thousand
Project NPV – US$ 26,979 thousands
IRR – 38.9%
Payback period – 4.5 years

**Prerequisites for the Project implementation**
- **Innovative nature of the Project.** Due to the current lack of domestic producers and reliance on overseas equivalents, the plan is to produce a CBD-based antiepileptic drug.
- **Access to raw materials.** The Initiator plans to make initial cannabis seed purchases overseas and then supply the Project with its own seed material. It has the opportunity to expand its cannabis growing capabilities at the Taraz Chemical Park SEZ.

**Required investments and structure of financing**
The Project requires investment of US$ 14,246 thousand, of which:
- 70% (9,972 thousand USD) – debt financing subject to collateral;
- from 30% (4,274 thousand USD) – investor participation.
The proposed financing structure and state support measures are indicative. The final financing structure and Project interests will be determined based on the results of negotiations with the investor.
Manufacturing of disposable syringes in Almaty region

**Products**
Production capacity: 285 million units of disposable syringes
Demand in Kazakhstan: 502.8 million units of disposable syringes

**Project idea**
The Project envisages the construction of a plant for the manufacturing syringes with a capacity of 285 million units per year. The production will be located in the Special Economic Zone “Park of Innovational Technologies” in Almaty region. The total area of the land is 5 ha, production area – 4,000 sq. m.

**Company**
Dolce LLP is a Kazakhstani pharmaceutical company founded in 2003 and specializing in the production and wholesale and retail sales of medical devices. The company has experience in the sale of medical products to state medical institutions throughout the country. Since 2011, it has been a supplier of the distributor – SK-pharmacy LLP.

**Market**
- According to Firch Solutions, the syringe market is projected to reach US$ 11.5 billion by 2026. Syringe production will grow at a CAGR of 7.9% over the period 2021-2026.
- The demand for syringes in Kazakhstan reached 502,790 thousand units in 2020, with an increase of 37% compared to the previous year. The country continues to have a shortage of syringes on average 76% during 2016-2020. In 2020, Kazakhstan imported 407,322 thousand disposable syringes.

**Investment attractiveness of the project:**
- Investment amount – 5,731 US$ thousands
- Project NPV – 6,287 thousand USD
- IRR – 31.4%
- Payback period – 4.9 years

**Prerequisites for the Project implementation**
- Low competition and deficit in the domestic market. The Project will provide medical institutions with domestic products and reduce import dependence. Today only a few manufacturers are involved in the production of syringes in Kazakhstan.
- Developed infrastructure and communications. The industrial facility will be provided with water and electricity. In addition, there is a transport infrastructure: highways are connected to the territory of the SEZ.
- Availability of distribution channels. The Project Initiator has signed a long-term contract with a distributor SK-Pharmacy LLP within a state program for a period of 10 years.

**Required investments and structure of financing**
The Project requires investment of US$ 5,731 thousand, of which:
- 30 % (US$ 1,719.3 thousand) – debt financing subject to collateral;
- from 70 % (US$ 4,011.7 thousand) – Investor participation.

The proposed financing structure and state support measures are indicative. The final financing structure and Project interests will be determined based on the results of negotiations with the investor.
Medical glove production in Almaty Oblast

Commercial products
Annual capacity – 144 million units of medical gloves.

Project description
The purpose of the Project is to build a latex glove plant with capacity to produce 144 million units per year. Production will be located in the Innovative Technology Park Special Economic Zone in Almaty Oblast on a 5 ha plot. The production site will cover an area of 3,100 m2.

Company
Dolce LLP is a Kazakhstan pharmaceutical company founded in 2003, specializing in the production of medical items and wholesale/retail sales. The company has many years of experience in selling medical devices to state medical institutions throughout the country. Since 2011, it has been a supplier to the integrated distributor SK-Pharmacy LLP.

Market
• According to Fitch Solutions, global medical glove production will reach 3.7 billion USD by 2026. Average annual growth in medical gloves production will be 7.8% in 2021-2026.
• Domestic demand is covered by imports. In 2020, Kazakhstan imported 24.3 million pairs of medical gloves worth 2.1 million USD. The average annual growth in medical glove supplies into Kazakhstan in the last five years was -9%.

Investment attractiveness of the project:
- Investment – US$ 4,124 thousand
- Project NPV – US$ 4,458 thousand
- IRR – 38.9%
- Payback period – 4.4 years

What is the attractiveness of the project?
• Export potential. The launch of industrial production and the receipt of the required international compliance and quality certificates help the Company expand its sales geography significantly, first of all in other CIS countries.
• Developed infrastructure and communications. To ensure operating continuity, the facility will have access to utilities, electricity and transport infrastructure: the SEZ territory is connected to the road system.
• Sales channels in place. The Initiator has entered into a long-term (10-year) agreement to supply medical items with SK-Pharmacy LLP as part of the programme to support domestic producers.

Investment proposal
The Project requires investment of US$ 4,124 thousand, of which:
• 70% (2,887 thousand USD) – debt financing subject to collateral;
• from 30% (1,237 thousand USD) – investor participation.

The proposed financing structure and state support measures are indicative. The final financing structure and Project interests will be determined based on the results of negotiations with the investor.
Construction of a plant for the production of diapers in Nur-Sultan

Commercial products
Annual capacity: 2.88 million packs of baby diapers

Project description
This investment project plans to build a plant for the production of baby diapers with an annual capacity of 2.88 million packs within “Astana – New City” Special Economic Zone in the city of Nur-Sultan. The plant area is 1,125 sq. m.

Company
The Project Initiator, United Care Group LLP is a project company established to implement a project to build a plant for the production of baby diapers. The founders of the Company are Aesthetics Group LLP (50%) and Kausar-Pharm LLP (50%).

Market
- In 2020, the global diaper market revenue reached US$ 48,915 million. According to forecasts by Allied Market Research, the world will see an increase in total revenue, with CAGR at 4.7% in 2021-2024.
- The production of hygiene products in Kazakhstan reached 311 tonnes in 2020. The compound annual growth rate (CAGR) for 2016-2020 was 30%. The only domestic manufacturer of children’s disposable diapers is Sachiko Olzha Products LLP. In 2020, the company’s share in the market of diapers and baby pants in Kazakhstan amounted to 5.3% or KZT 4.4 billion.

Investment attractiveness of the project:
Investment – US$ 3,569 thousand
Project NPV – US$ 6,926 thousand
IRR – 34.6%
Payback period – 5.3 years

What is the attractiveness of the project?
- Favorable location. Location in Nur-Sultan is an advantage given an easy access to the target group of consumers and a developed transport hub, which ensures prompt deliveries to the regions of Kazakhstan and the neighboring markets such as Russia, China, Uzbekistan and Kyrgyzstan. These factors will allow achieving a lower, competitive production cost.
- Growing demand and entering new markets. According to MarketLine forecasts, there will be an increase in the total revenue of the diaper market and consumption around the world, which will facilitate further expansion to the neighboring sales markets.

Investment proposal
The Project requires investment of US$ 3,569 thousand, of which:
- 70% (US$ 2,498.3 thousand) – debt financing subject to collateral;
- from 30% (US$ 1,070.7 thousand) – investor participation.
The proposed financing structure and state support measures are indicative. The final financing structure and Project interests will be determined based on the results of negotiations with the investor.
**Project description:**
Construction of a pharmaceutical plant to produce the original drug substance “N-Pentoxenial” and the original drug “Notaloron” in the form of an injection solution for the treatment of liver diseases. Number of jobs created – 90.

**Location:**
Turkestan Oblast, Ordabasy district, Temirlan village.

**Initiator:** Pharmaceutical company Beisenfarm LLP.

**Commercial products and capacities:**
Drug “Notaloron” – 6,160 thousand packages.

**Sales markets:** Kazakhstan, Uzbekistan, Kyrgyzstan, Tajikistan, Turkmenistan, Mongolia, Turkey, Belarus, Russia.

**Manufacturing process:**

**Key investment indicators**

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investment amount, US$ thous.</td>
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</tr>
<tr>
<td>Project NPV, US$ thous.</td>
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</tr>
<tr>
<td>IRR, %</td>
<td>27.1%</td>
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<tr>
<td>EBITDA margin, %</td>
<td>24%</td>
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<tr>
<td>Payback period, years</td>
<td>7.1</td>
</tr>
<tr>
<td>Discounted payback period, years</td>
<td>9.8</td>
</tr>
</tbody>
</table>

**Investment structure**

| Construction and assembly work    | 70% |
| Machinery and equipment          | 11% |
| Initial working capital          | 19% |

$70.0 million

$11.4 million

$19.2 million

**Market prerequisites:**

**Absence of similar production.** There is no production of injectable hepatoprotectors in Kazakhstan. The market niche is free.

**Plans to expand medical uses.** In the future, the initiator plans to expand the medical uses of the drug by conducting additional clinical trials (inclusion of children and pregnant women into the list of potential patients; adding NASH treatment potential). Expansion of indications for the use of the drug will increase the Company’s sales market.

**Plans to include the drug in state medical procurement.** In accordance with the legislation of the Republic of Kazakhstan, domestic suppliers have advantages in conducting state purchases of medicines. If a domestic manufacturer is selected as a supplier, the Uniform Distributor SK-Pharmacy LLP concludes a long-term supply contract with him for a period of up to 10 years.

**Project profitability**

![Project Profitability Chart]

**Financing structure**

- **Initiator equity**
  - 15% ($15.55 million)
- **Participation of the Fund**
  - (KIDF or KCM) 7.3% ($0.98 million)
- **Debt financing subject to collateral**
  - 70% ($70.39 million)
- **Participation of the Investor from 7.4% ($7.46 million)**

The proposed financing structure is indicative, the final financing and Project participation structures will be determined based on the results of negotiations with the Investor.

KAZAKH INVEST
Investment proposal
August 2020

Deloitte.
### Project description:
Construction of a full cycle chemical and pharmaceutical production facility in accordance with international GMP standards. Number of jobs created – 170.

### Location:
Karaganda Oblast, Bukhar-Zhyrau district, Doskey village, Special Economic Zone "Saryarka".

### Initiator:
Pharmaceutical company Bioquintes LLP.

### Commercial products and capacities:
- Veterinary substances - 215 tons, finished drug forms - 1,800 thous. packages, original drugs - 950 thous. standards, latest generation generics - 652 thous. packages, analog generics – 20,548 thous. packages.

### Sales markets:
Kazakhstan, Russia, Belarus.

### Manufacturing process:
The initiator holds patents for catalytic methods and catalysts for the production of substances. All substances will be produced using the same technological units and apparatus.

### Key investment indicators

<table>
<thead>
<tr>
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<th>Results</th>
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<tbody>
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<td>Project NPV, US$ thous.</td>
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<td>IRR, %</td>
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<td>EBITDA margin, %</td>
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<td>Payback period, years</td>
<td>5.9</td>
</tr>
<tr>
<td>Discounted payback period, years</td>
<td>8.3</td>
</tr>
</tbody>
</table>

### Investment structure

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction and assembly work</td>
<td>30%</td>
<td>$10.1 million</td>
</tr>
<tr>
<td>Machinery and equipment</td>
<td>70%</td>
<td>$23.5 million</td>
</tr>
</tbody>
</table>

### Market prerequisites:

**Long-term agreement and inclusion of the Initiator’s drugs in the procurement list of the Uniform Distributor.** The construction of a plant in accordance with GMP standards enables the Initiator to conclude a long-term contract for up to 7 years with SK-Pharmacy LLP for the purchase of medicines. It should be noted that The Uniform Distributor (SK-Pharmacy LLP) added 37 of the Initiator’s drugs to the List of Drugs for inclusion in the list of long-term procurement contracts with domestic manufacturers.

**No need for costly clinical trials.** The original drugs have already passed clinical trials and are currently being marketed. FDFs, generics and substances do not require clinical trials. However, when production starts, trial batches are checked for certification.

**Expansion of the product range.** After the company reaches its full output capacity, it is possible to expand the range of manufactured drugs to cover a larger target group of consumers.

### Project profitability

![Graph showing project profitability](image)

**Financing structure**

- **Initiator equity**: 12% ($4.03 million)
- **Participation of the Fund (KIDF or KCM)**: 9% ($3.02 million)
- **Debt financing subject to collateral**: 70% ($23.48 million)
- **Participation of the Investor from 9%**: ($3.02 million)

The proposed financing structure is indicative, the final financing and Project participation structures will be determined based on the results of negotiations with the Investor.
Prerequisites for Project implementation

Low competition in Kazakhstan. To date, several manufacturers are involved in the production of nonwovens in Kazakhstan, and the implementation of the Project will allow to provide raw materials for local manufacturers of disposable medical devices and reduce import dependence. In connection with the growing demand for medical personal protective clothing around the world due to the Covid-19 coronavirus infection pandemic, the Kazakhstan Government introduced restrictions on the imports of foreign medical products to support domestic manufacturers.

Global demand for medical devices made of nonwoven material. According to Fitch Solutions, the global production of medical products from polypropylene in 2019 amounted to US$ 16 billion, down 2% compared to the previous year. The CAGR for the period between 2015 and 2019 amounted to 5%. It is expected to reach US$19 billion by 2022.

Project description

The Project envisages the construction of a nonwoven material production plant with a capacity of 2,300 tonnes per annum as well as medical devices in the future. The production will be located in the special economic zone Park of Innovative Technology in Almaty Oblast. The project will create 54 jobs.

Initiator: Dolce LLP is a Kazakhstan pharmaceutical company founded in 2003, specialized in the production and wholesale and retail sales of medical products. The Company and Dolce Farm LLP are integral parts of pharmaceutical production and commercial association engaged in the production of disposable medical products, professional consumables, disposable clothing and linen, as well as medicines. Since 2011, the company has been a supplier of the Single Distributor SK-Pharmacia LLP.

Commodity production and capacity: Upon reaching the design capacity since 2024, it is planned to produce 2,300 tonnes of finished products annually.

Sales markets: Domestic market

Equipment suppliers: Chinese company Beijing LiaoSha Import Export Trading Co., Ltd.

Key investment indicators of the Project

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Results</th>
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</thead>
<tbody>
<tr>
<td>Investment amount, US$ thousand</td>
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<td>Project NPV, US$ thousand</td>
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<tr>
<td>IRR, %</td>
<td>19.6%</td>
</tr>
<tr>
<td>EBITDA margin, %</td>
<td>29%</td>
</tr>
<tr>
<td>Payback period, years</td>
<td>6.8</td>
</tr>
<tr>
<td>Discounted payback period, years</td>
<td>10.8</td>
</tr>
</tbody>
</table>

Investment structure

- Construction and assembly work: 26% $2.2 million
- Machinery and equipment: 54% $4.6 million
- Other capital expenses: 1% $0.1 million
- Working capital: 19% $1.6 million

Project profitability

The proposed financing structure is indicative, the final financing and Project participation structures will be determined based on the results of negotiations with the Investor.
Construction of the ski resort Turgen - 37

**Product**
The number of rooms in hotel - 70 rooms.
Other services: ski school, equipment for rental, Alpine Coster Rides attraction and other.

**Project**
This investment project (the “Project”) envisages the construction of a ski resort in the Turgen gorge of Almaty region. A land plot of 310 hectares allocated for the Project is located 70 km from Almaty. The expected length of ski slopes of various levels is 37.5 km with a capacity of up to 5,000 people per day. The project provides for the installation and construction of 3 cable cars, the installation of 5 ski lifts and the construction of a hotel with 70 rooms. In addition, there will be a restaurant and 4 cafes, a first-aid post, shops, a ski school and recreational facilities on the ski resort territory.

**Company**
The Project initiator is Turgen Resort LLP.

**Market**
- In 2016-2019, average annual growth of incoming tourists was 12.7%. In 2020 the number of incoming tourists was over double the number of outbound tourists. In addition, the number of countries whose nationals can enter Kazakhstan visa-free has also grown.
- In 2020, Kazakhstan nationals spent approximately 397 billion tenge on domestic and overseas tourism. Approximately 291 billion tenge (73%) of that amount was spent in Kazakhstan.

**Investment attractiveness of the Project:**
- Investment – US$ 98,133 thousand
- NPV – US$ 19,869 thousand
- IRR – 13.6%
- Payback period – 8.8 years

**What is the attractiveness of the project?**
- **Year-round offerings.** The unique mountainous area makes the location attractive for year-round offerings, including hotel accommodation, skiing, ecotourism, recreational facilities and other types of recreation (snowmobile tour, outdoor pool, horse riding, baths and SPA).
- **Unique country location.** Kazakhstan is in close geographic proximity to countries with higher international tourism levels, which opens the possibility of increasing incoming tourism. The location is a 1-2-hour car journey from major Kazakhstan city - Almaty. After commissioning, the Initiator will become the only supplier of tourist services in the middle price segment in the unique mountainous area of the Turgen gorge.

**Investment proposal**
The Project requires investment of US$ 98,133 thousand, of which:
- 70% (US$ 68,393 thousand) – debt financing subject to collateral;
- from 30% (US$ 29,440 thousand) – Investor participation.
The proposed financing structure and state support measures are indicative. The final financing structure and Project interests will be determined based on the results of negotiations with the investor.
Construction of a hotel and water park in Pavlodar Oblast

Project
The Project envisions the construction of the hotel, water park and infrastructure improvements on the basis of a children’s health camp in a pine forest of Shaldai village in Pavlodar Oblast (130 km from the city of Pavlodar). The facilities will be built on a 17 ha site. The site is two hours from Pavlodar airport, and 7-10 hours from major Russian and other Kazakhstan resorts. The tourist complex will feature hotel rooms and cottages, a restaurant, swimming pool, sauna, water park, games room and sports’ areas. Seasonal ethno-tours, horse riding and skiing trips, and snowmobile rides have also been planned. The plan is to engage international hotel operators to realise the Project.

Company
The Project Initiator is AST-LogiStic.PVL LLP, which was created in 2016. The Company is mainly involved in road haulage.

Market
- In 2016-2019, average annual growth was 12.7%, while in 2020 the number of incoming tourists was over double the number of outbound tourists. In 2016-2019, the growth in the number of incoming tourists has been stable at an average of 9.4% per year. In addition, the number of countries whose nationals can enter Kazakhstan visa-free has also grown.
- In 2020, Kazakhstan nationals spent approximately 397 billion tenge (73%) of that amount was spent in Kazakhstan.

Investment attractiveness of the project:
- Unique offerings. In addition to the hotel business, the Shaldai hotel will take into account modern food trends, “adventure” and recreational tourism.
- Year-round offerings and a lack of major competitors in the region. The attractive location for year-round offerings, including hotel accommodation, therapeutic leisure, surfing and so on. Pavlodar Oblast has no premium-class hotel complexes.
- New trend of unique and authentic travel. The millennium generation, which accounts for roughly 29% of international tourists prefers to visit authentic locations for new experiences.

What is the attractiveness of the project?
- Unique country location. Kazakhstan is in close geographic proximity to countries with higher international tourism levels, which opens the possibility of increasing incoming tourism. The location is a 7-10 hour car journey from major Kazakhstan and Russian cities.

Investment proposal
The Project requires investment of US$ 7,147 thousand, of which:
- 70% (5,003 thousand USD) – debt financing subject to collateral;
- from 30% (2,144 thousand USD) – investor participation.

The proposed financing structure and state support measures are indicative. The final financing structure and Project interests will be determined based on the results of negotiations with the investor. The investment allocation is as follows:
- 0.3% (18 thousand USD) – machinery and equipment purchase;
- 99.7% (7,129 thousand USD) – construction and assembly work.

Product
The number of rooms of the hotel - 70 rooms; namely, standard rooms - 50; luxury rooms - 20.
Construction of a multifunctional health and tourist eco-complex "Zhantobe" in Almaty region

**Product**
The number of rooms of the complex: hotel - 100 rooms; apartments – 240 units; cottages - 150 units.
Other services: summerhouses, aquapark, rope park, horse trips, pelotherapy, hydrotherapy.

**Project**
This investment project ("Project") is planned to build a multifunctional health and tourist eco-complex "Zhantobe" in the Talgar district of Almaty region.
The land plot on which the complex will be located occupies 27.9 hectares. This eco-complex includes a hotel with a total area of 3,600 square meters; apartments for rent – 13,390 sq. m; cottages – 7,12.5 sq. m; apartments for sale – 42,900 sq. m; outdoor and indoor water park with a total area of 18,500 sq. m; as well as an amusement natural park with equipped tracks for sports and recreation, athletics and cycling events.

**Company**
The Project Initiator is LLP PKF "Zhulduz". The main activity of the company is the rental and management of its own real estate, and additional - comprehensive maintenance of facilities and the provision of services of hotels with restaurants.

**Market**
- In 2016-2019, average annual growth was 12.7%, while in 2020 the number of incoming tourists was over double the number of outbound tourists. In 2016-2019, the growth in the number of incoming tourists has been stable at an average of 9.4% per year. In addition, the number of countries whose nationals can enter Kazakhstan visa-free has also grown.
- In 2020, Kazakhstan nationals spent approximately 397 billion tenge on domestic and overseas tourism. Approximately 291 billion tenge (73%) of that amount was spent in Kazakhstan.

**Investment attractiveness of the Project:**
Investment – US$ 28,425.4 thousand
NPV – US$ 13,650 thousand
IRR – 21.5 %
Payback – 7.5 years

**What is the attractiveness of the project?**
- **Unique offerings.** In addition to the hotel business, the hotel "Zhantobe" takes into account modern food trends of "adventure" and recreational tourism, provides a wide range of entertainment and activities for various segments of visitors.
- **New trend of unique and authentic travel.** The millennial generation, who make up about 29% of international tourists according to Euromonitor, prefer to visit authentic places where they can get new experiences. They also want to learn how to cook local food, try new sports, learn new languages and so on.
- **Unique climate.** According to agroclimatic conditions, the Zhantobe OTC will be located in a mountainous and foothill zone with a mild climate. Mountain breezes carry streams of humidified and cool air in the summer, and in winter, increased solar activity favorably affects the comfort of rest and recovery conditions.

**Investment proposal**
The Project requires investment of US$ 28,425.4 thousand, of which:
- 60% (17,055 thousand USD) – debt financing subject to collateral;
- from 40% (11,370 thousand USD) – investor participation.

The proposed financing structure and state support measures are indicative. The final financing structure and Project interests will be determined based on the results of negotiations with the investor.
Project Profitability

Prerequisites for implementation of the Project

Growing demand for tourism services. Since 2015, the number of domestic tourists has risen more than 200 times from 30 thousand people up to 8,587 thousand people, while the number of outbound tourists has hardly changed over the past five years.

Growth of attendance at resort areas of the RK. In 2019, 1,239 thousand people stayed in tourist accommodation places. The average annual growth rate of this indicator for 2015-2019 amounted to 24%. Moreover, the closure of borders connected with the COVID-19 pandemic could contribute to the development of domestic tourism in the country.

Year-round offer and attractive location. An attractive location for a year-round offering, including hotel accommodation, recreational activities (antler therapy, aquatherapy), hunting, fishing and hiking. Katon-Karagai State National Natural Park is an ecologically clean area with picturesque landscapes with trails, waterfalls and rich flora and fauna.

Project Profitability

![Graph showing Project Profitability](image)

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investment amount, US$ thous.</td>
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<tr>
<td>Project NPV, US$ thous.</td>
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<td>IRR, %</td>
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<td>EBITDA yield, %</td>
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<td>Payback period, years</td>
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<td>Discounted payback period, years</td>
<td>11.85</td>
</tr>
</tbody>
</table>

Investment structure

- Construction and assembly work: 50% = $2.7 mln
- Machinery and equipment: 50% = $2.7 mln

Financing structure

- Debt financing subject to collateral: 70% ($3.8 mln)
- Participation of the Investor from 30% ($1.6 mln)

The proposed financing structure is indicative, the final financing and Project participation structures will be determined based on the results of negotiations with the Investor.
Development of a resort complex on Bolshoe Chebachye and Tekekol lakes

Tourism

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

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 until 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 accommodation 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.

Key investment indicators

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project implementation period, years</td>
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<tr>
<td>incl. investment stage, years</td>
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<tr>
<td>operating stage, years</td>
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<td>Project NPV, US$ thous.</td>
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<td>EBITDA margin, %</td>
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<td>Payback period, years</td>
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<tr>
<td>Discounted payback period, years</td>
<td>17.9</td>
</tr>
</tbody>
</table>

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.
Energy sector
Waste processing combined with commercial product output

**Product**
Project product range will include 3,060 tonnes of base oil per year; 2,024 tonnes per year of technical carbon, steel wire cord and fuel oil; energy saving electric boilers – 60 units per year etc.

**Project location**

**Project**
The purpose of this investment project ("Project") is to raise financing to complete the construction of a hazardous waste processing and recycling plant that will generate commercial products. To implement the Project, the Astana-New City SEZ has allocated a 2.9621 ha site in Industrial Park No. 1.

Project goals include:
- producing I-20 and I-30 oil bases by recycling technical oil;
- producing technical carbon, steel wire cord and fuel oil by recycling carbon-bearing products;
- producing adapter plugs and powdered glass as a result of recycling mercury lamps;
- the thermal incineration of medical and chemical waste to create associated thermal energy for own consumption;
- producing industrial equipment, specifically energy-saving heating boilers and condensed air delivery line equipment.

**Company**
NTP Kazecotech LLP has been processing and recycling specific types of extremely hazardous waste since 2011. In the last few years, it has participated in tenders to collect, transport and process/recycle specific types of waste and use waste-free and low-waste processing techniques.

**Market**
- **New sales market.** Access to resources and the use of innovative processing techniques will help increase production capacity and diversify the range of yield, expanding the opportunity to enter and develop new markets.
- **Significant experience.** The Company has been processing and recycling specific types of extremely hazardous waste since 2011. In the last few years, it has participated in tenders to collect, transport and process/recycle specific types of waste and use waste-free and low-waste processing techniques together with its own qualified personnel.
- **Intellectual property.** A patent has been received to produce “screw compressors”. An application has been made to acquire national and international patents for the KROT drilling device and an energy saving electric boiler for heating systems.

**Investment proposal**
The Project requires investment of 18,756 thousand USD, of which:
- 70% (13,129 thousand USD) – debt financing subject to collateral
- 30% (5,627 thousand USD) – investor participation.

The proposed financing structure and state support measures are indicative. The final financing structure and Project interests will be determined based on the results of negotiations with the investor.
Construction of a hybrid biogas and solar power station

**Annual capacity:**
- electricity – 20,520 thousand kWh;
- organic fertiliser – 10 thousand tonnes.

**Project investment attractiveness:**
- Investment – US$ 13,813 thousand
- NPV – US$ 7,124 thousand
- IRR – 20.6%
- Payback period – 6.4 years

**What is the project’s attractiveness?**
- **Eco-friendliness.** Electricity production at a biogas unit significantly reduces harmful emissions into the atmosphere.
- **Product demand.** According to the Law On the Support of the Use of Renewable Energy Sources, clean energy producers are able to sell electricity generated from renewable sources to general grids at special tariffs through the RE FSC, which guarantees the procurement of electricity from renewable sources.
- **Availability of a raw materials base.** Almaty Oblast has registered 2,122 organisations operating in the agricultural industry, including three major poultry farms, two beer breweries, two pig farms within a 30 km radius from power station.

**Project**
The Project envisages the construction of a biogas power station, and an organic fertilizer production plant, located in Almaty Oblast’s Ili District.

**Company**
ZOR-Biogas LLP is a project Initiator, whose core operations are non-hazardous waste processing and removal.

**Market**
- According to the IFA, global fertiliser consumption (nitrogen + phosphorous + potassium) in 2020 was 198.2 million tonnes or 7 million tonnes (5.2%) higher than in 2019.
- In 2020, renewable energy (including biofuel) consumption grew 9.7%, slower than the average for the last 10 years (13.4% per year).
- In the last decade, electricity consumption in the southern zone of Kazakhstan grew by 43% to 23 billion kWh in 2020. At the same time, electricity production in the region amounted to 12 billion kWh, with annual average growth of 3.4%.

**Investment proposal**
The Project requires investment of 13,813 thousand USD, of which:
- 70% (9,669 thousand USD) – debt financing subject to collateral;
- from 30% (4,144 thousand USD) – investor participation.

The proposed financing structure and state support measures are indicative. The final financing structure and Project interests will be determined based on the results of negotiations with the investor.
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

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

<table>
<thead>
<tr>
<th>Purchase</th>
<th>Production</th>
<th>Consumption</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1</td>
<td>2.0</td>
<td>3.1</td>
</tr>
</tbody>
</table>

The initiator is also negotiating with Chinese offtakers.

China’s imports of electrical energy, mln MWh

<table>
<thead>
<tr>
<th>Year</th>
<th>Russia</th>
<th>6.42</th>
<th>6.19</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td></td>
<td>6.21</td>
<td></td>
</tr>
<tr>
<td>2016</td>
<td></td>
<td>6.19</td>
<td></td>
</tr>
<tr>
<td>2017</td>
<td></td>
<td>6.42</td>
<td></td>
</tr>
</tbody>
</table>

Prices of electrical energy by exporting country, USD/MWh

<table>
<thead>
<tr>
<th>Country</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Korea</td>
<td>17</td>
<td>19</td>
<td>21</td>
</tr>
<tr>
<td>Hong Kong</td>
<td>34</td>
<td></td>
<td></td>
</tr>
<tr>
<td>China</td>
<td>25</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Myanmar</td>
<td>43</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Russia</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Investment highlights

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Upfront investment</td>
<td>$38 MM</td>
</tr>
<tr>
<td>NPV</td>
<td>$12 MM</td>
</tr>
<tr>
<td>IRR</td>
<td>21%</td>
</tr>
<tr>
<td>Payback period</td>
<td>7 years</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Year</th>
<th>CPI</th>
<th>Tariff, tenge/kWh</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>106</td>
<td>17</td>
</tr>
<tr>
<td>2016</td>
<td>117</td>
<td>19</td>
</tr>
<tr>
<td>2017</td>
<td>107</td>
<td>21</td>
</tr>
</tbody>
</table>

Value proposition

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

Target Investor Mandate

- Long-term financing
- Supply of technologies

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

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project implementation period, years</td>
<td>24</td>
</tr>
<tr>
<td>incl. investment stage, years</td>
<td>6</td>
</tr>
<tr>
<td>operating stage, years</td>
<td>18</td>
</tr>
<tr>
<td>Investment amount, US$ thous.</td>
<td>340,000</td>
</tr>
<tr>
<td>Project NPV, US$ thous.</td>
<td>217,018</td>
</tr>
<tr>
<td>IRR, %</td>
<td>17.5%</td>
</tr>
<tr>
<td>EBITDA margin, %</td>
<td>47-60%</td>
</tr>
<tr>
<td>Payback period, years</td>
<td>11.4</td>
</tr>
<tr>
<td>Discounted payback period, years</td>
<td>15.5</td>
</tr>
</tbody>
</table>

---

**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**

<table>
<thead>
<tr>
<th>Year</th>
<th>Revenue, US$ thousands</th>
<th>EBITDA margin, %</th>
</tr>
</thead>
<tbody>
<tr>
<td>2021</td>
<td>68,914</td>
<td>44%</td>
</tr>
<tr>
<td>2024</td>
<td>114,803</td>
<td>47%</td>
</tr>
<tr>
<td>2025</td>
<td>157,542</td>
<td>59%</td>
</tr>
<tr>
<td>2035</td>
<td>167,837</td>
<td>59%</td>
</tr>
<tr>
<td>2040</td>
<td>201,543</td>
<td>59%</td>
</tr>
</tbody>
</table>

---

*Figure showing revenue and EBITDA margin progression*
Construction of a refuse recycling complex

Product
Annual capacity:
• 3,500 tonnes of technical carbon;
• 30,000 m$^3$ of foam glass granulate;
• 4,400 tonnes of greenhouse tomatoes and cucumbers.

Project
The aim of this investment project (the “Project”) is to build a refuse recycling production complex (“RRPC”) 15 km to the south-east of Nur-Sultan. Production is due to be commissioned in 2023 Q4, while planned production capacity should be reached in 2025. Company product will be sold domestically. The target groups for product sales are construction companies, tyre production and restoration companies; and wholesale and retail market networks.

Company
Project initiator is SIO Consulting LLP, whose core activities are processing non-metallic waste.

Market
• Between 2016 and 2020, Kazakhstan saw stable technical carbon import growth and, consequently, consumption, which practically doubled from 372 tonnes in 2016 to 690 tonnes in 2020, with CAGR at 16.7%. Import substitution potential is valued at 598 thousand USD.
• In 2020, the Kazakhstan construction sector was worth 11,914 million USD with CAGR for 2016-2020 of 6%. The import of foam glass granules and other foam glass materials into Kazakhstan grew nearly nine-fold from 47 tonnes in 2016 to 410 tonnes in 2020.

Project investment attractiveness
Investment – US$ 34,000 thousand
NPV – US$ 10,808 thousand
IRR – 19.4%
Payback period – 7.4 years

What is the project’s attractiveness?
• State support. Under the Concept for Kazakhstan to transition to a “green” economy, waste recycling should reach 50% by 2050. For this reason, the government is providing all-round support to implement waste processing projects.
• Stable raw materials base. Nur-Sultan is a fast-growing city whose population produces over 350,000 tonnes of solid domestic waste per year, which is sufficient to ensure full RRPC capacity. The Nur-Sultan solid waste handling system lacks an advanced waste treatment process, meaning that 90% of combined solid domestic waste residue is buried at the city’s open waste disposal site. As at March 2020, Nur-Sultan has the only sorting station where waste accumulates at the only open waste landfill site.

Investment proposal
The Project requires investment of 34,000 thousand USD, of which:
• 70% (23,800 thousand USD) - debt financing subject to collateral;
• from 30% (10,200 thousand USD) – Initiator participation.

The proposed financing structure and state support measures are indicative. The final financing structure and Project interests will be determined based on the results of negotiations with the investor.
Modernization of MSW management system in the Karaganda Oblast

Project description:
Construction and equipment of 300 waste collection points. As well as the acquisition and commissioning of equipment using composting technology, to reduce the volume of municipal solid waste disposal by production of biogas and generation of green energy.

Capacity: 5 MW of electricity;
Service of 265 thousand people per year for Municipal Solid Waste ("MSW") disposal services.

Products: Service of MSW disposal and electric power.

Initiator: GorKomTrans goroda Karagandy LLP
Location: Karaganda and Karaganda Oblast.

Main consumers:
1) The main consumers of electrical energy are the Financial Settlement Center of RE (state) and enterprises operating on electric power.
2) The main consumers of sorted MSW are companies engaged in recycling of secondary raw materials.

Key investment indicators

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investment amount, US$ thous.</td>
<td>16,713</td>
</tr>
<tr>
<td>Project NPV, US$ thous.</td>
<td>28,418</td>
</tr>
<tr>
<td>IRR, %</td>
<td>25.7%</td>
</tr>
<tr>
<td>EBITDA margin, %</td>
<td>61%</td>
</tr>
<tr>
<td>Payback period, years</td>
<td>6.1</td>
</tr>
<tr>
<td>Discounted payback period, years</td>
<td>7.6</td>
</tr>
</tbody>
</table>

Project location:
Karaganda and Karaganda Oblast

Market prerequisites

High level of MSW generation. The Republic of Kazakhstan has a high level MSW generation at the level of 3 million tonnes annually. Moreover, due to the dynamic growth of the economy and the growth of the well-being of population, the waste generation indicator is anticipated to grow to 8.3 million tonnes per year.

Lack of competition in the region. The Karaganda Oblast does not have the enterprises engaged with the recycling of MSW by production of biogas, while the total volume of wastes continues to increase annually. Thus, by the end of 2017, more than 350 thousand tonnes of MSW was generated in the Karaganda Oblast, which is the third highest indicator across the country after the largest cities Almaty and Nur-Sultan.

The development of new sources of electricity production. Currently, the state allocates large amount of the investments in the sphere of electricity production by Renewable Energy Sources ("RES"), therefore, production volumes are growing at an average of 3% annually. At the same time, the volume of production using biogas in 2017 amounted to only 200 thous. kWh, while the total volume of produced electricity by RES being equal to 11,643 mln kWh.

Project profitability

<table>
<thead>
<tr>
<th>Year</th>
<th>US$ thous.</th>
<th>Revenue, US$ thous.</th>
<th>EBITDA margin, %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year 3</td>
<td>7,761</td>
<td>10,951</td>
<td>66%</td>
</tr>
<tr>
<td>Year 5</td>
<td>8,645</td>
<td>15,249</td>
<td>65%</td>
</tr>
<tr>
<td>Year 10</td>
<td>10,951</td>
<td>17,710</td>
<td>63%</td>
</tr>
<tr>
<td>Year 15</td>
<td>13,062</td>
<td>17,710</td>
<td>61%</td>
</tr>
<tr>
<td>Year 20</td>
<td>15,249</td>
<td>17,710</td>
<td>59%</td>
</tr>
<tr>
<td>Year 24</td>
<td>17,710</td>
<td>17,710</td>
<td>56%</td>
</tr>
</tbody>
</table>

Product sales provision

MSW disposal services
The main income will be generated through the payments made by the population and legal entities for waste disposal services. 300 waste collection points will serve 265,000 people in the city of Karaganda.

Electrical power
According to the Law of the Republic of Kazakhstan “On support for the use of renewable energy sources”, KOREM JSC conducts auction bidding for the purchase of “green energy” produced. The winner receives a contract for a guaranteed purchase of electricity for a period of 15 years. GorKomTrans goroda Karagandy LLP is currently registered as a participant in an auction for RES bidding.
Project overview:
Modernization of the municipal solid waste (MSW) management system in Pavlodar Oblast.

Objective of the Project:
Improving the efficiency, reliability, environmental and social acceptability of a range of services for the collection, transportation, processing and disposal of municipal solid waste, increasing the share of solid waste recycling, as well as ensuring safe disposal of waste in Pavlodar Oblast.

Production: solid waste disposal service, 20 types of recyclable materials obtained by sorting.

Annual capacity: 150 thousand tonnes of solid waste per year.

Initiator: Specmashin LLP, Pavlodar city

Location:
Pavlodar city, satellite cities – Aksu and Ekibastuz.

Key consumers:
Household solid waste companies engaged in the recycling of secondary raw materials.

Key investment indicators

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investment, US$ thousands</td>
<td>6,427</td>
</tr>
<tr>
<td>Project NPV, US$ thousands</td>
<td>9,631</td>
</tr>
<tr>
<td>IRR, %</td>
<td>13.8%</td>
</tr>
<tr>
<td>EBITDA returns, %</td>
<td>35%</td>
</tr>
<tr>
<td>Payback period, number of years</td>
<td>2.8</td>
</tr>
<tr>
<td>Discounted payback period, number of years</td>
<td>3.1</td>
</tr>
</tbody>
</table>

Location of the Project:
Pavlodar, Aksu and Ekibastuz

Market assumptions

High level of MSW accumulation. According to the Committee on Statistics of the Republic of Kazakhstan, there is a high level of generation of solid household waste, which is not regenerated, at the level of 3 million tonnes annually. Between 2021 and 2030, an increase in waste generation is expected to reach 8.3 million of solid waste per year. For comparison, the global waste management market amounted to US$ 330.6 billion in 2017 and it is predicted that by 2025 this figure will reach US$ 530 billion with a CAGR of 6%.

Increased public awareness of waste management. The number of landfills and their area is growing rapidly, having a negative impact on the environment. At present, in Kazakhstan there are more than four thousand landfills, of which only 13% comply with sanitary standards and have a permit for emissions into the environment. The standard of living of the population will improve significantly with the comprehensive modernization of the MSW management system in the country.

Dynamic socio-economic development of the region. Pavlodar is one of the most economically important cities in the country with an average annual growth of gross regional product of 13%.

Project profitability

<table>
<thead>
<tr>
<th>Year</th>
<th>Revenue, US$ thous.</th>
<th>EBITDA margin, %</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>4,861</td>
<td>35%</td>
</tr>
<tr>
<td>4</td>
<td>5,510</td>
<td>35%</td>
</tr>
<tr>
<td>8</td>
<td>6,690</td>
<td>35%</td>
</tr>
<tr>
<td>11</td>
<td>7,838</td>
<td>35%</td>
</tr>
<tr>
<td>12</td>
<td>10,120</td>
<td>35%</td>
</tr>
<tr>
<td>20</td>
<td>11,642</td>
<td>34%</td>
</tr>
<tr>
<td>24</td>
<td>11,642</td>
<td>34%</td>
</tr>
</tbody>
</table>

Morphological composition of the MSW in Pavlodar
Other promising sectors
Production of straw pulp and paper goods

**Product**
- Production and sales will be as follows: paper roll – 150 thousand tonnes per year; cardboard – 50 thousand tonnes per year.

**Project**
This investment project (the “Project”) envisages the construction of a facility for the production of straw paper rolls and cardboard in the Akmola oblast, Atbasar district, Atbasar city. The company plans to purchase straw from local farmers to produce its goods.

**Company**
The Project initiator is Turkestansky Pulp and Paper Plant LLP. Turkestansky Pulp and Paper Plant LLP – an enterprise created with the purpose of implementing this project.

**Market**
- **Global market of paper and cardboard.** Global paper and cardboard consumption level in 2021 was 409 million tonnes. According to the Economist analysts, this figure will continue to grow over the next decade and reach 466 million tonnes by 2031.
- **Paper and cardboard production in Kazakhstan.** At the end of 2021, the production of processed paper and cardboard increased by 31% compared to 2020 reaching 4,076 tonnes. On average, from 2017 to 2021 the annual production volumes of these products were 3,445 tonnes, with an average annual growth rate of 39%.
- **Export of cellulose, paper and cardboard from/into Kazakhstan.** In 2021, the volume of exports of products from Kazakhstan reached US$ 26 million, which is 38% higher than in 2020. The main shares of exports belong to Russia (57%), Kyrgyzstan (28%) and Uzbekistan (8%).

**Investment attractiveness of the project:**
- **Investment – US$ 148,332 thousand**
- **NPV – US$ 169,633 thousand**
- **IRR – 32.4%**
- **Payback period – 6.14 years**

**What is the attractiveness of the project?**
- **Favourable location.** Akmola oblast is located in the central part of Eurasia, in the northwestern part of the Republic of Kazakhstan. This oblast has an extensive road and logistics infrastructure: highways of republican and regional significance pass through the region. Around 4% of Kazakhstan’s population (0.74 million people) live in the Akmola oblast. Akmola oblast is located on the main axis of the international transport corridor “Western Europe - Western China”. In addition, works are being conducted to improve the condition of irrigated lands, and increase the production and technical base of farms in the region.
- **Proximity to raw materials.** The largest agricultural areas are located in Kostanay oblast – 5.2 million hectares (23%), Akmola oblast – 5.1 million hectares (22.3%) and North Kazakhstan oblast – 4.3 million hectares (19%). In 2021, the gross harvest of grains, legumes and oilseeds in Akmola oblast reached 40.2 million ctw (21.4% of the country’s figure).

**Investment proposal**
The Project requires investment of US$ 148,332 thousand, of which:
- 70% (US$ 103,833 thousand) – debt financing subject to collateral;
- 30% (US$ 44,500 thousand) – investor participation.

The proposed financing structure and state support measures are indicative. The final financing structure and Project interests will be determined based on the results of negotiations with the investor.
Expansion of hosiery production

Products
It is planned to produce men’s, women’s and children’s socks. The planned production capacity is about 24 million pairs per year.

Project
This investment project envisages the expansion of the existing production of hosiery by launching additional capacity. During the Project, it is planned to increase the production capacity from 18 million to 24 million pairs of socks per year. The installation of the additional capacity is planned in the immediate vicinity of the existing plant on a plot of land that is provided to the company in a long-term free-of-charge agreement in the special economic zone “Ontustik” in Shymkent.

Project objectives:
• creation of capacities for the export of products to Russia;
• creation of up to 500 additional jobs.

Company
Alem-BT LLP opened its factory in 2015. Today, the Company is the largest manufacturer of hosiery of the business and economy class in Kazakhstan.

Market
• Product range expansion. There is no pronounced seasonality in the production of socks, the high-tech equipment will allow to produce products for all seasons, and in the northern and central regions of Kazakhstan, the demand for socks is present all year round.

Investment attractiveness of the project:
Investment – US$ 4,614 thousand
Project NPV – US$ 12,645 thousand
IRR – 32.8%
Payback period – 5.6 years

What is the attractiveness of the project?
• Advantages of SEZ. Since the Company is a member of the SEZ, it is possible to obtain exemption from CIT, property tax, land tax, and zero fees for the right to use land plots, and benefit from a simplified procedure for attracting foreign specialists, a special customs and tax regime, and a single-window system.
• Initiator’s experience and advanced equipment. The company has many years of experience in selling hosiery and is the largest Kazakhstani exporter of hosiery. High-tech equipment from South Korea is used in production. The knitting equipment fleet consists of 246 machines, which can produce an average of 18 million pairs of products annually.

Investment proposal
To The Project requires investment of US$ 12,645 thousand, of which:
• 70% (US$ 8,851 thousand) – debt financing subject to collateral
• 30% (US$ 3,793 thousand) – investor participation.
The proposed financing structure and state support measures are indicative. The final financing structure and Project interests will be determined based on the results of negotiations with the investor.
Construction of a furniture production workshop in Almaty

Product
Production capacity: 737,404 units annually, namely: chairs – 662,702 units; benches – 20,616 units; armchairs – 54,086 units.
Domestic demand: 2,201 thousand units, namely; metal-frame seating furniture – 1,632 thousand units; wooden-frame seating furniture – 569 thousand units.

Project
The Project envisages the construction of a workshop to produce 737 thousand chairs, benches and armchairs per year under the Zeta brand in Kazakhstan.

Company
P.T.Z. LLP is part of the Zeta group of companies (the “Group”), which has 25 years of experience in furniture production and trading.
The Group incorporates five furniture production plants in Almaty and one in Nur-Sultan; 50 stores in 26 towns and cities around Kazakhstan and several branches in other CIS countries.
The share of Kazakhstan content in finished products is approximately 80%. The Company employs over 3,000 people and produces in excess of 6,000 different items.

Market
• According to GR&DS, global upholstered metal-frame seating furniture sales will almost double to 51 billion USD with CAGR reaching 14.46% (2020-2025).
• According to GS&DS, in Kazakhstan demand for adjustable seating furniture will reach 31 million USD in 2025 (CAGR at 12.9% in 2020-2025). Demand for upholstered and metal-frame furniture will reach 25.5 million USD (CAGR at 18.3% in 2020-2025). The positive trend may be due to the growth in real estate purchased in Kazakhstan.

Investment attractiveness of the project:
Investment – US$ 7,141 thousand
NPV – US$ 7,876 thousand
IRR – 27.2%
Payback – 7.2 years

What is the attractiveness of the project?
• Low production costs and competitive selling prices. The Company has a good supply base for raw materials and parts (Kazakhstan content is 80%). Thus, the production process does not require resources to be purchased from overseas. Finished items are lower in price than imports whose end cost includes significant transportation costs etc.
• Good location. Production has been planned for Almaty, the country’s most densely populated and economically active city. The Almaty agglomeration has well-developed road and logistics infrastructure in place, which is one of the deciding factors influencing successful Project implementation.
• Vast experience in the furniture market. ZETA has 25 years of market experience, and is a well-known brand among B2B and B2C consumers.

Investment proposal
The Project requires investment of US$ 7,141 thousand, of which:
• 70% (4,999 thousand USD) – debt financing subject to collateral;
• from 30 % (2,142 thousand USD) – investor participation.
The proposed financing structure and state support measures are indicative. The final financing structure and Project interests will be determined based on the results of negotiations with the investor.
Production of wool worsted fabrics

Annual capacity:
• 552 tonnes of worsted fabric.

Project
This investment project (the “Project”) provides for the expansion of the primary wool processing factory into a textile production of worsted fabric in Tekes village of Almaty oblast.

Company
Kuat LTD factory limited liability partnership is a project Initiator, whose core activity is wool processing. The company has been operating in the wool market for 30 years: currently, the company specialises in the production of scoured wool of all types. The Initiator has a land plot of 2 hectares with a total area of production facilities of over 5,000 sq. m.

Market
• According to Mordor Intelligence, the textile market will show stable growth over the next 5 years increasing from US$ 791 billion in 2021 to US$ 967 billion with CAGR of 5.2%.
• In 2019, the woolen fabric production in the country ceased due to an increase in the supply of cheap imported raw materials from China, the countries of Southeast Asia and Turkey, as well as the violation of cooperation ties.
• In 2020 the volume of imports of fabrics containing predominantly wool mixed with synthetic fiber increased by 48.1% compared to the previous year. The potential volume of import substitution for this product amounted to US$ 819 thousand.

What is the attractiveness of the project?
• Favorable location. Almaty region with favourable climatic conditions is the best zone for breeding mutton-wool sheep in Kazakhstan, which is confirmed by the region’s leading position in the production of sheep wool in 2020.
• Access to infrastructure. The company is a primary wool processing factory and owns a land plot with production workshops. It also has own treatment facilities with a sewerage system, water supply, a boiler room for heating and production of technical steam.
• Full cycle of fabric production. The formation of own herd of fine-wool merino breed will ensure the production of high-quality raw materials and reduce wool supply risks. Organization of an enterprise with a full cycle of production of fabrics used in the manufacturing of finished textile products for final use will allow achieving low production costs and ensuring the competitiveness of production.

Investment attractiveness of the project:
Investment – 8,174 thousand USD
NPV – 8,030 thousand USD
IRR – 24.2%
Payback – 6.5 years

Investment proposal
The Project requires investment of US$ 8,174 thousand, of which:
• 70% (US$ 5,722 thousand) – debt financing subject to collateral;
• 30% (US$ 2,452 thousand) – Investor participation.
The proposed financing structure and state support measures are indicative. The final financing structure and Project interests will be determined based on the results of negotiations with the investor.
Construction of a textile plant

Product
Processing capacity: 20,000 tons of cotton fibre.
Production volumes: yarn – 18,000 tons; cotton fibre waste – 1,300 tons.

Project
The investment project ("Project") involves the construction of a textile plant to process cotton fibre into yarn for weaving. The Project is due to be realised in two stages:
• cotton fibre production capacity will be 10 thousand tonnes in stage one;
• capacity is due to be increased to 20 thousand tonnes per year for stage two.
The plant is due to be built in the Ontustik SEZ in Shymkent. Turkestan Oblast is the only region in Kazakhstan producing cotton thanks to its favorable climate.
The Initiator has signed agreements of intent with local producers to supply 20-30 thousand tonnes of cotton fibre per year.

Company
Shymkent Textile Group LLP was created to implement a project to produce cotton yarn from cotton fibre processing for weaving purposes.

Market
• In Kazakhstan, the average gross raw cotton harvest is 326.5 thousand tonnes, while cotton fibre production is 74.5 thousand tonnes. On average, fibre yield from raw cotton in Kazakhstan is 20%, which is lower than industry averages in other Central Asian countries (30-40%), but is growing year on year.

Investment attractiveness of the project:
Investment – 34,053 thousand USD
NPV – 28,486 thousand USD
MIRR – 23.1%
Payback – 5.3 years

What is the attractiveness of the project?
• Advantageous location. Turkestan Oblast is the only region in Kazakhstan producing cotton, and is home to a number of textile enterprises and plants. The region is known for its well-developed transportation and logistics infrastructure, which helps to reduce the time and costs needed to deliver finished products across the country and overseas.
• SEZ advantages. As the Company operates in a SEZ, the Project may be eligible for CIT, property tax, land tax and land use charge exemptions, as well as a simplified procedure for hiring foreign specialists, special customs and tax regimes, and access to a “one-stop-shop” in terms of servicing for the entire Project.

Investment proposal
The Project requires investment of 34,053 thousand USD, of which:
• 70% (23,837 thousand USD) – debt financing subject to collateral;
• 30% (10,216 thousand USD) – investor participation.
The proposed financing structure and state support measures are indicative. The final financing structure and Project interests will be determined based on the results of negotiations with the investor.
The investment allocation is as follows:
• 15% (5,000 thousand USD) – buildings and structures;
• 65% (22,040 thousand USD) – equipment purchases;
• 20% (7,013 thousand USD) – working capital.
**Project description:**
The project provides the development of software and technological equipment in the field of logistics.

**Capacity:** 15,645 tastamats

**Products:** Tastamats; TOOLPAR hardware; Range of services: «Postbox», «Client», «Service» and «Marketplace».

**Initiator:** TOOLPAR LLP

**Location:** Nur-Sultan, st. Mambetova 24.

**Main consumers:**
1) Owners of commercial premises willing to work under the partnership scheme;
2) Mail and logistics operators, e-commerce traders;
3) Legal entities and individuals in the marketplace;
4) Enterprises providing repair of personal items, as well as dry cleaning and laundry services.

**Market prerequisites**

**Growth of the mail and logistics market.**
Globally as well as in Kazakhstan, the general trend of growth in the volume of postal and courier services could be admitted. In particular, the volume of postal and courier services rendered within the market of Kazakhstan is estimated at KZT 33,688 mln in 2018, which is 16% higher than the same indicator for 2014.

**E-commerce market development.**
The e-commerce market in Kazakhstan is growing at a dynamic pace. According to the data from the Committee on Statistics of the Ministry of National Economy of the Republic of Kazakhstan, the volume of services sold via the Internet in 2016 amounted to 32.5 mln units, of which 15.4 mln units are retail goods. The annual increase in traded volumes is more than 42%.

**Growth in demand for postamat services.**
Accordingly to a described reasons, operators launched an active adaptation of postamats into the market of Kazakhstan. Currently, there are over 400 parcel lockers installed across the Kazakhstan. Moreover, it is expected to install additional 1,500 postamats by 2020.

### Key investment indicators

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investment amount, US$ thous.</td>
<td>10,975</td>
</tr>
<tr>
<td>Project NPV, US$ thous.</td>
<td>78,233</td>
</tr>
<tr>
<td>IRR, %</td>
<td>28.7%</td>
</tr>
<tr>
<td>EBITDA margin, %</td>
<td>63%</td>
</tr>
<tr>
<td>Payback period, years</td>
<td>6.5</td>
</tr>
<tr>
<td>Discounted payback period, years</td>
<td>7.4</td>
</tr>
</tbody>
</table>

### Project profitability

#### The number of postamats by regions of RoK, 2018

- **Nur-Sultan city**: 12%
- **Kostanay Oblast**: 10%
- **Shymkent city**: 5%
- **East Kazakhstan Oblast**: 8%
- **Karaganda Oblast**: 12%
- **Almaty city**: 17%
- **Others**: 43%

#### The number of postamats by regions of RoK, 2018
Project description:
Construction of a sanitary paper product production plant with creation of 37 new workplaces.

Project location:
North-Kazakhstan Oblast, Petropavlovsk

Project Initiator:
Raduga LLP main activities of which involve the production and distribution of consumer goods.

Product and output:
Toilet paper – 8 thousand tonnes/year;
Paper tissues – 0.5 thousand tonnes/year;
Paper towels – 0.6 thousand tonnes/year;
A4 office paper – 0.6 thousand tonnes/year.

Sales market:
The manufactured products are planned to be sold on the domestic market of the Republic of Kazakhstan through its own distribution network with branches in 10 cities: Petropavlovsk, Kokshetau, Nur-Sultan, Kostanay, etc.

Production process:
2. Rewinding of paper base, embossing, cutting, printing and packaging of finished products.

Key investment indicators of the Project

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investment amount, US$ thous.</td>
<td>9,422</td>
</tr>
<tr>
<td>Project NPV, US$ thous.</td>
<td>11,881</td>
</tr>
<tr>
<td>IRR, %</td>
<td>32.5%</td>
</tr>
<tr>
<td>EBITDA margin, %</td>
<td>36%</td>
</tr>
<tr>
<td>Payback period, years</td>
<td>5.5</td>
</tr>
<tr>
<td>Discounted payback period, years</td>
<td>6.9</td>
</tr>
</tbody>
</table>

Investment structure

- Purchase of transport and equipment: 14% ($1.4 million)
- Machinery and equipment: 40% ($3.7 million)
- CAPEX: 38% ($3.6 million)
- Other: 8% ($0.7 million)

Prerequisites for Project implementation

The growth of paper product market. In comparison to other segments of the pulp and paper industry, the sector of a sanitary products is growing steadily. The total production of sanitary paper goods in Kazakhstan increased by 17% in 2019 (CAGR on average 14.2% over 5 years).

Import substitution. The share of imports in the structure of sanitary paper products consumption of the country is 46%. Thus, Kazakhstan had imported 37 thou. tonnes of toilet paper, paper tissues and towels in 2019. Therefore, an expansion of own production will reduce the amount of imported goods.

Export development. The total volume of exports of sanitary paper products in 2019 was 300 tonnes. The indicator had decreased by 32% in comparison to 2015. Considering the stable growth of the industry and the high demand for sanitary paper products, there is a potential for growth of export volumes.

Project profitability

<table>
<thead>
<tr>
<th>Year</th>
<th>Revenue US$ thousands</th>
<th>EBITDA margin, %</th>
</tr>
</thead>
<tbody>
<tr>
<td>2022</td>
<td>2,748</td>
<td>35%</td>
</tr>
<tr>
<td>2026</td>
<td>13,300</td>
<td>36%</td>
</tr>
<tr>
<td>2030</td>
<td>15,318</td>
<td>36%</td>
</tr>
<tr>
<td>2034</td>
<td>16,673</td>
<td>36%</td>
</tr>
<tr>
<td>PPP</td>
<td>17,047</td>
<td>36%</td>
</tr>
</tbody>
</table>

Financing structure

- Initiator equity: 15% ($1.4 million)
- Debt financing subject to collateral: 70% ($6.6 million)

The proposed financing structure is indicative, the final financing and Project participation structures will be determined based on the results of negotiations with the Investor.