



KAZAKH INVEST

NATIONAL COMPANY

**Deloitte.**

# INVESTMENT OPPORTUNITIES OF KAZAKHSTAN

«NICHE» PROJECTS

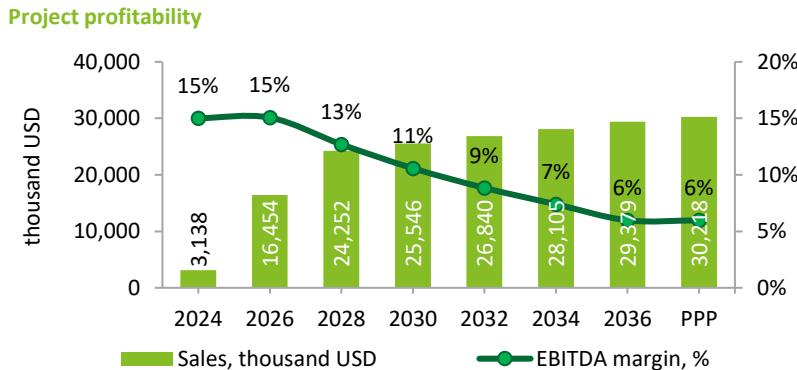




KAZAKH INVEST  
NATIONAL COMPANY



## ***AGRICULTURE-INDUSTRIAL COMPLEX***



#### Location



## Construction of a meat processing plant with slaughtering facilities for up to 300 sheep and goats and 50 cattle per shift

### Products

Upon reaching full capacity in 2027, annual sales volumes will be 1,750 tonnes of frozen and chilled beef, 787.5 tonnes of frozen and chilled mutton, 61,250 units of cattle, sheet and goat offal, 52,500 units of sheep, goat heads, 61,250 units of sheep, goat and cattle hides. Company plans to export 80% of beef and mutton to the Middle East (UAE, Saudi Arabia, Qatar, Oman, Bahrain and Lebanon), the remainder, as well as offal, hides and heads will be sold domestically.

### Project description

The Project envisages the construction of a meat processing enterprise with an area of 0.54 ha and slaughter capacity for 300 sheep and goats and 50 cattle per shift in the town of Abai, Karaganda Oblast.

At the moment, a 0.72 ha site has been acquired in the town of Abai, Karaganda Oblast. (Cadastre No. 3Y 09-141-026-24). Discussions are currently being held regarding the receipt/acquisition of 2 ha of grazing land from reserve land/private land to breed cattle, sheep and goats and create a full-cycle enterprise.

### Company

The initiator of the project is Alisha Group LLP. The Company was created to implement a project to build a meat processing facility with slaughter capacity for 300 heads of sheep and goats and 50 heads of cattle per shift.

### Market

- In 2022, 72,217 thousand tonnes of beef and veal and 16,206 thousand tonnes of mutton were produced globally. According to the UN FAO, the production of beef and veal will increase to 74,690 thousand tonnes by 2027, with CAGR for 2022-2027 at 0.7% and the global mutton production will reach 17,295 thousand tonnes by 2027, with CAGR for 2022-2027 at 1.3%.
- GIRA has predicted that beef consumption in MENA countries will grow in 2021-2026, with CAGR at 3.3%. Mutton consumption will grow in MENA countries over the same period at 2.2%

### Investment attractiveness of the project:

- Investment – US\$ 2,509 thousand
- Project NPV – US\$ 5,700 thousand
- MIRR – 31.2%
- Payback period – 3.64 years
- Discounted payback period – 4.02 years

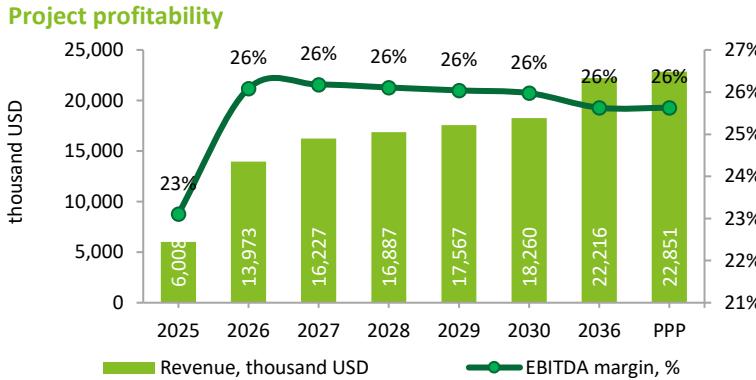
### What is the attractiveness of the project?

- Advantageous location.** Production in Karaganda Oblast offers optimum natural and climate conditions for developing animal farming and access to an international airport to export product to the Middle East. The region is also known for its significant investment in agricultural production and processing. Agriculture accounted for 7% of the region's total gross regional production in 2022, of which 41% was generated by animal farming product.
- State support.** The Project is recognised as a priority for state support as well as concessions, including the state "Business Road Map 2025" programme, which subsidises loan interest rates, commodity mark ups, and partial loan guarantees
- Investment proposal**

The Project requires investment of US\$ 2,509 thousand (at the rate of 449.2 tenge), of which:

- 85% (US\$ 2,133 thousand) – investor participation;
- 15% (US\$ 376 thousand) – initiator's 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.



## Location



## Construction of a cheese-based product and cheese production plant for HoReCa

### Products

Upon reaching full design capacity by 2027, the projected sales volumes are as follows: butter – 432 tonnes, cheeses – 648 tonnes, ricotta cheese – 78 tonnes, albumin curd – 104 tonnes, mixed nuts – 27 thousand tonnes, tomato sauces – 68 tonnes, dried apples – 34 tonnes, dried pears – 34 tonnes. The company plans to sell 80% of its products in the domestic market, and export the remaining 20% to Russia, South Korea and the UAE.

### Project description

The Project provides the construction of a plant to produce cheese-based products and cheese for the hotel and restaurant business in the Almaty industrial zone. A land with an area of 1 ha was leased for the construction of the plant (cadastral number 20-321-029-109, rent agreement until 12/31/2023). A positive summary conclusion has been received on the state review of Project plans (design and estimate documentation). Earth work has been completed to clean and mark the territory for future construction. Equipment has been ordered for cheese and vegetable production, as well as auxiliary equipment.

### Company

The Project Initiator is Green Works LLP, which was created in 2019 to realise a production Project for the hotel and restaurant business. Green Works LLP is a subsidiary of Honest Group LLP, and has been specialising in restaurant and public catering business consulting services since 2015.

### Market

- In 2022, the volume of cheese and cottage cheese production in Kazakhstan amounted to 35 thousand tonnes, and the volume of consumption - 29 thousand tonnes.
- In 2022, the volume of production of dried fruits, butter, tomato sauce and nuts in Kazakhstan amounted to 69 thousand tonnes, 22 thousand tonnes, 17 thousand tonnes and 6 thousand tonnes, respectively.
- At the end of 2022, the main suppliers of butter, albumin, cheese and cottage cheese to Kazakhstan are Russia, Belarus and Lithuania.
- As of 2022, Russia is the main exporter of butter, albumin, cheese and cottage cheese to Kazakhstan.

### Investment attractiveness of the project:

- Investment – 8,630 thousand USD
- Project NPV – 8,322 thousand USD
- MIRR – 21.3%
- Payback period – 4.45 years
- Discounted payback period – 5.99 years

### What is the attractiveness of the project?

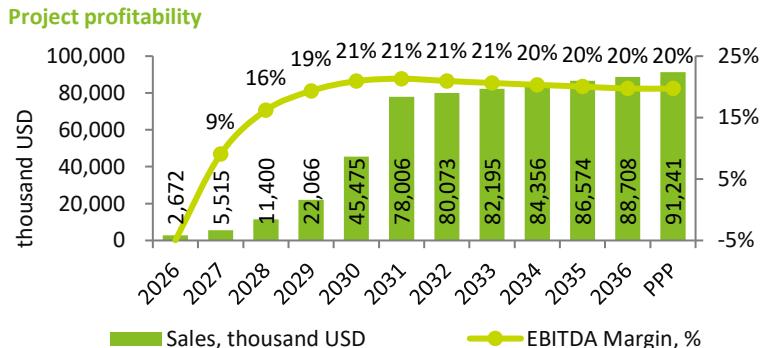
- Advantageous location.** The region is home to well-developed and extensive road and logistics infrastructure linking it to other regions of Kazakhstan and neighbouring countries. Almaty Oblast is a leader in terms of the production of raw milk, tomatoes, peppers, apples and pears. A total of 385 thousand tonnes of raw milk, 146 thousand tonnes of tomatoes, 136 thousand tonnes of peppers, 958 thousand tonnes of apples and 64 thousand tonnes of pears were produced in Almaty Oblast in 2022.
- Eco-friendly product.** Food production using natural ingredients without semi-processed products and other additives is an advantage compared to imported equivalents and allows the Company to occupy a specific consumer niche.
- Import substitution.** The construction of a plant to produce cheese and other food products will help reduce cheese imports in Kazakhstan (in 2022 – 35 thousand tonnes) and provide the domestic market with quality local products.

### Investment proposal

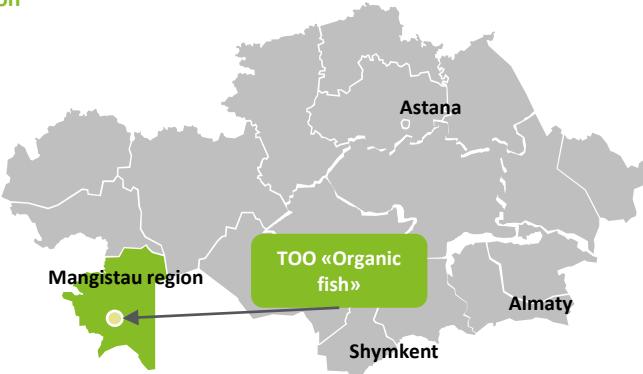
The Project requires investment of 8,630 thousand USD (at the rate of 449.2 tenge), of which:

- 70% (6,041 thousand USD) – debt financing subject to collateral;
- 30% (2,589 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.



## Location



## Trout production

### Products

Upon reaching full capacity in 2031, company will have the capacity to sell 5,000 tonnes of sea trout per year. The company is planning to sell 50% of its product domestically and export the other 50% to Russia, Belarus, Kyrgyzstan, China and Vietnam).

### Project description

The Project envisages farming of sea trout (*Oncorhynchus mykiss*) in 5,000 tonne/year fish hatcheries in Mangistau region.

Trout farming is to be performed in the Caspian Sea water area in hatcheries covering 3,000 ha, 20 km from Kuryk port. At the moment, the initiator signed a contract for cage fish farming for 49 years on an area of 3000 hectares in the Middle Caspian Sea with the territorial body of the Fisheries Committee of the Ministry of Ecology and Natural Resources of the Republic of Kazakhstan, and also approved the resolution of the Akim of the Mangistau region on the assignment of the site to the Company.

### Company

Organic Fish LLP was created to implement a Project for the hatchery farming and processing of sea trout.

### Market

- In 2022, total fish production amounted to 183 million tonnes, which is 1% higher than in 2021. As at 2022, rainbow trout accounted for 2% of total fish produced globally. In 2022, the main fish producers were China (35%), India (8%) and Indonesia (7%).
- A total of 13.3 thousand tonnes of commercial fish was farmed in Kazakhstan in 2022, which is 82% higher than in 2021. For 2018-2022, the CAGR for commercial fish farmed at fish farms was at 23.8%, and 7.9% for fish caught.

### Investment attractiveness of the project:

- Investment – US\$ 22,100 thousand
- Project NPV – 16,177 thousand USD
- Project IRR – 28%
- Payback period – 9.59 years
- Discounted payback period – 11.8 years

### What is the attractiveness of the project?

- Advantageous location.** Having production based in Mangistau region will provide access to a well-developed rail and road system, as well as sea routes, manage feedstock supplies as well as product supplies to neighbouring regions and countries. Kuryk port is located in a natural bay, at the crossroads of the East-West ("One Belt, One Route") and North-South (Iran, India, Russia) trading corridors. The location provides access to Mangistau region consumer markets with a population of over 778 thousand, and the neighbouring Atyrau, Aktobe and West-Kazakhstan regions, which are home to over 2.3 million people.
- State support.** The Project is recognised as a priority for state support, making it eligible for a number of concessions and land grants.

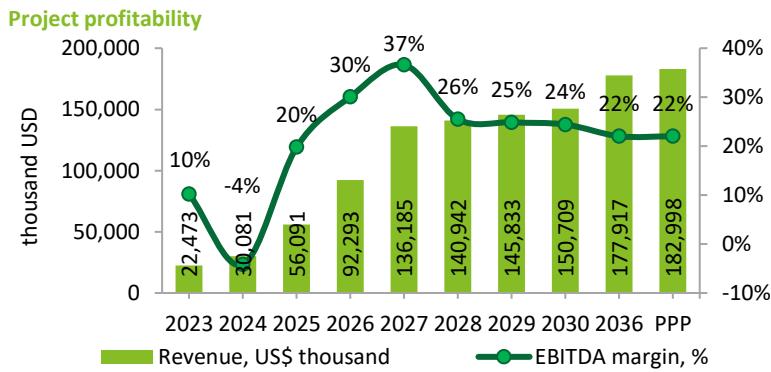
### Investment proposal

The Project requires investment of US\$ 22,100 thousand, of which:

- 88% (US\$ 19 500 thousand) – investor participation;
- 12% (US\$ 2,600 thousand) – initiator's 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.

The final investment structure will be determined after a preliminary design being developed by the Norwegian institute. At the same time, during the period 2020-2022, the Company has invested sufficient funds (2.8 million USD) to conduct marine research in the Middle Caspian Sea, a preliminary feasibility assessment of the project and the purchase of an aquaculture site for 49 years and is currently financing the development of project documentation and detailed marine baseline environmental studies at the site assigned to the Company.



## Feed component production

### Products

When design capacity is achieved in 2030, product range and annual sales will be as follows: wheat – 198,188 tonnes; barley – 42,775 tonnes; sunflower oil – 29,012 tonnes; sunflower meal – 28,640 tonnes; sunflower cakes – 28,268 tonnes; husk – 4,463 tonnes; soybean meal – 915 tonnes; peas – 29,071 tonnes. The Company is planning to sell 40% of product domestically. The remainder will be exported to Uzbekistan, Tajikistan, Kyrgyzstan, Iran, Afghanistan, UAE, China, Italy and Belgium.

### Project description

This investment project envisages the expansion of current wheat, sunflower, soy and pea feed component production by increasing the Company's land bank to 185 thousand ha in Kostanai, Akmola, East-Kazakhstan and North-Kazakhstan Oblasts.

### Company

The Initiator of the project is Aitas Agro LLP. Company incorporates 4 agricultural crop farming companies: Sekisovka LLP, Mileiko LLP, Zaschita Uba LLP and Shalaga Agro LLP in North-Kazakhstan Oblast. In 2022, its average agricultural product yield was 26.9 CWT/ha. In September 2023, total sowing area was 33 thousand ha. The main product customers are the poultry farms belonging to the affiliated JSC Aitas KZ.

### Market

- The global animal feed market was worth 300 billion USD in 2022. According to the Business Research Company, it will be worth 439 billion USD by 2027, which is 46.6% higher than in 2022. CAGR for 2022-2027 is forecast to be 7.95%.
- In 2022, Akmola Oblast was recognised as the leader in terms of the consumption of all types of feed (17% of total consumption for the country). In North-Kazakhstan Oblast, the figure was 14%.
- Akmola region also became the leader in the consumption of poultry feed in 2022 (21% of all consumed bird feed in the Republic of Kazakhstan).
- The volume of exports and imports of wheat and meslin in the Republic of Kazakhstan has been growing for the last 5 years. Imports to the Republic of Kazakhstan in 2022 amounted to 1,290 thousand tonnes (CAGR for the period 2018-2022 is 131%), and exports - 6,106 thousand tonnes (CAGR for the period 2018-2022 - 3%).

### Investment attractiveness of the project:

- Investment – US\$ 117,257 thousand
- Project NPV – US\$ 80,229 thousand
- IRR – 48.4%
- Payback period – 5.17 years
- Discounted payback period – 6.34 years

### What is the attractiveness of the project?

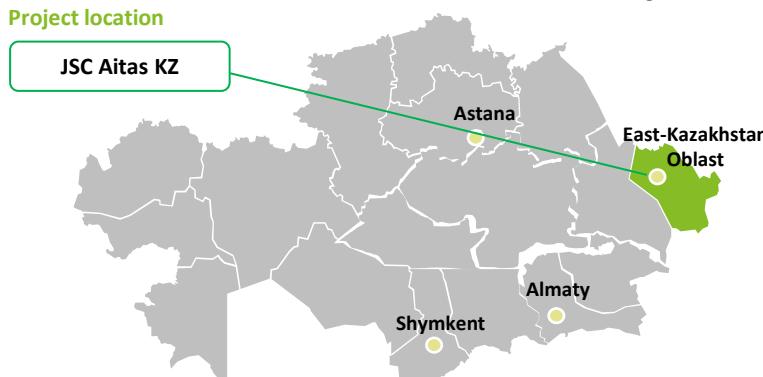
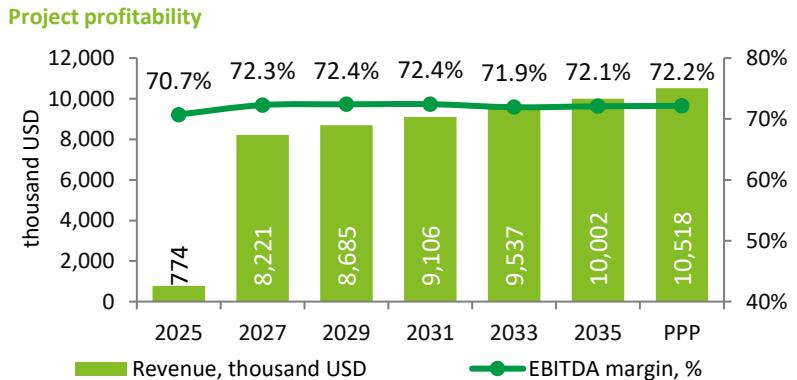
- Advantageous location.** The Project is due to be implemented in East-Kazakhstan, North-Kazakhstan, Akmola and Kostanai Oblasts, which are ideal for crop farming. As at August 2023, the total cereal (except rice), cereal legume and oil seed sowing area in the above regions was 15,759 thousand ha (73% of the national figure). Average precipitation in the north and east of the country is 300-600 mm (compared to 100-200 mm in the south). In 2022, average crop yield in the above oblasts for peas was – 14.8 CWT/ha, wheat – 14.3 CWT/ha, barley – 16.7 CWT/ha and sunflower seeds – 14.1 CWT/ha.
- State support.** The Project is recognised as a priority for state support, making it eligible for a number of concessions and land grants.
- Initiator experience.** The Company is a leader in the Kazakhstan agriculture sector. The Company also has an extensive client base in Uzbekistan, Tajikistan, Afghanistan, UAE and China.
- Utilising modern technology to ensure effective management.** The Company collects digital data on all production processes (IoT, CROPWISE, ERP and BI analytics), which allows for more accurate yield forecasting and detailed cost accounting. This includes real-time GPS monitoring of machinery.

### Investment proposal

The Project requires investment of US\$ 117,257 thousand (at the rate of 449.2 tenge), of which:

- 70% (US\$ 82,080 thousand) – debt financing subject to collateral;
- 30% (US\$ 35,177 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.



## Meat and bonemeal tankage production plant

### Products

The Company is planning to sell 30% of product domestically in Kazakhstan, and export the remainder to neighbouring countries (Russia, China and Turkey), and also to Thailand, Vietnam and the Philippines. Design capacity, which is planned in 2027, will equate to the following product range and production levels: meat and bonemeal tankage (category 1) – 2,656 tonnes; feather meal – 1,216 tonnes; blood meal – 344 tonnes; meat and bonemeal tankage (category 2) – 447 tonnes; feeding fat – 958 tonnes; technical fat – 129 tonnes.

### Project

The Project envisages the construction of meat and bonemeal tankage production plant in the village of Kasym Kaisenov in East-Kazakhstan Oblast's Ulan District.

The Project will be implemented at JSC Ust-Kamenogorsk Poultry Farm (UKPF) on a 34.5 ha site (0.99 ha and 33.47 ha), held on a long-term 32-year lease. UKPF is one of the largest poultry farms in Kazakhstan, slaughtering 30 million birds per year (meat production of 60 thousand tonnes per year).

Currently, the Project plans are being developed (should be completed by October 2023) and talks are being held with potential core equipment suppliers

### Project initiator

JSC Aitas KZ is a leading agricultural company in Kazakhstan, specialising in poultry meat production and processing, as well as grain and oil crop farming. Total meat production at the Company's Makin and Ust-Kamenogorsk poultry farms amounts to 160 thousand tonnes per year. The Company's poultry farms also produce meat and bonemeal tankage (9 thousand tonnes in 2022). Company product is represented extensively in Kazakhstan commercial and retail networks under the "Kus&Vkus" and "AMP" brands. The Company's Almaty pedigree poultry reproducer has capacity for up to 80 million eggs per year.

### Market overview

- In 2022, the global animal protein feed market was worth 275.33 billion USD. The Business Research Company is also predicting that by 2027, the global animal protein feed market will have increased to 343.45 billion USD, with CAGR for 2023-2027 at 4.3%.
- In 2022, the production volume of meat and bone meal in Kazakhstan reached 12,018 tonnes, which is 22% more than in 2021. Imports of this product amounted to 2,824 tonnes in 2022, exports were 173 tonnes.

### Investment attractiveness of the project:

Investment amount – 13,705 thousand USD;  
Project NPV – 7,967 thousand USD;  
IRR – 30.2%;  
Payback period – 5.36 years;  
Discounted payback period – 7.73 years.

### What is the attractiveness of the project?

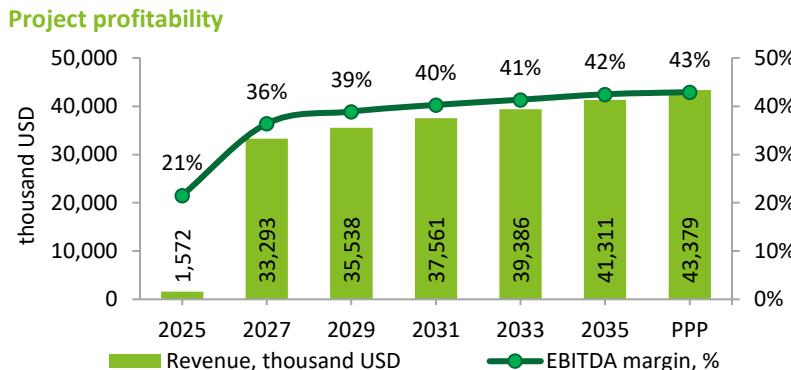
- Advantageous location.** East-Kazakhstan Oblast has well-developed and extensive road and logistics infrastructure, linking it with other regions and neighbouring countries. By basing the Project at the Ust-Kamenogorsk Poultry Farm, which slaughters 30 million birds per year, the Company will be able to control end-product cost for the entire supply chain, including the supply of feedstock (meat processing and mortality surplus). East-Kazakhstan Oblast enjoys optimum natural and climate conditions and geographical position to develop animal farming.
- Initiator experience.** JSC Aitas KZ is a leading company in the agricultural sector with 25 years of experience. It specialises in poultry meat production and processing, as well as grain and oil crop farming. Total meat production at the Company's Makin and Ust-Kamenogorsk poultry farms is 160 thousand tonnes per year. Its poultry farms also produce meat and bonemeal tankage (9 thousand tonnes in 2022). Company product is represented extensively in Kazakhstan commercial and retail networks under the "Kus&Vkus" and "AMP" brands. The Company's Almaty pedigree poultry reproducer has capacity for up to 80 million eggs per year.

### Investment proposal

The Project requires investment of 13,705 thousand USD (at the rate of 449.2 tenge), of which:

- 30% (4,112 thousand USD) – debt financing subject to collateral;
- 70% (9,594 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 full-cycle tomato paste production plant

### Products

Under full design capacity, which should be achieved in 2027, the Plant will have capacity to produce 20,102 tonnes of tomato paste annually.

Up to 30% of product is due to be sold domestically in Kazakhstan, with the remainder exported to neighboring countries.

### Project description

This investment project (the “Project”) envisages the construction of a full-cycle tomato paste production plant, as well as greenhouse complex in the Zhanakorgan District in Kyzylorda Oblast, 70 km from Turkestan. Current Project status:

- Long-term leases have been signed for the 2,993 ha greenhouse complex site, the 30 ha plant site, for a pumping station with an area of 2 ha, on the river bank for a pumping station with an area of 1 ha.
- Plant and greenhouse equipment suppliers have been determined
- Agreements reached with the authorities to connect to the nearest electricity power station.
- Technical specifications for gas were obtained for the construction of a gas distribution unit for the subsequent supply of natural gas to the plant.

### Company

Kyzylorda AGROPlus LLP is part of the Orbis Kazakhstan Holding, via the parent company Orbis Agro LLP. Orbis Agro LLP manages an 11.8 ha vegetable and grain greenhouse complex (up to 80 thousand tonnes per year) in Kyzylorda Oblast.

### Market

- In 2022 in Republic of Kazakhstan, the gross tomato harvest was 801 thousand tonnes with CAGR at 1.2% in 2018-2022.
- In 2018-2022 in Kazakhstan tomato yield was 26 tonnes per ha.
- As of 2022, the volume of tomato and processed vegetables consumption in Kazakhstan amounted to 852 and 96 thousand tonnes, respectively.
- In 2022, 91% of the volume of canned tomatoes imported into Kazakhstan (21 thousand tonnes) came from China.

### Investment attractiveness of the project:

- Investment – 39,489 thousand USD
- Project NPV – 12,160 thousand USD
- IRR – 24.9%
- Payback period – 6.20 years
- Discounted payback period – 10.15 years

### What is the attractiveness of the project?

- **Advantageous location.** Having production based in Kyzylorda Oblast will ensure access to a well-developed and extensive rail and road system to supply both raw materials and finished products to neighboring regions and other CIS countries.
- **Import substitution.** Plant construction will help supply the market with a high-quality domestic product and reduce imports of canned tomato goods to Kazakhstan, which were at 23 thousand tonnes in 2022. Imports of processed vegetables amounted to 75.1 thousand tonnes in 2022 (78% of the total consumption of processed vegetables in Republic of Kazakhstan).
- **Full production cycle and long storage period.** A full production cycle helps better control supply chain costs. An automated production management system will control tomato infection and disease risks. The use of high-temperature Cold Break and Hot Break production technology, as well as aseptic bag packaging extend the storage life of tomato paste to 24 months without special storage conditions.

### Investment proposal

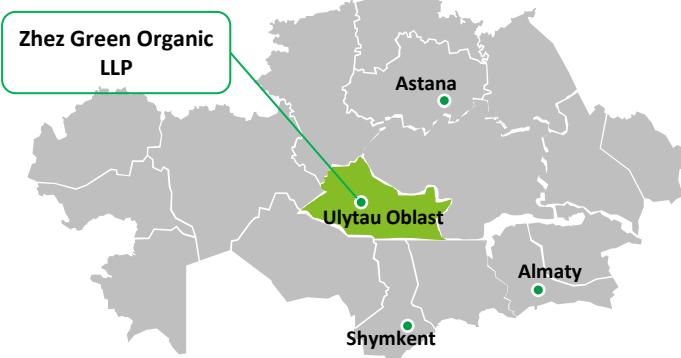
The Project requires investment of US\$ 39,489 thousand (at the rate of 449.2 tenge), of which:

- 80% (US\$ 31,591 thousand) – debt financing subject to collateral;
- 20% (US\$ 7,898 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.



## Location



## Construction of a modern high-tech tomato greenhouse complex

### Products

Upon reaching full design capacity by 2025, the projected sales volume of tomatoes is 3,850 tonnes /year.

The structure of product sales is as follows:

- Domestic market – 1,925 tonnes (or 50%);
- Export to Russia – 1,925 tonnes (or 50%).

### Project description

The Project involves the construction of a modern greenhouse complex with a total area of 5 ha for the cultivation of tomatoes. The implementation of the Project is planned in Geologichesky village near Zhezkazgan on a land plot of 7 ha. The initiator has registered a land plot of 7 ha, of which 5 ha are allocated for the construction of a greenhouse complex.

### Company

Initiator of the project is Zhez Green Organic LLP. The Company was established in 2017 to build a modern high-tech greenhouse complex for growing tomatoes and does not have an operating business.

### Market

- The gross harvest of tomatoes in Kazakhstan in 2022 was 801,000 tonnes, with an average annual growth rate of 1.2% in 2018-2022.
- Tomato harvest was stable in 2018-2022, averaging 26 tonnes per ha.
- The total area of greenhouses for growing tomatoes in 2022 was 689 ha, 1% more than in 2021.
- As of 2022, the volume of vegetable oil consumption in Kazakhstan amounted to 852 thousand tonnes, with an average annual growth rate of 1.3% over the period 2018-2022. In 2022, per capita consumption of tomatoes in Kazakhstan was about 43 kg.
- In 2022 imports of tomatoes reached 68 thousand tonnes, 42% more than in 2021. The main suppliers of tomatoes to the Kazakhstan were Uzbekistan (34 thousand tonnes) and Turkmenistan (31.2 thousand tonnes).

### Investment attractiveness of the project:

- Investment– US\$ 17,705 thousand
- Project NPV – US\$ 6,911 thousand
- IRR – 27.7%
- Payback period – 5.37 years
- Discounted payback period – 8.04 years

### What is the attractiveness of the project?

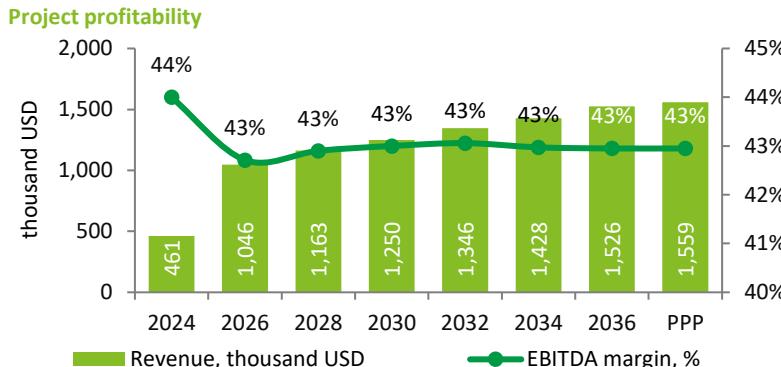
- **Environmentally friendly products and year-round harvest.** Environmental tomato growing without the use of genetically modified materials is an advantage over imported tomatoes and allows to occupy a certain niche in the consumer basket. Heating and artificial lighting systems ensure year-round harvesting.
- **Import substitution.** The construction of the greenhouse complex will reduce the volume of tomato imports to Kazakhstan (68 thousand tons in 2022) and provide the domestic market with quality domestic products.
- **Geographical location.** Developed and ramified system of railroads, existing in the region, allows organizing both raw material delivery and delivery to neighboring countries and abroad. Access roads connect the complex with highways of national and regional importance, with access to the neighboring regions of Kazakhstan and the Russian Federation.

### Investment proposal

The Project requires investment of US\$ 17,705 thousand (at the rate of 449.2 tenge), of which:

- 100% (US\$ 17,705 thousand) – 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.



## Project location



## Industrial quantity hydroponic green feed farming with a capacity of 20 tons per day

### Products

The Project focuses on product sales throughout Kazakhstan. In 2025, production will reach 7.3 million tonnes of hydroponic green feed ("HGF") at full capacity.

### Project

The investment Project envisages the farming of hydroponic green feed in industrial quantities in the Akmola Oblast village of Novomarkova. The 20 tonne/day Project will be implemented on a 0.8809 ha site.

#### Current Project status:

- Design and estimate documentation has been drafted;
- The Company has a site connected to the required infrastructure at its disposal;
- Foundations are being created to build an HGF plant; talks are being held with equipment suppliers.

### Project initiator

Zhana-Bereke LLP is part of the Altyn Taga (Holding) production cooperative and specialises in cattle breeding, cereal and legume cultivation, and feed production.

### Market overview

- In 2022, the global animal feed market was worth 300 billion USD. CAGR for 2022-2027 is forecast to be 7.95%.
- In 2022, Kazakhstan produced 1,741 thousand tonnes of ready animal feed. CAGR for ready animal feed production in 2018-2022 was at 6.5%.
- The gross harvest of green feed grass, haylage, silage, grass meal and for other products increased 22.4% in Kazakhstan in 2022 to 571.2 thousand tonnes. CAGR for the same in 2018-2022 was at 1.3%.
- Animal feed imports into Kazakhstan were worth 61 million USD in 2022, which is 9% higher than in 2021. CAGR for imports into Kazakhstan in 2018-2022 was at 10.7%.

### Investment attractiveness of the project:

Investment amount – 1,781 thousand USD;

Project NPV – 938 thousand USD;

IRR – 25.5%;

Payback period – 5.72 years;

Discounted payback period – 9.09 years.

### What is the attractiveness of the project?

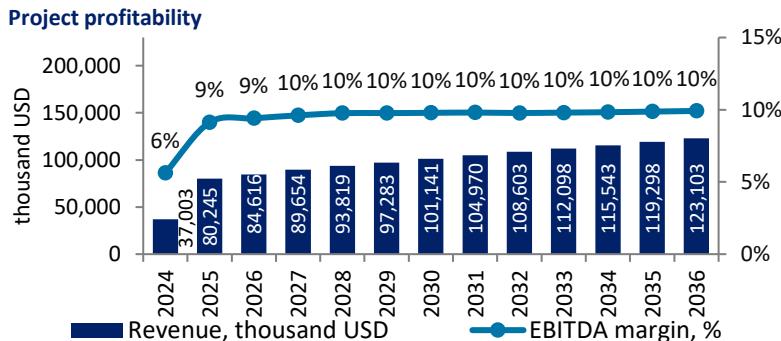
- **Eco-friendliness and high productivity.** The hydroponic system enables the effective use of water and energy resources. Plants receive only the quantity of humidity and nutrients they need, which helps reduce water and energy consumption compared to traditional feed cultivation methods. In addition, the modern hydroponic equipment used means plant cultivation processes can be automated and controlled. Automation simplifies management and increases the accuracy of any impact on plants, which aids optimum growth and productivity.
- **Experience.** The Initiator owns a cattle breeding complex and specialises in cattle breeding, cereal and legume cultivation, and feed production. It has 5,000 heads of cattle at its disposal, feed yards for 5,000 heads, and a meat processing plant with its own laboratory (60 heads per day).

### Investment proposal

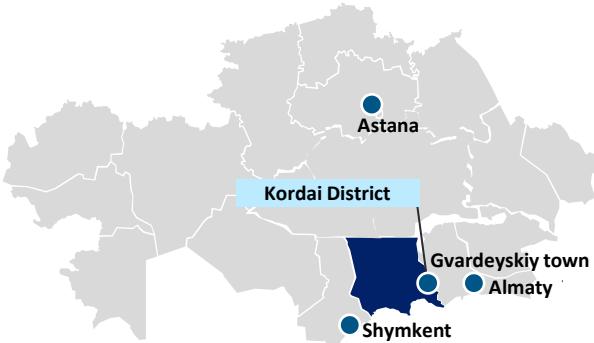
The Project requires investment of 1,781 thousand USD (at the rate of 449.2 tenge), of which:

- 70% (1,247 thousand USD) – debt financing subject to collateral;
- 30% (534 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 location



## Veterinary vaccine production

### Product

The veterinary vaccine production plant will reach its planned capacity of 80 million doses per year by 2025 and will produce:

- Vaccines against anthrax for large ruminants: 10,000 doses of monovalent vaccines per year and 12,000 doses of trivalent vaccines.
- Vaccines against anthrax for small ruminants: 16,000 doses of monovalent vaccines per year and 41,000 doses of trivalent vaccines.

### Project

This investment project envisages the production of monovalent and trivalent foot-and-mouth disease vaccinations for cattle, sheep and goats at an operational full-cycle biopharmaceutical plant in Dzhambul Oblast. Currently, the company has reached agreements with the Ministry of Agriculture of the Republic of Kazakhstan to purchase the full volume of produced vaccines.

### Company

OtarBioPharm LLC is a manufacturer of biological and medicinal products. The company owns a plant for the production of immunobiological preparations that comply with the requirements of good manufacturing practice (GMP).

### Market

- The loss of the foot-and-mouth disease-free status of a country hinders international and regional trade in meat and meat products. According to the estimates of the World Organisation for Animal Health (WOAH), the virus circulates among 77% of the global cattle population in Africa, the Middle East, Asia, and certain parts of South America.
- Currently, the foot-and-mouth disease vaccine is not produced within the territory of the Republic of Kazakhstan, and the country is entirely dependent on imports. In 2022, the Ministry of Agriculture of Kazakhstan purchased foot-and-mouth disease vaccines from Russia for a total amount of 3.5 million US dollars. The annual demand for foot-and-mouth disease vaccine amounts to 80 million doses.

### Project investment attractiveness:

Investments: 391 thousand USD

Project's NPV: 10,345 thousand USD

IRR: 39.4%

Payback period: 5.31 years

Discounted payback period: 6.89 years

### Project's attractiveness

- Existing infrastructure.** Project is planned to be implemented at the facility owned by the initiator, which is a plant for the production of immunobiological preparations. The plant complies with the requirements of good manufacturing practice (GMP) and has experience in contract manufacturing of over 5 million doses of the coronavirus infection vaccine.
- Secured contracts.** The company has reached an agreement with the Ministry of Agriculture of the Republic of Kazakhstan regarding the purchase of the full volume of vaccines produced within the scope of the project.
- Qualified personnel.** The plant employs 90 qualified staff with experience in industrial and other laboratories, including in the Ministry of Health's Biosafety Scientific and Research Institute.

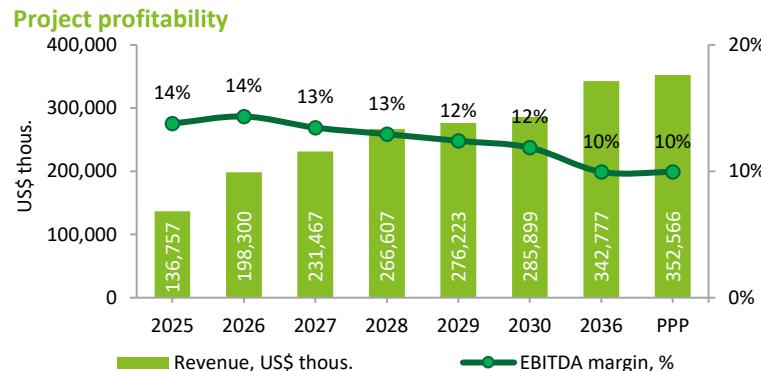
### Investment proposal

The Project requires investment of 391 thousand USD (at the rate of 449 tenge), of which:

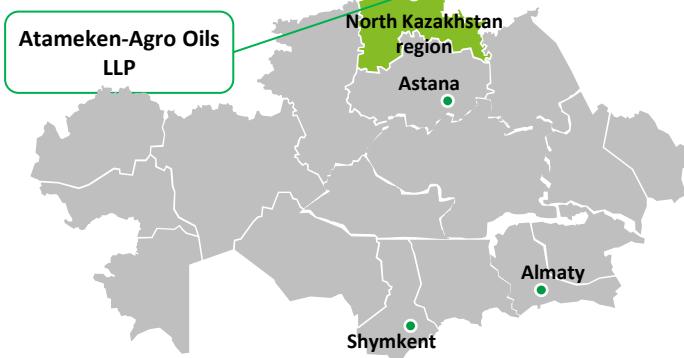
- 100% (391 thousand USD) – investor participation.

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:

- 74% (291 thousand USD) – raw materials;
- 26% (101 thousand USD) – equipment.



## Location



## Creation of an oil extraction plant in SEZ in Petropavlovsk

### Products

Upon reaching full design capacity by 2028, the projected sales volumes are as follows: sunflower oil – 116 thousand tonnes, flaxseed oil – 12.9 thousand tonnes, rapeseed oil – 22.5 thousand tonnes, granulated sunflower meal – 82.3 thousand tonnes, granulated flax meal - 20.5 thousand tonnes, granulated rapeseed meal – 26.7 thousand tonnes, granulated husk (pellets) - 22.1 thousand tonnes. The entire oil production is planned for export to China, Uzbekistan, Iran, Turkey, and EU countries such as Poland and Belgium. The company aims to sell approximately 50% of the meal and husk volume in the markets of Uzbekistan and EU countries like France and Italy, while the remaining products will be sold on the domestic market.

### Project description

The Project provides the construction of an oil extraction plant for the processing of vegetable oils with a capacity of 924 thousand tonnes per year in Qyzyljar Special Economic Zone in Petropavlovsk, North Kazakhstan region.

The configuration of the industrial site for the planned production has been finalised, along with the technical specifications for the design of the plant, production technology and the list of equipment to be supplied. The project roadmap has been approved.

### Company

Initiator of the project is Atameken-Agro Oils LLP. The Company is a part of Atameken-Agro JSC, a large agricultural holding company consisting of 16 companies. Atameken-Agro JSC has been operating since 2003 and is a prominent player in the Kazakhstan agricultural sector, with a land fund exceeding 440,000 hectares in the North Kazakhstan and Akmola regions, producing a diverse range of agricultural products. Annually, the companies within the holding collectively produce 400 thousand tonnes of crops, which are sold in both domestic and international markets.

### Market

- In 2022, the total harvested area dedicated to oilseeds reached 3.4 million ha, marking an increase of 437 thousand ha compared to the previous year.
- In 2022 in Kazakhstan, the volume of sunflower oil production amounted to 537 thousand tonnes. In 2018-2022 sunflower oil production has grown at a CAGR of 19.4%.
- As of 2022, the volume of vegetable oil consumption in Kazakhstan amounted to 457 thousand tonnes, which is 5% more than last year.
- In 2022, the entire volume of sunflower oil imported to Kazakhstan, totaling 60.9 thousand tonnes, came from Russia.

### Investment attractiveness of the project:

- Investment – US\$ 46,582 thousand
- Project NPV – US\$ 67,471 thousand
- IRR – 30.7%
- Payback period – 5.74 years
- Discounted payback period – 7.65 years

### What is the attractiveness of the project?

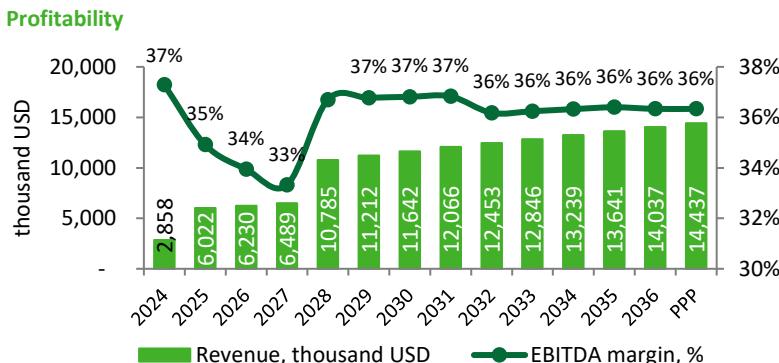
- Advantageous location.** The production site is strategically planned in North Kazakhstan region, offering access to a well-developed transportation hub and ensuring efficient product delivery throughout Kazakhstan. The region benefits from an extensive railway network, connecting it to other parts of the country and neighbouring nations.
- Proven track record.** The Company is affiliated with the prominent agricultural holding, Atameken-Agro JSC, comprising 16 companies. With a presence since 2003, the holding has established itself as a leader in the Kazakhstan agricultural sector. It has a land fund exceeding 440 thousand hectares in North Kazakhstan and Akmola regions, producing a diverse range of agricultural products. Annually, the companies within the holding collectively produce 400 thousand tonnes of crops, which are sold in both domestic and international markets.
- Availability of raw materials.** Atameken-Agro JSC's portfolio includes subsidiaries engaged in the cultivation of sunflower, rapeseed and flax seeds. These crops serve as the primary raw materials for the Company's production.

### Investment proposal

The Project requires investment of US\$ 46,582 thousand (at the rate of 449.2 tenge), of which:

- 50% (US\$ 23,291 thousand) – debt financing subject to collateral;
- 50% (US\$ 23,291 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 location



## Construction of fruit storage facility

#### Product

The Project is scheduled to be commissioned by 2024, reaching the full capacity - in 2028. Upon reaching the full capacity, the annual production volumes will be as follows: sale of apples - 6,935 tonnes; apple storage lease - 2,290 tonnes. 20% of the products is planned to be sold in the markets of Russia, 80% will be sold in Kazakhstan.

#### Project

This Project ("Project") plans to build a fruit storage facility with a capacity of 9,225 tonnes on an area of 3.8 ha in Almaty region. The Project will also build a sorting and packaging complex. The company plans to get a land plot for rent in the Almaty region within the framework of the Project.

Almaty region has a favorable location in terms of production capabilities and availability of transport communications for prompt delivery of finished products to the regions of Kazakhstan with subsequent access to foreign markets. Another advantage of the Project location is its proximity to consumer markets. As of April 2023, the combined population of Almaty region and the city of Almaty exceeds 3.7 million people.

#### Initiator

ISSYK FOOD LTD is a project company established for the construction of a fruit storage facility.

#### Market

- International purchases of imported apples in 2022 amounted to 12.5 million tonnes. The average annual growth rate of global imports from 2018-2022 was 11.4%. Russia was one of the largest importers of fresh apples in 2022.
- In 2022, 268 thousand tonnes of apples were harvested in Kazakhstan. The average annual apple harvest over the period 2017-2022 was about 235 thousand tonnes, and the average annual growth rate (CAGR) was 8.2%. The consumption of apples in the RK over the last 5 years shows a steady growth with an average of 337 thousand tonnes. In 2017 - 2022, the average annual growth rate of product consumption was 4%. The leaders in fruit consumption are Almaty city (88.9 kg), Mangistau region (87.5 kg) and Astana city (85.2 kg).

#### Project payback

Investment amount – US\$ 15,681 thousand

Project NPV – US\$ 3,095 thousand

IRR – 23.6%

Payback period – 7.61 years

Discounted payback period – 12.34 years

#### What is the advantages of the project?

**Advantageous location.** Location of the fruit storage is assumed in Almaty region, where the production of apples is widely developed. According to the results of 2022, the total planted area for apples in the region was 11,139 ha, the annual harvest of apples - 94.9 thousand tonnes.

**Advanced, waste free and eco-friendly processing.** Ripe apples that do not meet the standard for sale fresh are used in the processing industry for products such as jams, juices, apple puree, pectin.

**Quality of goods sold.** The company uses Control Atmosphere Storage Technology, which preserves fruit texture and color for up to 11 months (instead of 6 months).

**State support.** The Project is included in the list of priority sectors for State support, under which a range of benefits, preferences, and in-kind grants can be obtained.

#### Investment and financing structure

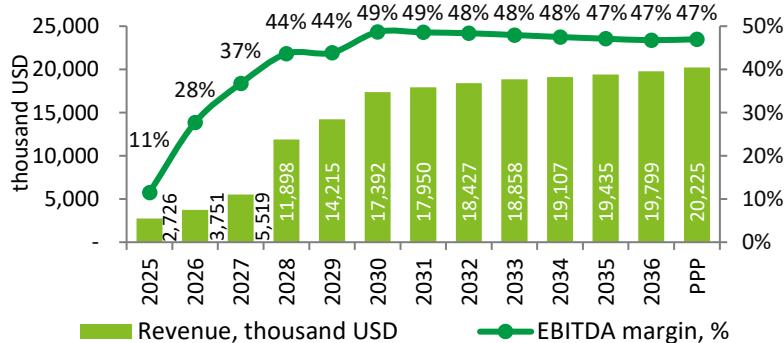
The Project requires investment of US\$ 15,681 thousand (exchange rate: KZT 449), of which:

- 70% (US\$ 10,977 thousand) – debt financing subject to collateral;
- 30% (US\$ 4,704 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



## Project location



## Creation of Genetic Livestock Biotechnology Centre

### Product

When reaching full capacity in 2029, the following sales volumes are planned on average per year: breeding material – 1,359 thous. doses, insemination services – 109 thous. units, genomic testing – 68 thous. units, embryo transplantation – 5 thous. units.

Genomic analysis and embryo transplantation services will be offered in the domestic market of Kazakhstan. The breeding material will be sold in both the domestic market of Kazakhstan and for export to Uzbekistan, Kyrgyzstan, Russia, Mongolia, Azerbaijan and Armenia.

### Project

The investment project envisages the construction and establishment of the Genetic Livestock Biotechnology Centre. The Centre will encompass laboratories dedicated to cryopreservation, embryo transplantation and genomic analysis in the livestock breeding and personnel training. The project is being implemented on the basis of the production facilities of Asyl Tulik JSC. Currently, a 20-hectare land has been allocated for the construction of the centre in the Kabanbay village, Tselinograd district.

### Company

Asyl Tulik JSC is a major breeding centre in Kazakhstan that focuses on introducing technology for obtaining, cryopreservation, storage, and utilisation of breeding material from highly productive cattle and small ruminant. Company has 22 years of experience. Asyl Tulik JSC has at its disposal a Center for animal breeding with a cryolaboratory equipped in accordance with international standards and a semen bank, which contains about 4 million doses of cattle and sheep semen.

### Market

- As of 2022, the coverage of artificial insemination of the breeding stock of cattle in Kazakhstan is 15% (450 thousand heads out of 3.5 million heads of breeding stock). In 2022, import of breeding material in Kazakhstan reached 3.87 million US dollars, with an increase of 207% compared to 2021.
- Imports of breeding material to Russia in 2021 reached 25.8 million USD. In Uzbekistan, in 2021, imports of material for veterinary artificial insemination increased by 55%, reaching 147 thousand USD. In Kyrgyzstan, the volume of imports in 2021 showed a positive trend and amounted to 64 thousand USD.

### Project investment attractiveness

Investments: 9,373 thousand USD  
Project's NPV: 3,830 thousand USD  
IRR: 33.4%  
Payback period: 5.55 years  
Discounted payback period: 8.65 years

### Project's attractiveness

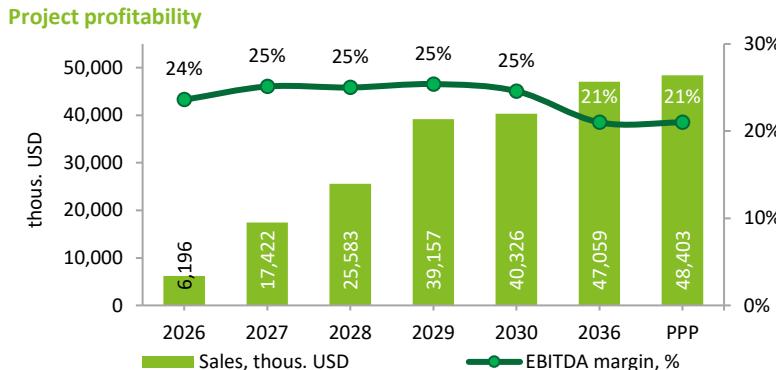
- Company's experience and established sales:** Asyl Tulik JSC is a company with 22 years of experience in the field of livestock breeding and cryopreservation of breeding material of highly productive cattle breeders. The Company has developed trade channels to Russia, Kyrgyzstan and Mongolia.
- Untapped market:** The market in Kazakhstan currently has only three cryopreservation centres and lacks embryo transplantation centres. This provides Asyl Tulik JSC with the opportunity to occupy an untapped niche and gain a significant market share within Kazakhstan.
- Involvement of a strategic partner:** Synetics, a leading genetics centre in France, is expected to contribute its expertise by providing training for local specialists in artificial insemination and embryo transplantation technology.

### Investment proposal

The Project requires investment of 9,373 thousand USD (at the rate of 449 tenge), of which:

- 100% (9,373 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.



#### Location



## Breeding, cultivation, processing of fish products in Almaty region

### Products

The following sales volumes are planned at full design capacity in 2029: carp – 470 tonnes, sazan – 353 tonnes, grass carp – 165 tonnes, silver carp – 165 tonnes, trout – 470 tonnes, zander – 353 tonnes, processed fish – 376 tonnes. Fish is sold in live, frozen and chilled forms.

The structure of product sales is as follows:

- Domestic market – 50%;
- Export – Russia (25%), China (10%), Uzbekistan (7,5%), Kyrgyzstan (7,5%).

### Project description

The project involves expansion of the existing fish farm for breeding, cultivation and processing of fish products on a land plot of 155 ha in B. Kydyrbekuly village of Almaty region.

### Company

The initiator of the project is Aiho LLP. Aiho LLP was founded with the purpose of creating a fish farm for the breeding, cultivation and processing of fish products. Currently, the company produces 140 tonnes of fish products annually. The Initiator has at his disposal a land plot of 155 ha. Water and power supply infrastructure is connected to the land plot.

### Market

- In 2022, global imports of live fish reached \$2,642 million. USA, which is \$518 million. The United States is larger than last year's figure. In 2022, the total volume of marketable fish grown in the Republic of Kazakhstan amounted to 13.3 thousand tons, which is 82% more compared to 2021. At the end of 2022, carp (19%), trout (15%), pike perch (16%) and carp (14%) occupied significant shares in the structure of farmed fish in the Republic of Kazakhstan.
- At the end of 2022, imports of live fish to the Republic of Kazakhstan reached 177 tons, which is 14% less than in 2021. The main suppliers of live fish to the Republic of Kazakhstan were Russia (142 tons), Uzbekistan (18 tons), China (11 tons) and Kyrgyzstan (5 tons).
- In 2021, the volume of live fish imports in Russia and Kyrgyzstan amounted to 2.03 thousand tons and 107 tons, respectively. In 2022, the volume of live fish imports in China and Uzbekistan amounted to 29 thousand tons and 8 thousand tons.

### Investment attractiveness of the project:

- Investment – 23,304 thousand USD
- Project NPV – 10,267 thousand USD
- IRR – 24.0%
- Payback period – 7.00 years
- Discounted payback period – 10.58 years

### What is the attractiveness of the project?

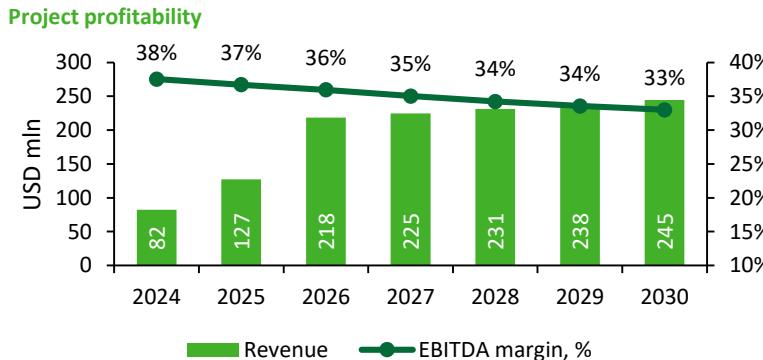
- **Beneficial location.** Locating production in Almaty oblast provides access to a large market for the southern regions of the country (over 3.7 million people live in Almaty oblast and Almaty city alone). This region also has a developed and extensive road transport and logistics infrastructure that connects it to the regions of the country and neighboring countries.
- **Experience.** The company annually produces about 200 tonnes of fish products under its own brand name using modern technology. Manufactured fish products are sold both in the domestic and foreign markets.
- **Organic products.** Only organic food and minerals are used for fish farming. This approach to farming contributes to the creation of environmentally safe and sustainable products that meet modern market requirements.

### Investment proposal

Project requires investment of 23,304 thousand USD (at the rate of 449.2 tenge), of which:

- 70% (16,313 thousand USD) – is debt financing subject to collateral;
- or 30% (6,992 thousand USD) – investor participation.

The proposed financing structure of 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 location



## Construction of a plant for deep complex processing of wheat grain (starch, gluten)

### Products

The products are planned to be sold both in the domestic and foreign markets. The Initiator plans to export to neighboring countries such as Russia, Uzbekistan, Kyrgyzstan, Tajikistan and Turkmenistan.

The design capacity will be reached with the following annual range of products: wheat starch – 60,000 tons; gluten – 17,000 tons; lysine – 30,000 tons; bioethanol – 48,600 tons; compound feed – 40,000 tons.

### Project

This project (the "Project") provides the construction of a wheat grain deep processing production complex in Kostanay Oblast. The estimated area of its own land plot is 0.6 ha:

- Increasing the processing component in the gross regional product of Kostanay region;
- Creating 500 permanent jobs.

### Project initiator

Vadisa M LLP was established in 2002. Main activity: flour production.

### Market overview

- The products are planned to be sold both on the domestic market of the Republic of Kazakhstan (40% of the total sales volume) and export (60%).
- In 2021 the production volume of starch, inulin, wheat gluten, dextrin, other modified starch in Kazakhstan was 45 thousand tons, which is 3% more than in 2020. The average annual growth rate of production volumes was 38% from 2017 to 2021. Over the past 5 years, the decrease in imports of wheat gluten in percentage terms amounted to 91%.
- Export of wheat gluten for 5 years demonstrates a positive dynamics. The average annual growth rate for 5 years is 476%.

### Investment attractiveness of the project:

- Investments – 134,242 thousand USD
- Project NPV – 160,577 thousand USD
- IRR – 32.4%
- Payback period – 4.35 years

### What is the attractiveness of the project?

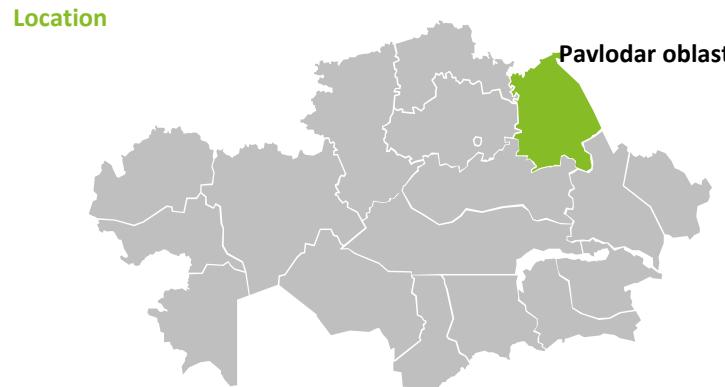
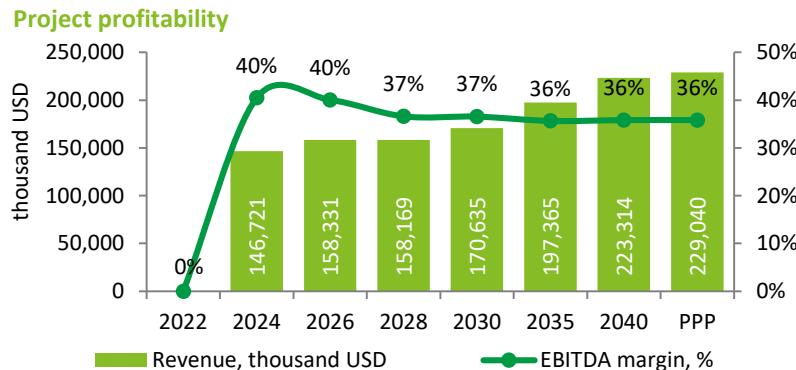
- **Experience.** The Initiator has a mill complex for grain processing with a daily production capacity of 600 tons, a complex for production of mixed fodder and feed additives with a daily production capacity of up to 300 tons, and granaries with a total capacity of 60,000 tons. In addition, the company has accumulated 20 years of experience in sales and production of mixed fodder, wheat grain, rapeseed, barley, bran, and flour, and has trained personnel and established supply chains. The company's products are in demand both in Kazakhstan and overseas.
- **State support.** An extensive list of instruments of state support is available through specialized authorized organizations for the support of the agro-industrial complex.

### Investment proposal

The Project requires investment of US\$ 134,242 thousand, of which:

- 100% (US\$ 134,242 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 sugar factory

### Products

Sales volumes are as following:

- sugar – 148 thousand tonnes per year;
- molasses – 41.3 thousand tonnes per year;
- pressed pulp – 210.1 thousand tonnes per year.

### Investment attractiveness of the project:

Investment – 377,134 thousand USD

Project NPV – 49,572 thousand USD

IRR – 16.3%

Payback period – 8.9 years

### Project

This investment project ("Project") envisages the construction of a 960 thousand tonnes/year sugar production plant. The Project aims to create over 400 jobs in the region.

### Company

The Project Initiator is JSC Socio-Entrepreneurial Corporation based in the cities of Pavlodar and Turkistan. The Initiator manages assets and stimulates economic activity in Kazakhstan by attracting investment. The Initiator's mission is to contribute to the region's socio-economic development based on a public-private partnership.

### Market

- A total of 170 million tonnes of sugar was produced and 171 million tonnes of sugar was consumed globally in 2021. By 2031, sugar production is expected to reach 190 million tonnes, while sugar consumption is expected to reach 188 million tonnes.
- In 2021, the global beet pulp market was worth 404 million USD, while global sugar beet molasses market was worth 2,270 million USD. By 2028, the global sugar beet pulp market will be worth 453 million USD, while the global sugar beet molasses market will increase by 133% reaching 5,281 million USD.
- In 2021, sugar production and consumption levels in Kazakhstan were 227 thousand and 533 thousand tonnes respectively. Imports accounted for 95% of demand in 2017-2021, while the deficit level reached 89%.

### What is the attractiveness of the project?

- **Project location.** The plant will be located close to the main raw material suppliers. Furthermore, Pavlodar Oblast has well-developed road and logistics infrastructure, which helps reduce both time and delivery times for finished product to major cities in Kazakhstan and Russian border regions.
- **State support.** As the development of the sugar sector is a prerequisite for ensuring national food security, beneficial economic conditions are in place for reducing the financial burden on enterprises within the framework of the "Saving Simple Things", "2025 Business Road Map", "SIIDP 2020-2025" programmes and others.
- **Import substitution.** The country has seen a shortage of sugar products as production only covers domestic demand. In 2021, less than 7% of all sugar in Kazakhstan was made from local sugar beet. The construction of a plant with capacity to produce 148 thousand tonnes of sugar per year will help replace imports with quality local product.

### Investment proposal

The Project requires investment of 377,134 thousand USD, of which:

- 70% (263,993.8 thousand USD) – debt financing subject to collateral;
- 30% (113,140.2 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.



## Location



## Production of immunobiological drugs (vaccines) for the industrial poultry sector with an SPF-embryo unit

### Products

When reaching the design capacity in 2025, the following production volumes are planned: live vaccines (against Gamborough disease, Marek, Newcastle, ITL, infectious bronchitis, etc.) – more than 2 billion doses per year, inactivated vaccines (against Gamborough disease, Marek, Newcastle, ITL, infectious bronchitis, etc.) – more than 1 billion doses per year.

### Project

The investment project (“Project”) envisages the construction of a plant to produce immunobiological drugs (vaccines), immunomodulatory and diagnostic tests that meet good manufacturing practice (GMP), ISO/IEC 17025, ISO 9001:2008 and ICH Q10 standards and requirements. The planned production capacity will be more than 3 billion doses of vaccines per year. A 1.35 ha site at the Company’s disposal has been allocated for construction.

The Project will help :

- create a full vaccine production cycle for industrial poultry with an SPF-embryo unit;
- develop patent protected anti-infectious medicines and veterinary drugs.

### Company

NPP Antigen LLP produces biological preparations and medicines. It produces 50-70 million doses of preventative veterinary drugs and 60-70 million diagnostic tests every year.

AntigenBioPharm Scientific and Production Centre LLP is due to be created in conjunction with potential investors.

### Market

- The animal vaccine market, both domestically and overseas, is growing. According to Market Research Future, the global animal vaccine market will be worth 13 billion USD by 2027, with CAGR of 7% in 2021-2027. The greatest growth is forecast in the domestic poultry vaccine segment, where CAGR in 2021-2027 will reach 8.94%.
- Production of serum and vaccines used in veterinary science in 2021 amounted to 188 tonnes, which is 82% lower than in 2020. Production CAGR for 2017-2021 amounted to 41%.

### Investment attractiveness of the project:

- Investment – 15,819 thousand USD
- Project NPV – 26,582 thousand USD
- IRR – 43.5%
- Payback period – 5.51 years

### What is the attractiveness of the project?

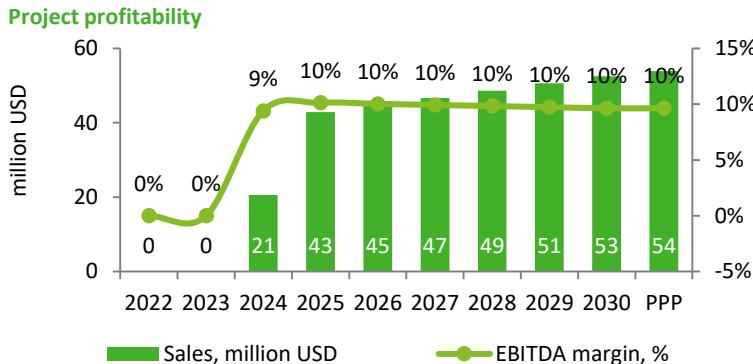
- **Compliance with global standards.** Company product will meet global GMP, ISO/IEC 17025, ISO 9001:2008 and ICH Q10 standards. The Project plans to implement modern control methods using World Health Organisation (WHO) reference strains.
- **Company experience.** The Initiator possesses an extensive intellectual and material database and also employs highly-qualified experts. The Initiator currently sells a portion of its product for export to Central Asia, Azerbaijan, Armenia and Georgia.
- **Lack of competition.** The Company will be the only producer of immunobiological drugs for the industrial poultry sector, which has its own SPF-embryo unit.

### Investment proposal

The Project requires investment of 15,819 thousand USD, of which:

- 70% (11,073 thousand USD) – investor participation;
- 30% (4,746 thousand USD) – own funds of NPP Antigen LLP.

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 the "Wellbeing Village" Eco-Health Milk Processing Complex

### Products

The Project focuses on product sales in Kazakhstan and exports to Russia, Estonia, Belarus and China. Project commissioning is due in 2024 Q2. Product range and planned annual capacity are as follows: cottage cheese – 22,275 thousand pieces/year, yoghurt – 18,225 thousand pieces/year.

### Investment attractiveness of the project:

- Investment – 9,919 thousand USD
- Project NPV – 9,129 thousand USD
- IRR – 35.2%
- Payback period – 4.4 years

### Project

This investment Project (the “Project”) envisages the construction of a complex to produce dairy and nutritional food products in Akmola Oblast. A 68 ha land plot in the Company’s possession has been allocated to build facilities.

The Project will:

- provide persons working in hazardous industries (including the mining and metallurgy complex) with dairy products and nutritional food products;
- create up to 200 permanent jobs.

### Company

JV BAYAN AGRO HOLDING LTD, which was created to implement the Project.

### Market

- Growing demand. Milk and dairy product consumption is growing annually both within the country and overseas, at the same time ensuring stable increase demand for the product. According to the OECD, dairy product consumption will grow over the next 9 years at CAGR of 2.1%, increasing from 457 million tonnes in 2022 to 541 million tonnes by 2030.
- Demand for yoghurt in Kazakhstan in value terms grew continuously from 30 million USD in 2017 to 39 million USD in 2021, with CAGR of 6.8%.
- Demand for cottage cheese and other cheese in 2024 will reach 357 million USD, with CAGR for cottage cheese and other cheese in 2021-2024 at 7.2%.

### What is the attractiveness of the project?

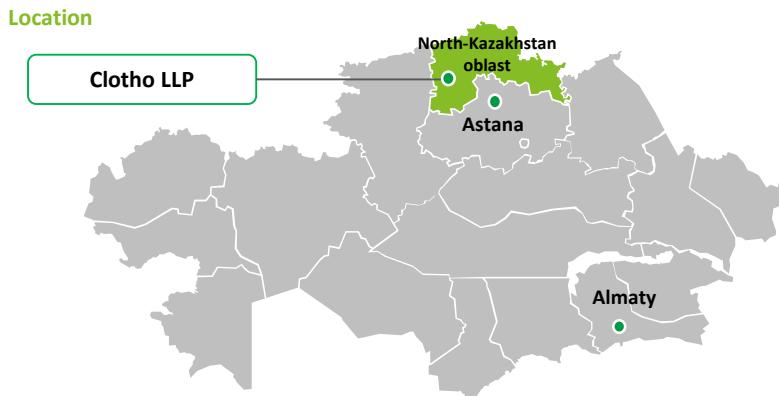
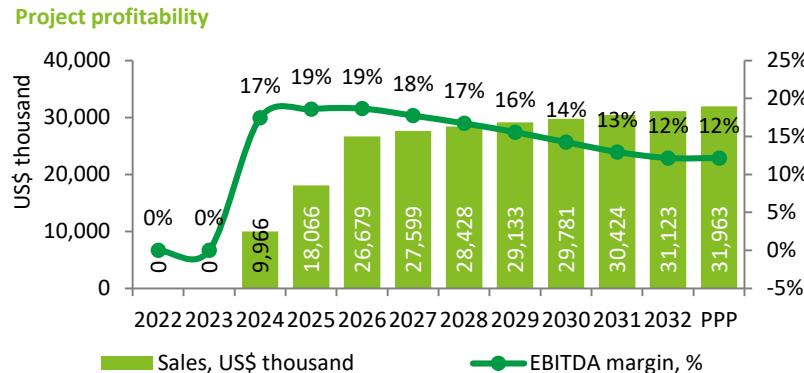
- The product acquires its **health** properties through inulin and pectin additives, which, according to an expert conclusion from the Kazakh Academy of Nutrition, remove toxins from the human body. Additives also help absorb vitamins and microelements and normalise immunity, providing a number of positive effects for consumption.
- **Advantageous location.** The plant is located 1-2-hours’ drive from the target sales market of Astana. The city is also a major transport hub for the country through which major rail and vehicle highways pass, ensuring easy supplies to the Kazakhstan regions and Russia. 10% of the Kazakhstan population lives in Akmola Oblast and Astana (1.8 million persons). Production will cover part of the food belt around the city. In addition, the region has historically been a source of highly-qualified agricultural sector specialists.
- **Developed sales channels.** As at August 2022, the Initiator signed a memo of intention with local and overseas wholesale consumers (Estonia, Belarus and Russia) regarding product sales.

### Investment proposal

The Project requires investment of 9,919 thousand USD, of which:

- 70% (6,943 thousand USD) – debt financing subject to collateral;
- 30% (2,976 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. Collateral – a land plot with a total area of 68 ha (market value – 1,357 thousand USD) and a production complex with a total area of 6,597.1 m<sup>2</sup> (market value – 2,539 thousand USD).



## Production of vegetable oil from rapeseeds, flax seeds, sunflower seeds

### Commercial products

- Sunflower oil – 4,992 tonnes;
- Linseed oil – 2,016 tonnes;
- Rapeseed oil – 4,992 tonnes;
- Sunflower meal – 7,386 tonnes;
- Linseed meal – 2,743 tonnes;
- Rapeseed meal – 6,515 tonnes;

### Investment attractiveness of the project:

Investment – US\$ 9,635 thousand  
Project NPV – US\$ 8,300 thousand  
IRR – 36,4%  
Payback period – 4.7 years

### What is the attractiveness of the project?

- **Proximity to high-capacity markets.** The geographical proximity of the country to a large market (China) and, accordingly, a short transport shoulder allows the country to establish exports and take a significant share of its consumption market..
- **Beneficial location.** Location of production facilities is planned in the North-Kazakhstan oblast. Placement of production in this region will provide access to a large consumer market and a developed transport hub, which will ensure prompt delivery of products to the regions of Kazakhstan and Russia. The region has an extensive network of railways connecting the region with the rest of the country and neighboring countries.
- **State support for the Project.** Project activities are included in the list of priority industries for state support and obtaining appropriate benefits and preferences.

### Investment proposal

The Project requires investment of US\$ 9,635 thousand, of which:

- 51% (US\$ 4,914 thousand) – debt financing subject to collateral;
- 49% (US\$ 4,721 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

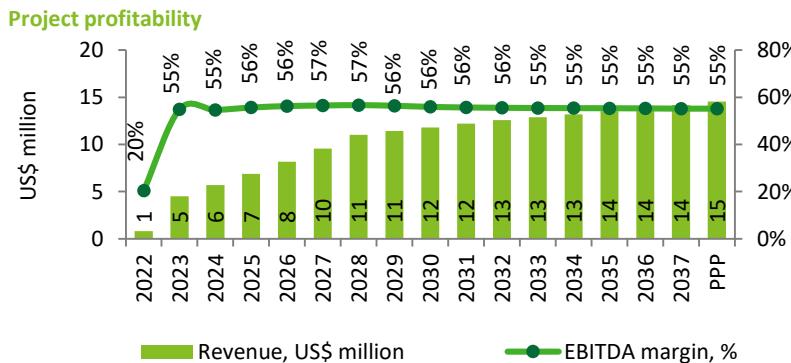
The Project envisages the construction of an oil extraction plant for the production of vegetable oils with a capacity of 12 thousand tonnes per year in the village of Smirnovka of North-Kazakhstan oblast.

### Company

Initiator of the project is Clotho Limited Liability Partnership. The Company's main activities include: Grain and legume crops cultivation, including seed production.

### Market

- OECD-FAO predicts that vegetable oil production will grow at an average annual growth rate of 1.5% during the period 2021-2031 to 249 million tonnes by 2031.
- Over the last five years the average annual growth rate of sunflower oil production was 9.4%. According to the results of 2021 the production volume of refined sunflower oil reached 147 thousand tonnes, unrefined - 184 thousand tonnes per year.
- The dynamics of rapeseed oil production over the past five years has been unstable. During the period 2017-2019 the volume of production of this product increased almost 5 times to 69 thousand tonnes in 2019. However, in 2020-2021 there is a decline in rapeseed oil production due to the reduction of the harvest. In 2021, the production capacity of unrefined rapeseed oil was 266.5 thousand tonnes per year.
- During the 2017-2019 period linseed oil production showed a positive trend, reaching 20.7 thousand tonnes.



## Location



## Growing and processing potatoes

### Products

The annual volume of production and its sales in the following areas: commercial potatoes – 10,000 tonnes/year, seed potatoes – 4,000 tonnes/year, French fries – 2,400 tonnes/year.

### Project

This investment project (the "Project") envisages the growing and processing of elite seed potatoes in Stepnogorsk. Product processing provides for peeling potatoes on a potato washing line. Potatoes of the first and second reproduction and those that do not meet the interstate standards of seed potatoes, will be sold for commercial purposes.

### Company

The initiator of the Project is BioProm Technologies LLP. The main activity of the Company is related to the production and cultivation of elite seed potatoes. Between 2018 and 2020 The company worked on research and production tests with the Dutch company Farm Frites Beheer BV, in cooperation with which 860 tons of super-elite and elite varieties were grown on order.

### Market

- The potato is the third most consumed food crop in the world, after rice and wheat. The volume of world potato production was 359 million tons in 2020.
- In Kazakhstan, the gross potato harvest in 2021 amounted to 4 million tons, while the adjusted sown area was 196 thousand hectares. The yield was at the level of 207 q/ha. The impact of drought has been minimal as all potatoes are grown on irrigated land.
- In Kazakhstan, potato production has been continuously increasing since 2017 with an average annual growth rate of 3.2%, reaching 4 million tons in 2021. Potato consumption in the country was 3 million tons in 2021.

### Investment attractiveness of the project:

Investment – US\$ 11,044 thousand

Project NPV – US\$ 16,035 thousand

IRR – 53.6%

Payback period – 4.7 years

### The attractiveness of the project

- Experience in agricultural activities.** The company specialises in the cultivation of elite potato seeds and has six years of experience in the agriculture and seed production.
- Project location.** The production location region is distinguished by an extensive road transport and logistics infrastructure, which allows minimizing both the time and costs for the delivery of finished products to large cities of Kazakhstan and the border regions of Russia.
- Import substitution.** Due to the lack of highly productive locally bred potato seeds, the dependence of the Kazakhstan market on imported seeds has increased. These seeds are often characterized by a high price and poor quality, which is one of the reasons for the low erratic yield. The solution to this situation is the creation of a system of practical seed production for growing elite seed potatoes in Kazakhstan.

### Investment proposal

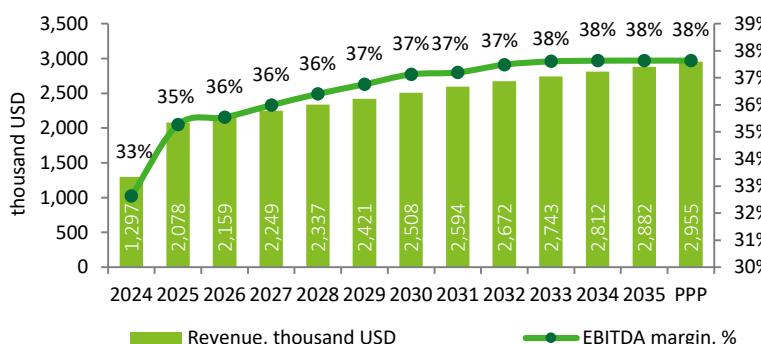
The Project requires financing of US\$ 11,044 thousand, of which:

- 80% (US\$ 8,835 thousand) – debt financing subject to collateral;
- from 20% (US\$ 2,209 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



Location



## Organization of a fish cluster. Construction of the second stage of the shrimp farm

### Production

Upon reaching the design capacity from 2025, the annual output will be 90 thousand kg of king shrimp. It is planned to sell about 72 thousand kg annually in the domestic market, and about 18 thousand kg for export to Russia, Uzbekistan, Kyrgyzstan and Azerbaijan.

### Investment attractiveness of the project:

Investment – 2,645 thousand USD  
Project NPV – 1,202 thousand USD  
IRR – 26.9%  
Payback period – 5.5 years

### Project

This investment project (the "Project") envisages the construction of the second phase of a shrimp farm in the village of Erkin, Talgar region of Almaty oblast. The Project provides a capacity expansion of the existing shrimp farm from 45 tons to 135 tons per year.

### Company

The initiator of the Project is Folle Faart Central Asia LLP. Folle Faart Central Asia LLP has commissioned the first stage of its shrimp farm, the products are produced under the brand Krevetka.kz. At the moment, with an annual capacity of 45 tons, the Company produces shrimp in four standard sizes: 30/40, 21/25, 16/20 and 13/15.

### Market

- In 2021, the level of global shrimp production was 172 thousand tons, an increase of 13% compared to 2020. Shrimp production is projected to reach 219,000 tons by 2026 at a compound annual growth rate (CAGR) of 5% over the period 2021-2026.
- Kazakhstan has not developed its own shrimp production on an industrial scale to date. All products consumed in the country are imported.
- In 2021, imports of frozen shrimp reached 1,046 tons or 6,806 USD, with a CAGR of 16% over the period 2017-2021. Russia accounts for the largest share in the structure of frozen shrimp imports in 2021 (75% or 782 tons). The share of other countries was 25%.

### What is the attractiveness of the project?

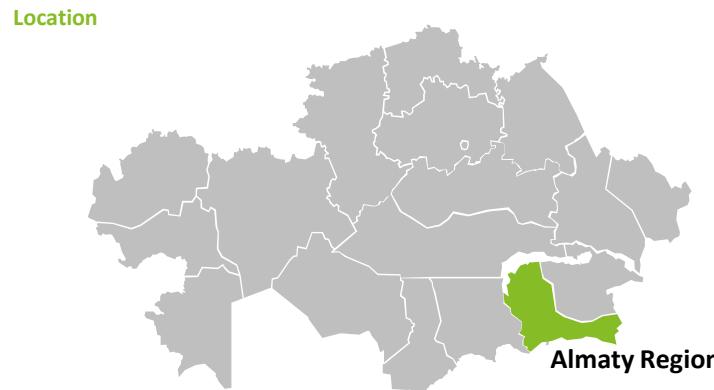
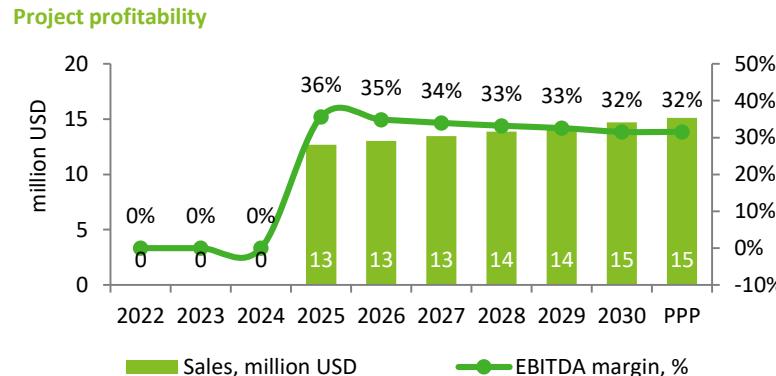
- Experience.** LLP Folle Faart Central Asia project team has launched the first phase of a 2,000 square meter shrimp farm consisting of 16 pools, with a total production capacity of about 45 tons of king prawns per year. The company uses an innovative bioreactor technology to grow shrimp. The products are produced under the brand Krevetka.kz
- Low competition.** Kazakhstan has not developed shrimp production on an industrial scale to date, with the exception of the production of the Initiator. A significant volume of products consumed in the country is imported from abroad.

### Investment proposal

Project requires investment of 2,645 thousand USD, of which:

- 70% (1,852 thousand USD) – is debt financing subject to collateral;
- 30% (794 thousand USD) – investor participation.

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



## Extruded feed plant

### Products

The Project is focused on the sale of products in Kazakhstan and exports to Uzbekistan and Kyrgyzstan. When reaching the design capacity the sales volumes will be: feed for trout – 6 thousand tonnes/year.

### Investment attractiveness of the project:

- Investment – 15,220 thousand USD
- Project NPV – 14,345 thousand USD
- IRR – 25.6%
- Payback period – 5.64 years

### What is the attractiveness of the project?

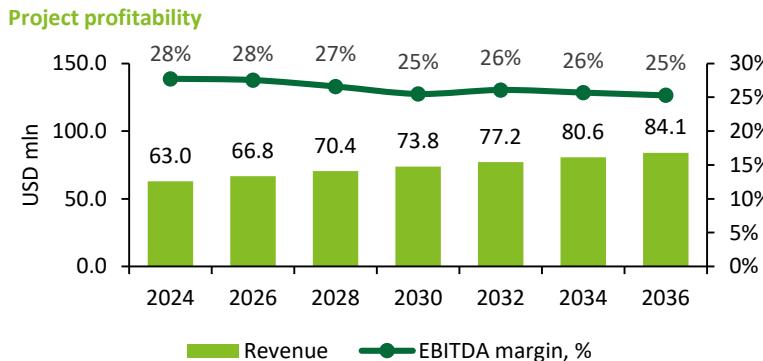
- **Beneficial location.** Placement of production is planned in Baiserke village of Iliysk district of Almaty oblast. A land plot of 10 ha will be allocated for the construction of the facility in the Industrial Zone "Baiserke Agro". Production capacity of the plant will be 6 thousand tonnes of products a year. The implementation of the Project contributes to the development of the processing industry of the region, providing the market with quality feed at affordable prices.
- **Zero-waste production.** The resulting production waste will be used for the production of high-calorie animal feed.
- **State support of the Project.** Project activities are included in the list of priority industries for state support and receiving appropriate benefits and preferences.

### Investment proposal

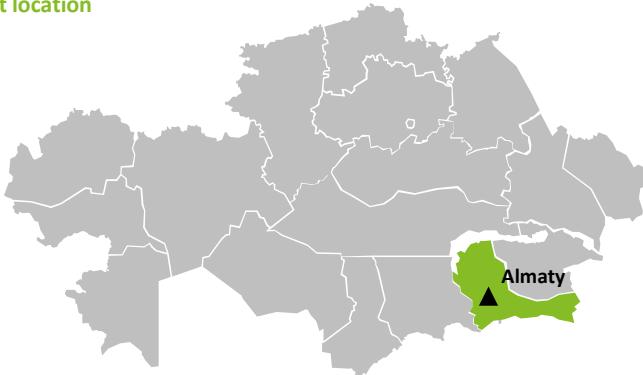
The Project requires investment of 15,220 thousand USD, of which:

- 70% (10,654 thousand USD) – debt financing subject to collateral;
- 30% (4,566 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 location



## Creation of a full cycle to cultivate sugar sorghum, process and produce sugar syrup and animal feed

#### Products

Commissioning is scheduled for 2023, with design capacity due to be achieved in 2023. The planned product range is: organic sorghum syrup - 16,277 tonnes per year; organic bottled sorghum syrup 0.25 litres – 3,500 tonnes per year; high-calorie organic animal feed – 71,290 tonnes per year, including hay - 9,362 tonnes per year; pellets (granular feed) - 26,928 tonnes per year; silage in bulk – 20,000 tonnes per year; silage in vacuum film (25-50 kg) – 15,000 tonnes per year.

#### Project

The project provides for the waste-free cultivation of sugar sorghum on a 1,700 ha site near Almaty. Sweet sorghum juice is processed to make 67% food syrup, while field waste and sweet sorghum green mass are used to produce high-calorie animal feed. All products will be classified as organic.

#### Company

KazBioSorgo LLP was established in 2008. Main activity: cultivation of one- or two-year-old crops not included in other groups. The project was created within the framework of cooperation between Debtor Consulting (Canada), Ecology Mir Group (USA) and KazBioSorgo (Kazakhstan).

#### Market overview

- Imports of sugar syrup and other types of sugar to Kazakhstan over the past five years have increased at an average annual rate of 1.4%. In 2021, imports of sugar syrup and other types of sugar to Kazakhstan reached 8.3 thousand tonnes.
- Over the past five years, silage consumption in the Republic of Kazakhstan has steadily increased. In 2021, 330 thousand tonnes of silage were consumed, which is 97% higher than in 2017

#### Investment attractiveness of the project:

Investment – 53,961 thousand USD  
Project NPV – 39,159 thousand USD  
IRR – 34.1%  
Payback period – 4.0 years

#### What is the attractiveness of the project?

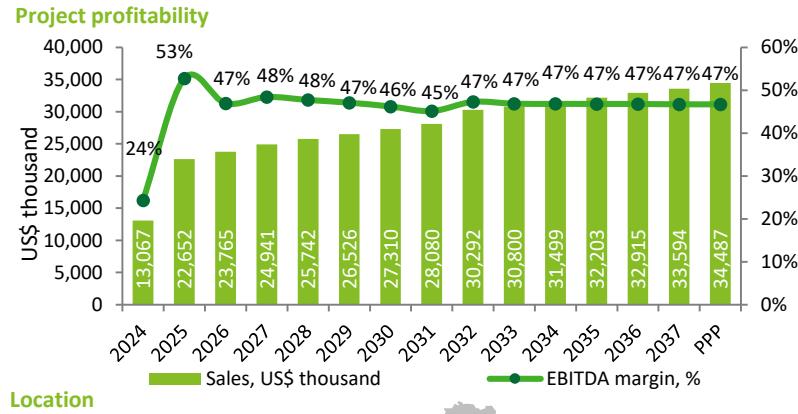
- High yield.** Sugar sorghum is a fodder crop, which in dry conditions can exceed the main silage crop, corn, by 30-40% in terms of green mass yield. Among field crops, sorghum is the leader in terms of drought resistance, heat resistance, salt tolerance and undemanding to soil.
- State support of the Project.** Project activities are recognized as priority sectors for state support, benefits and preferences.

#### Investment proposal

The Project requires investment of 53,961 thousand USD, of which:

- 50% (26,980.5 thousand USD) – debt financing subject to collateral;
- 50% (26,980.5 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.



## Creation of a mega-farm and construction of a small ruminant meat processing plant

### Products

The average range of manufactured products is planned to be as follows: wool – 183 tons, vacuum-packed meat (lamb) – 2,473 tons; by-products of the 1st category for liver – 412 tons; by-products of the 2nd category – 361 tons; washed intestines – 348 tons; edible fat – 294 tons; technical fat – 51 tons; meat and bone meal – 34 tons; semi-finished washed skin – 507 tons.

### Project

This investment project (the “Project”) envisages the creation of a mega-farm for the development of transhumance with a livestock of at least 200 thousand sheep. In addition, the Project provides for the construction of a meat processing plant with a capacity of up to 4 thousand tonnes per year for the processing of small ruminants. The construction of the meat processing plant is planned in Balkhash, Karaganda region.

### Company

The initiator of the Project is Qazaq Steppe Sheep LLP which has been established to implement the Project. .

### Market

- Growing demand.** Mutton consumption in Kazakhstan has been increasing over the past four years, reaching 171.3 thousand tons in 2021. According to the OECD forecast, in 2026, the level of mutton consumption in the country will reach 176 thousand tons.
- Availability of raw materials for production.** In 2021, the number of livestock of small cattle in the Republic of Kazakhstan amounted to 20,856.5 thousand heads. Over the past five years, the average annual growth rate of the number of small cattle has been 3.28%. About 312.55 thousand tons of sheep and 40.52 thousand tons of goats are sent for slaughter annually in the country.
- Feed production.** The country has significant sown areas, water resources and favorable climatic conditions create a high potential for fodder production. As of January 1, 2022, 37 million tons of feed were harvested in the Republic of Kazakhstan.

### Investment attractiveness of the project:

Investment – US\$ 55,476 thousand  
Project NPV – US\$ 22,743 thousand  
IRR – 21.1%  
Payback period – 6.26 years

### What is the attractiveness of the project?

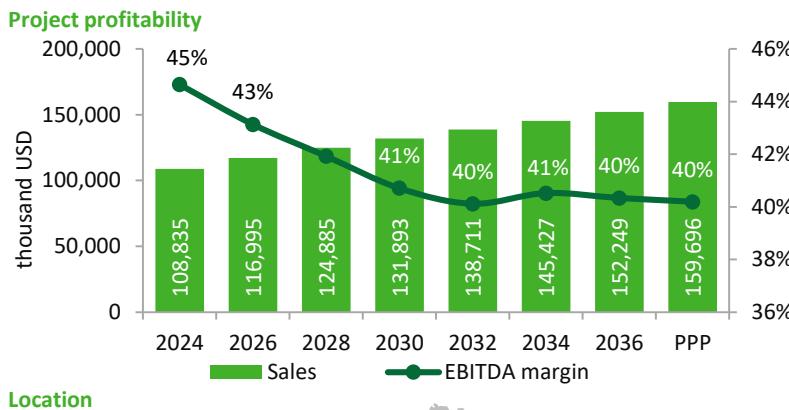
- Availability of raw materials.** It is planned to create a mega-structure of a farm for the development of transhumance with a livestock of at least 200,000 sheep. A herd of sheep and rams is planned to be imported from Mongolia during the first 2 years.
- Favorable Project location.** Karaganda region has optimal natural and climatic conditions and geographical location for the development of animal husbandry and is one of the leading regions of Kazakhstan in the production and processing of agricultural products. The share of agriculture in the total gross regional product of the region in 2021 was 3.6%, of which 56.8% accounted for livestock products. The pastures of the Company are located 160 km from the regional centre - Karaganda

### Investment proposal

The Project requires financing of US\$ 55,476 thousand, of which:

- 70% (US\$ 38,833 thousand) - debt financing subject to collateral;
- 30% (US\$ 16,643 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.



## 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 envisages 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 thous. USD

NPV – 138,001 thous. 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

### 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.

### Investment attractiveness of the project:

Investment – 12,361 thous. USD  
Project NPV – US\$ 16,206 thousand  
IRR – 30.7%  
Payback period – 5.80 years

### 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.

### 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 (Chapaev 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.

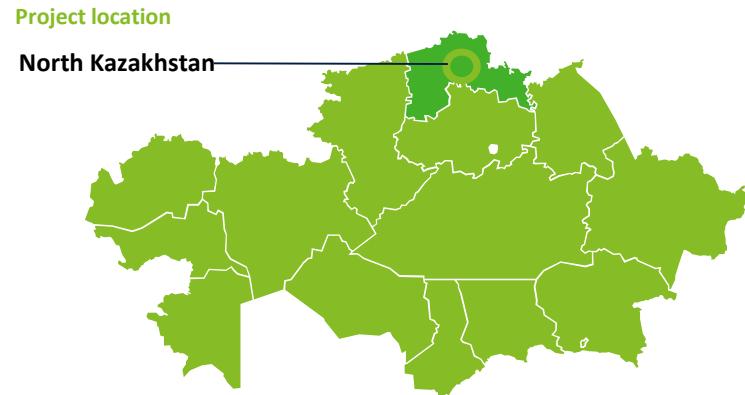
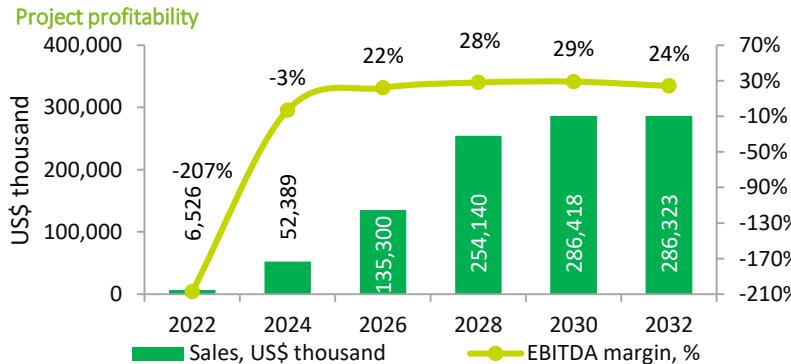
- **The Initiator's experience.** Since 2007, the Company has been a major wholesale supplier of poultry meat and has a well-established distribution system throughout Kazakhstan.

### 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.



## 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

### 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 Genesis 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.

### 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 of 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 stabilise at 4.5 kg by 2029.

### What is the project's attractiveness?

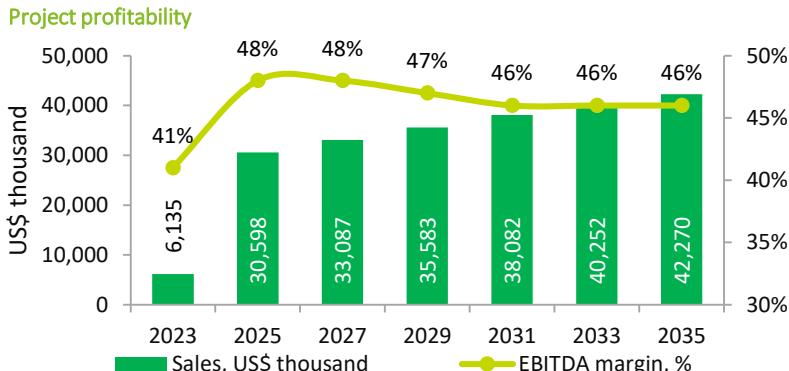
- Favorable location.** The chosen location of the complex is convenient in terms of the accessible distance from large settlements, which corresponds to the Company's strategy to ensure maximum biosecurity of facilities, but at the same time, it allows for significant reduction of logistics costs when 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

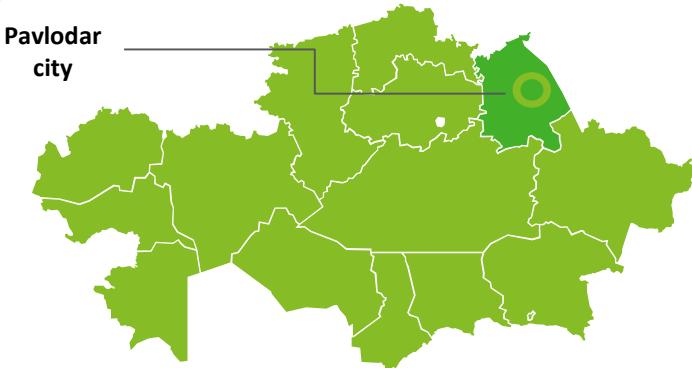
The Project requires investment of US\$ 136,396 thousand, of which:

- 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.



#### Project location



## 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 investment attractiveness :

Investment – 57,524 thousand USD

Project NPV – 31,463 thousand USD

IRR – 23.4%

Payback period – 5.9 years

### 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 Zhelezniy 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.

### What is the project's attractiveness?

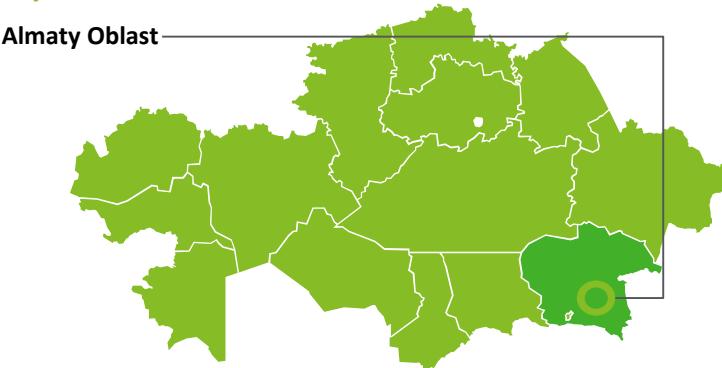
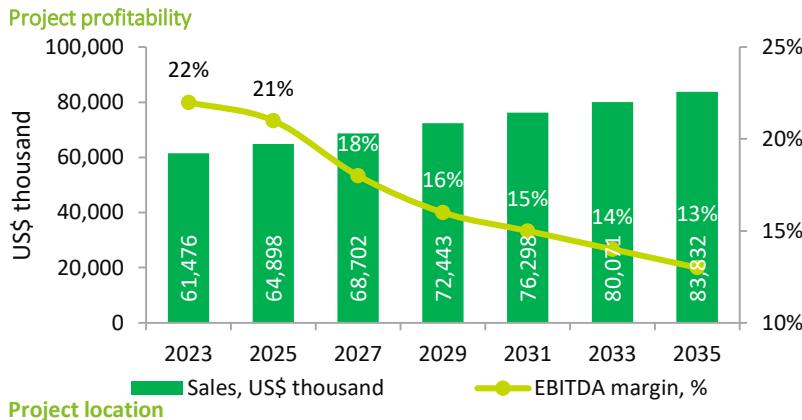
- Advantageous location.** The region's proximity to the Russian border and its transportation corridors such as the Zhelezniy-Omsk highway and the Karasuk-Omsk railway will help speed up and increase sales both domestically and overseas.
- Favourable climate.** Pavlodar Oblast had the highest potato 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?

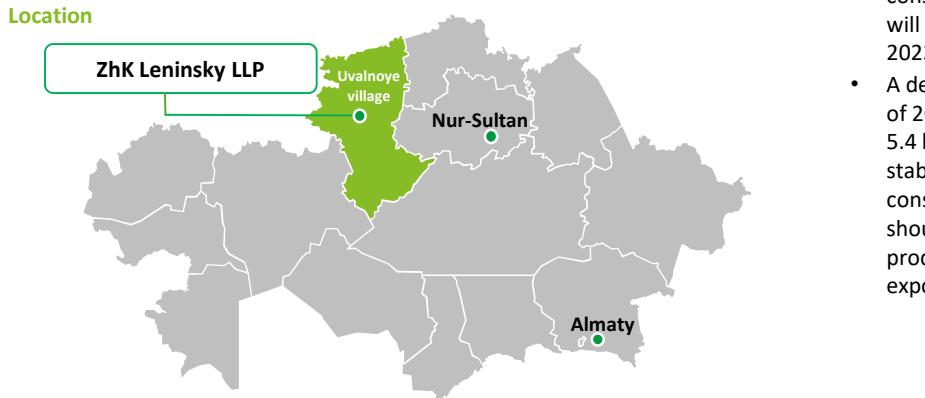
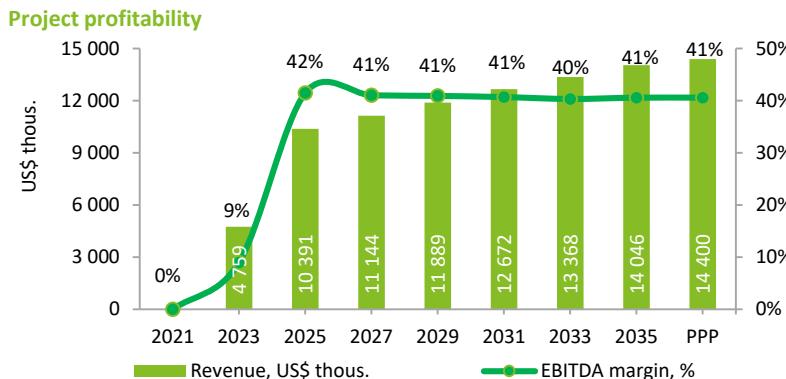
- Ultra-processing.** Raw materials are used to produce primary processing products (flour), secondary processing products (butter, pasta and bakery products) and the waste is used as raw material for the production of compound feed for animals and birds.
- Geographic location.** The advantages of location 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.



## 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?

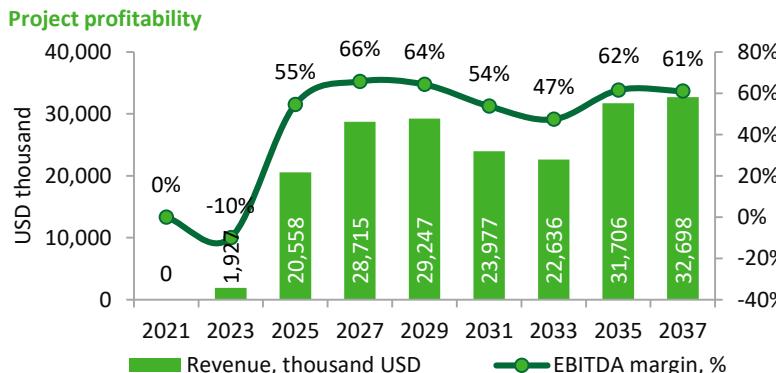
- Favourable location.** The availability of a developed transport infrastructure and large vacant lands, as well as water and specialised labour resources make Kostanay region attractive for pig breeding.
- Availability of infrastructure.** The company has land a plot of over 11 hectares, with connected 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

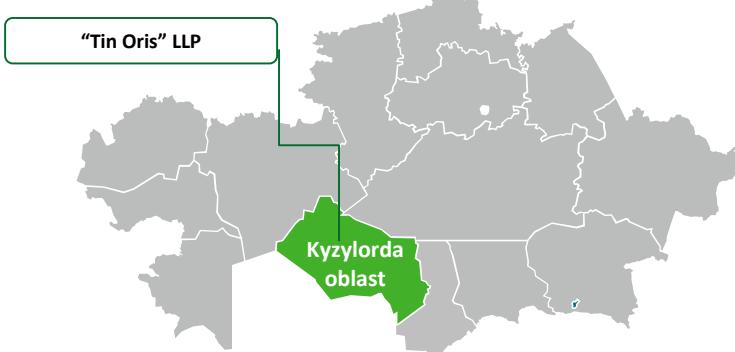
The Project requires investment of US\$ 7,282 thousand, of which:

- 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.



#### Location



## Alfalfa cultivation on 10 thous. ha with sprinkler irrigation

### Commercial products

Dry alfalfa hay – 147.1 thousand tonnes

### Investment attractiveness of the project:

Investment – US\$ 66,507 thousand

Project NPV – US\$ 21,893 thousand

IRR – 20.3%

Payback period – 7.24 years

### Project description

The Project envisages the production of quality alfalfa-based fodder on a 10,000 ha site in the Shiyeli District of Kyzylorda Oblast, and involves the gradual cultivation of high-yield seeds using regular irrigation technology and modern machinery and equipment.

### Company

Tin Oris LLP was established for the implementation of the project.

### Market

- In 2020, global demand for alfalfa hay amounted to 3,670 million USD, with average annual growth in 2016-2020 of -3.3%. According to Global Research & Data Services, demand for alfalfa hay will grow 2.8% per year between 2021 and 2025 to 4,182 million USD by 2025.
- In 2020, China imported 1,694 thousand tonnes of alfalfa hay, or 6% more than in 2019. On the whole, the last three years have seen positive changes.
- As at 2019, meat cattle generated the greatest demand for alfalfa hay (81.4%). Alfalfa hay is also used as horse (110%) and poultry (3.2%) fodder.

### What is the attractiveness of the project?

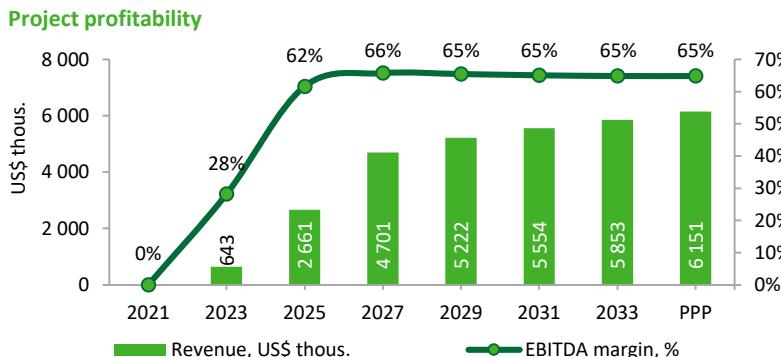
- Advantageous location.** Kyzylorda Oblast is situated to the east of the Aral Sea in the Syrdarya River downstream area. The region's severe continental climate is favourable for sowing alfalfa, which thrives in warm and light conditions, and is also frost resistant. The oblast is marked by a lengthy vegetation period (temperature of over +5°C) of 191-200 days, and an active vegetation period (temperature in excess of +10°C) of 164-173 days. Average annual precipitation is 130 mm.
- Irrigation system use.** Dependence on meteorological conditions and natural disasters increases the risk of shortages in or low-quality raw materials for production purposes. Irrigation minimizes typical negative meteorological factors of agricultural crops' cultivation.

### Investment proposal

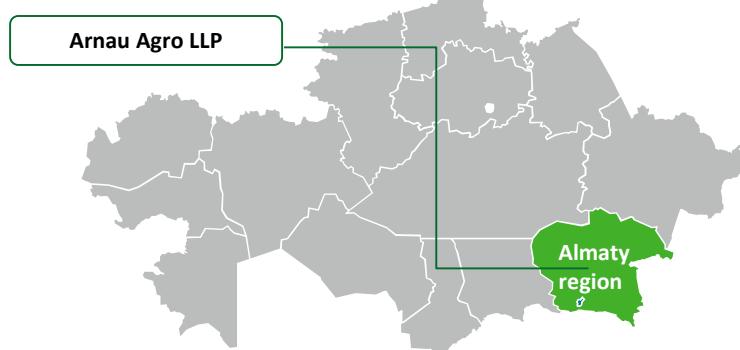
The Project requires investment of US\$ 66,507 thousand, of which:

- 70 % (US\$ 46,555 thousand) – debt financing subject to collateral;
- 30 % (US\$ 19,952 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.



## Location



## Fresh fruit processing plant for juice production

### Commercial products

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

### Investment attractiveness of the project:

Investment – US\$ 9,365 thousand  
Project NPV – US\$ 5,860 thousand  
IRR – 20.6%  
Payback period – 7.77 years

### 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).

### What is the attractiveness of the project?

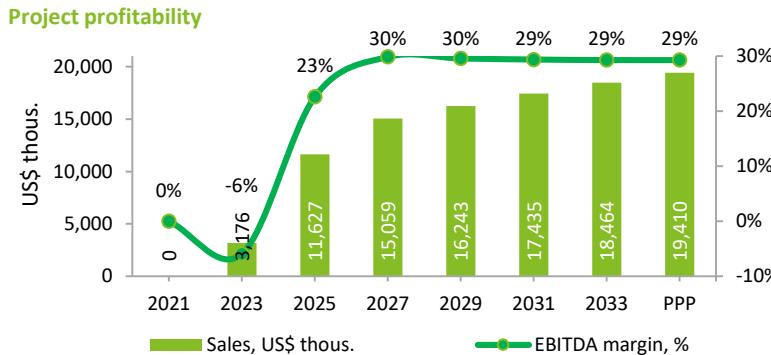
- Favorable climate and advantageous location.** The gardens are located in the foothills of the Zailiyskiy Alatau in the Almaty region, where the combination of a warm climate, fertile soil and a special irrigation system contributes to effective gardening and, accordingly, high yields.
- The use of 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.



## Location



## Construction of a poultry farm for meat and egg production

### Commercial products

Annual project capacity:

- poultry meat - 260 tonnes;
- commercial egg - 122 mln units.

### Investment attractiveness of the project:

Investment – US\$ 11,212 thousand

Project NPV – US\$ 10,728 thousand

IRR – 26.5%

Payback period – 6.05 years

### 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.

### What is the attractiveness of the project?

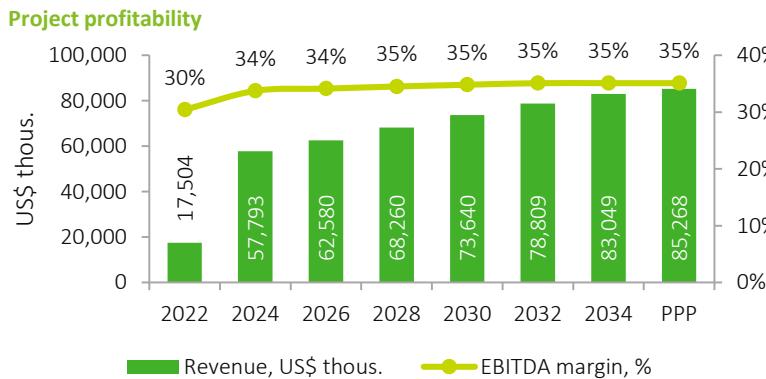
- Project location.** Aktobe region has an extensive road transport and logistics infrastructure: the region has highways of republican and regional significance with access to the regions of Russia and the cities of Kazakhstan.
- State support.** The project is included in the list of priority sectors 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

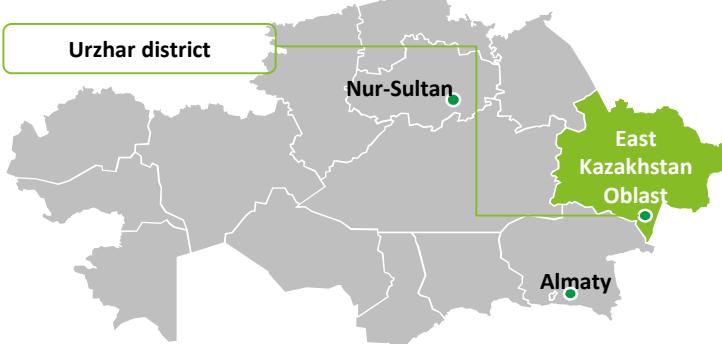
The Project requires investment of US\$ 11,212 thousand, of which:

- 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.



#### Location of the project



## 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.

### 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?

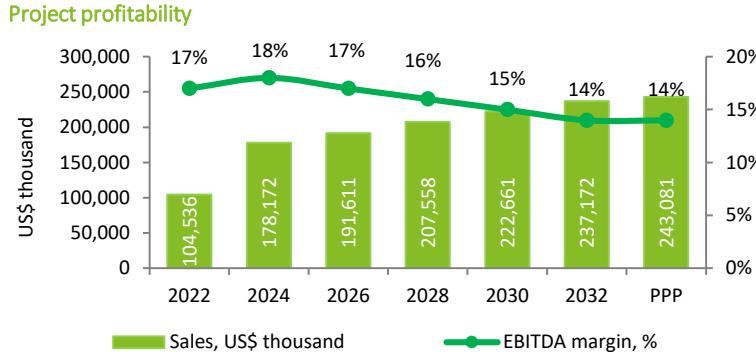
- Proximity to capacious markets.** Urzhar district is located in geographical proximity to capacious consumer markets of Almaty and Almaty Oblast (with a population of 4.0 million people). Urzhar district is located 100 km from highway Almaty-Ust-Kamenogorsk A-3.
- State support.** The project is included 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

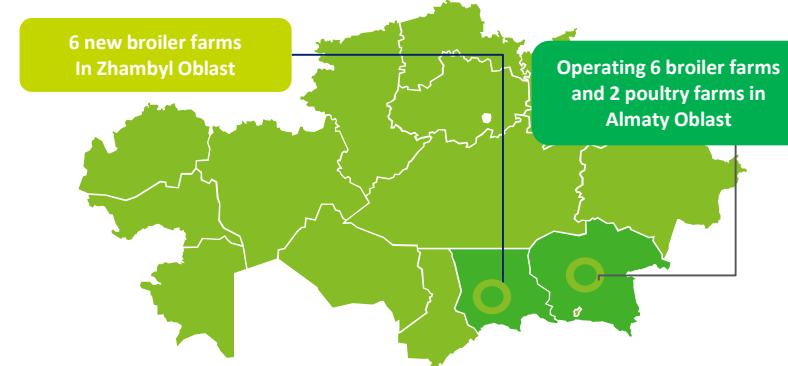
The Project requires investment of US\$ 100,257 thousand, of which:

- 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.



#### Project location



## Expansion of poultry production

### Annual capacity:

- commercial egg – 4 803 thous. units/year;
- poultry meat – 91 967 tonnes/year;

### Domestic demand:

- poultry meat consumption – 246 thousand tonnes/year.

### Project investment attractiveness :

Investment – 102,633 thousand USD  
Project NPV – 91,609 thousand USD  
IRR – 19.9%  
Payback period – 6.3 years

### 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

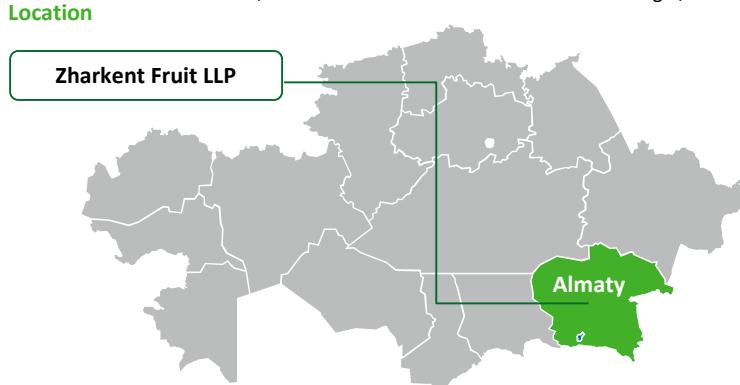
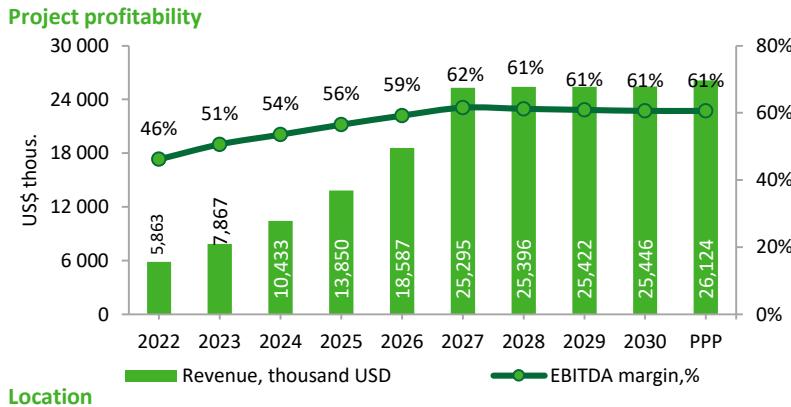
The Project requires investment of US\$ 102,633 thousand of which:

- 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.

### 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.



## 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?

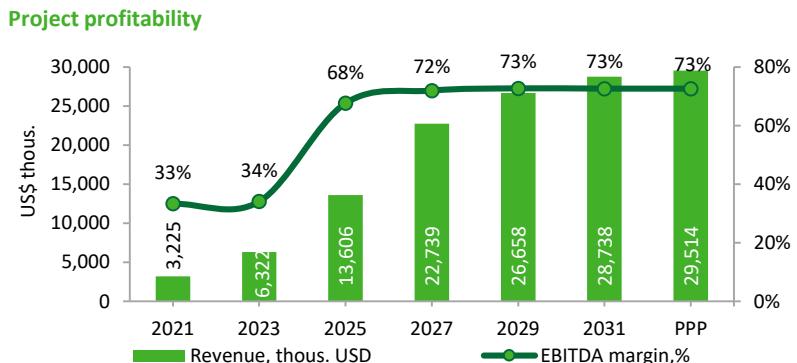
- Climate of Almaty region:** The orchards are located in Almaty region, where the combination of a warm climate, fertile soil and proximity to a mountain river contributes to the effective gardening and, accordingly, high yields.
- Well-established sales strategy and own brand.** Over the years, the 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

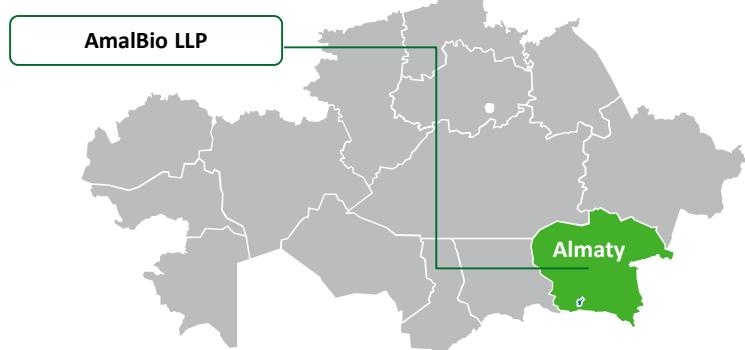
The Project requires investment of US\$ 19,127 thousand, of which:

- 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.



## Location



## 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).

### Investment attractiveness of the project:

Investment – US\$ 50,898 thousand  
Project NPV – US\$ 41,224 thousand  
IRR – 30.1%  
Payback period – 7.1 years

### 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 proposal

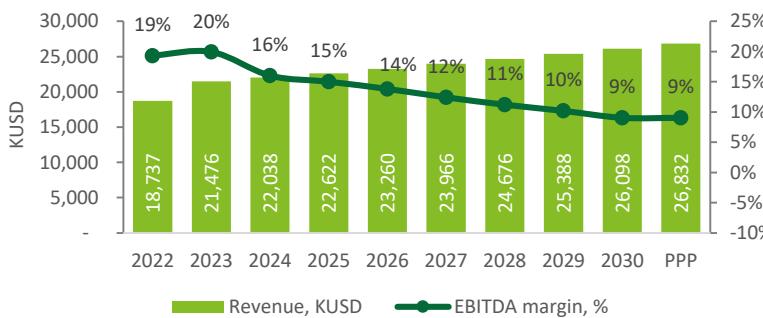
The Project requires investment of US\$ 50,898 thousand, of which:

- 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.



## Project profitability



## Location of the project



## 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 m<sup>2</sup>.

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).

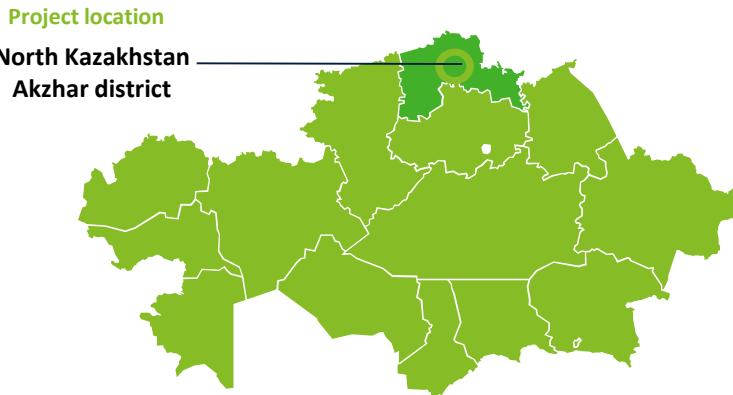
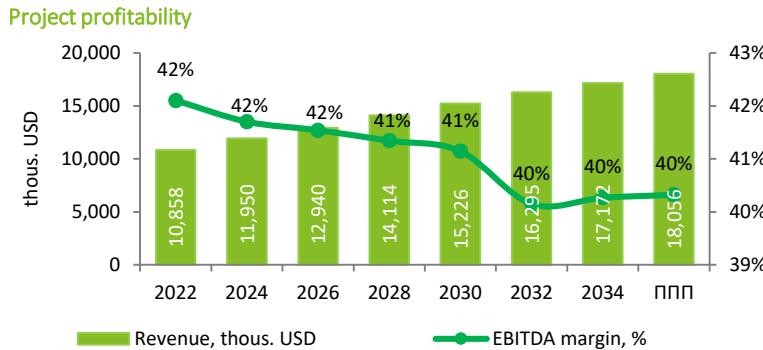
• **Favourable climate.** Turkestan Oblast is traditionally Kazakhstan's melon-growing area, where the combination of a warm climate, fertile soil and special irrigation system aid effective plant growing development and, correspondingly, high crop yield. Roughly 37% of melon growing areas are in Turkestan 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.



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

## Agro-industrial complex

### 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

Indicator	Results
Investment amount, US\$ thous.	13,267
Project NPV, US\$ thous.	9,090
IRR, %	19.7%
EBITDA margin, %	37.3%
Payback period, years	7.1
Discounted payback period, years	10.9

### Investment structure

 Construction and assembly work	 22%	\$2.9 million
 Machinery and equipment	 73%	\$9.7 million
 Initial working capital	 5%	\$0.6 million

### Market prerequisites:

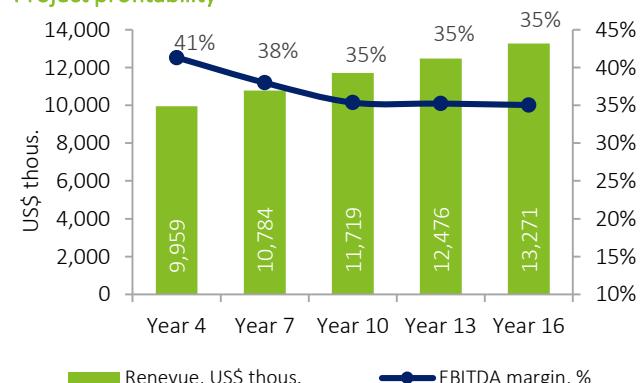
**Absence of similar production in Kazakhstan.** The absence of direct competitors on the market will make it possible to gain a large market share and implement an import substitution strategy.

**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 citrus 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.

### Project profitability



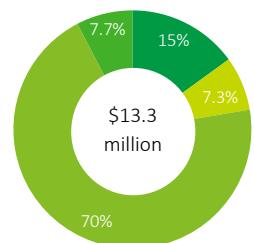
### Financing structure

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

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

 **Debt financing subject to collateral  
70% (\$9.29 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

KAZAKH INVEST  
Investment proposal  
August 2020

### 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:

Taiynsha 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

Indicator	Results
Investment amount, US\$ thousand	126,866
Project NPV, US\$ thousand	121,368
IRR, %	26.4%
EBITDA margin, %	22%
Payback period, years	8.2
Discounted payback period, years	10.2

### Investment structure

 Construction and assembly work	 53.2%	<b>\$67.52 million</b>
 Machinery and equipment	 26%	<b>\$33 million</b>
 Initial working capital	 8.1%	<b>\$10.27 million</b>
 Primal biological assets	 5.4%	<b>\$6.86 million</b>
 Others	 7.3%	<b>\$9.21 million</b>

### 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).

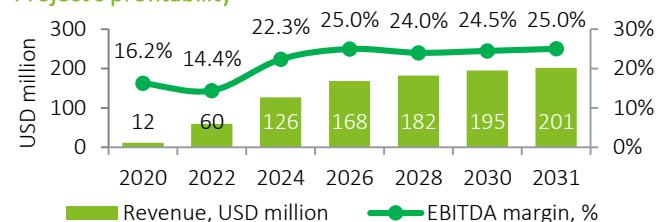
**Export to China.** Over the past 5 years, China's pork imports have increased 2.6 times and amounted to 2 million tonnes in 2019. It is expected that this indicator will grow due to the decline in the volume of domestic pork production.

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

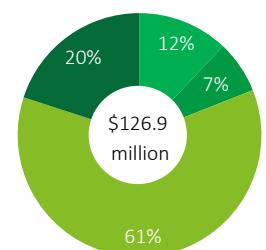
The Initiator manages a modern pig farm, has a land plot with all engineering and technical communications. The pig complex, where technological processes are automated, includes: reproductive farm, artificial insemination station, growing and fattening farm, meat processing plant, own veterinary service,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

### Project's profitability



### Financing structure

-  Initiator equity **12%** (**\$15 million**)
-  Participation of the Fund (KIDF or KCM) **7%** (**\$9 million**)
-  Debt financing subject to collateral **61%** (**\$76.9 million**)
-  Participation of the Investor **From 20%** (**\$26 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 cattle fattening and meat processing and sale enterprise

KAZAKH INVEST  
Investment proposal  
August 2020

## 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, Agromangement Kazakhstan LLP, Individual entrepreneur Pesterev I.A.

### Investment attractiveness of the Project

Indicator	Results
Investment, US\$ thousand	35,508
Project NPV, US\$ thousand	44,277
IRR, %	27.8
EBITDA margin, %	11
Payback period, years	6.3
Discounted payback period, years	8.3

### Investment structure

 Construction and assembly work	20%	\$7.1 million
 Machinery and equipment	7%	\$2.4 million
 Other expenses	24%	\$8.5 million
 Initial working capital	49%	\$17.5 million

### Prerequisites for Project implementation

**Trade and logistics chain** - To sell its products under its own brand Asyl ET, the Company has its chain of meat stores Asyl ET and its own frozen meat distribution network MPS Distribution (neighbourhood store).

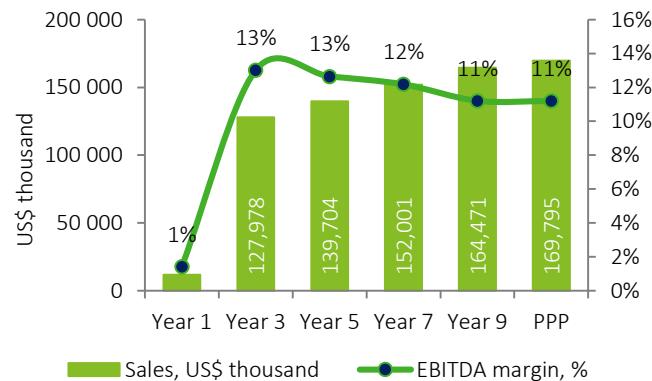
The Initiator is accredited for products distribution to China, Russia and the Middle East.

**Company's extensive material and technical base** - The Company's assets include large land plots for arable land and pastures, an operating meat processing plant, a feedlot, a trading network of five stores, seeding equipment and a granary, which greatly simplifies the Project implementation.

**Proximity to potential clients** - The location in the densely populated Almaty Oblast gives an advantage in proximity to the sales markets of Almaty and Almaty Oblast with a population of 3.8 million people.

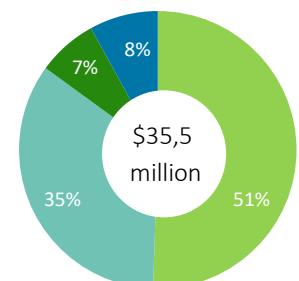
In addition, the strategically convenient location of the region for cross-border trade with China will reduce transport costs when exporting products.

### Project profitability



### 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)
-  Participation of the Investor from 8% (\$2.7 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.

# Organization of a meat cluster for the production of lamb and beef in West Kazakhstan oblast

## Agro-Industrial Complex

KAZAKH INVEST  
Investment proposal  
August 2020

### 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, Sholakankatyn 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).

### Investment attractiveness of the Project

Indicator	Results
Investment amount, US\$ thous.	18,468
Project NPV, US\$ thous.	32,164
IRR, %	16.7%
EBITDA yield, %	26%
Payback period, years	11.1
Discounted payback period, years	15.7

### Investment structure



### Prerequisites for implementation of the Project

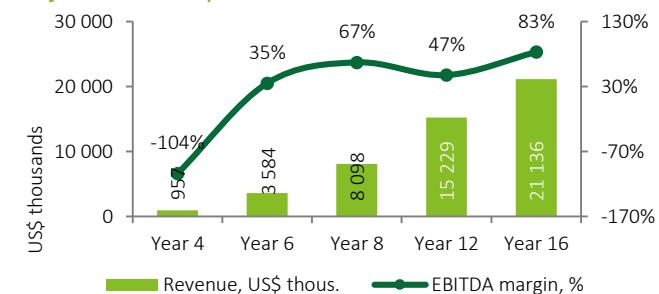
**Growing global demand for lamb.** According to forecasts by the OECD and the UN FAO, there will be an increase in the global level of consumption of mutton. The average annual growth rate in 2020-2024 will be 2.39%.

**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.

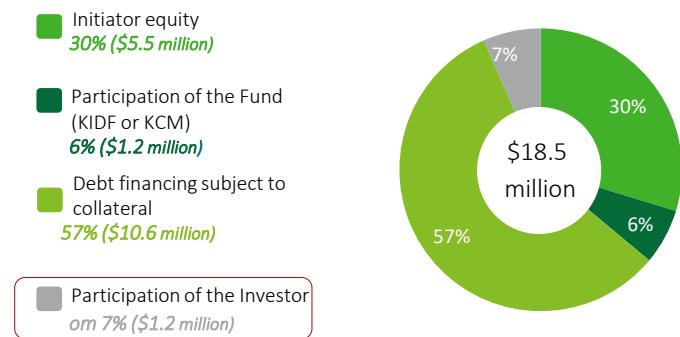
**Development of export to foreign countries.** The export volumes of mutton from Kazakhstan have been growing rapidly in recent years (3 times since 2017) due to beginning of large supplies to Iran, China and Russia.

**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.

### Project Profitability



### Financing structure



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.

# Goat farm and construction of a dairy plant

KAZAKH INVEST  
Investment proposal  
August 2020

## Agro-industrial complex

### Project Description:

The Project idea is the launch of a farm with a livestock of 10,000 goats and a plant construction for the production of liquid pasteurized and whole powdered goat milk in the Almaty oblast. Alpine dairy goats will be imported from France. The Project envisages the transfer of technology for raising dairy goats in a modern farm with a high level of technological processes automation, which reduces the cost of maintaining the farm. The Alpine goat produces milk that is devoid of the traditional goat scent, so it cannot be distinguished from cow's milk by taste or smell. The project will create 65 jobs.

### Initiator of the project:

The initiator of the Project is the French company S.A.S D.A.E, founded by two French farmers - René Montserre and David Ammeu

### Proposed sales markets and volumes:

Pasteurized milk and whole milk powder.

Upon reaching the design capacity, it is planned to produce 2.7 mln liters of pasteurized milk and 840 tons of whole milk powder. It is planned to sell products both in the domestic market and abroad. 19% of the milk powder volume is planned to be exported to China.

### Key investment indicators of the Project

Indicator	Results
Investment amount, US\$ thous.	11,886
Project NPV, US\$ thous.	14,893
IRR, %	24.8%
EBITDA margin, %	37.39%
Payback period, years	6.6
Discounted payback period, years	8.8

### Investment structure

 Land plot	 1,4%	\$0.1 million
 Construction and assembly work	 2,3%	\$0.3 million
 Machinery and equipment	 70,4%	\$8.4 million
 Other	 25,9%	\$3.1 million

### Prerequisites for Project implementation

#### Domestic market deficit

In 2019, the production deficit amounted to 21.7 thousand tons, and the provision with products of its own production was 13%. All products presented on the market are mainly imported. The main exporters of milk powder to Kazakhstan are Belarus, Lithuania and France.

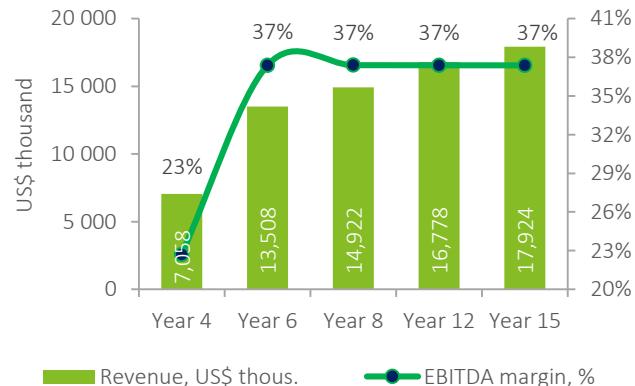
#### Quality dairy products

Alpine goats has good genetics, is one of the most productive dairy breeds of domestic goats and is well adapted to harsh climates. The average milk yield of a goat per day is 2.9 liters.

#### Low level of competition.

There is an acute shortage of breeding goats in Kazakhstan. Today there are only 3 relatively large goat farms in Kazakhstan. Dairy products are not produced in our country on an industrial scale. You can often find imported skinned goat milk powder and UHT milk on the shelves of shops in large cities and metropolitan areas.

### Project profitability

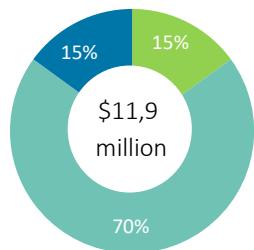


### Financing structure

 Initiator equity  
15% (\$1.8 million)

 Debt financing subject to collateral  
70% (\$8.3 million)

Participation of the Investor  
from 15% (\$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.

**Deloitte.**

# Development of an aquaculture complex to produce black caviar and commercial sturgeon.

## Agricultural sector

KAZAKH INVEST  
Investment proposal  
August 2020

### 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

Indicator	Results
Investment amount, US\$ thousands	8 400
Project NPV, US\$ thousands	30,533
IRR, %	36.5%
EBITDA margin, %	58%
Payback period, years	7.4
Discounted payback period, years	8.7

### Investment structure

 Biological assets	 35%	<b>\$2.9 million</b>
 Machinery and equipment	 9%	<b>\$0.8 million</b>
 Initial working capital	 6%	<b>\$0.5 million</b>
 Other	 50%	<b>\$4.2 million</b>

### 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.

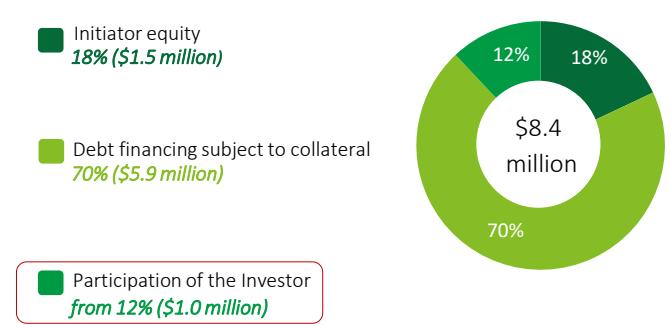
**Growing demand for fish and sturgeon caviar** - According to forecasts by the OECD and UN FAO, there will be an increase in the total level of fish consumption in the world. Average annual growth rate (CAGR) in 2019-2025 will be 1.8%. Thus, whilst in 2018 fish consumption per capita amounted to 20.3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

### Project profitability



### Financing structure



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.

# Juice, beverage and milk production in Nur-Sultan

KAZAKH INVEST  
Investment proposal  
August 2020

## 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.

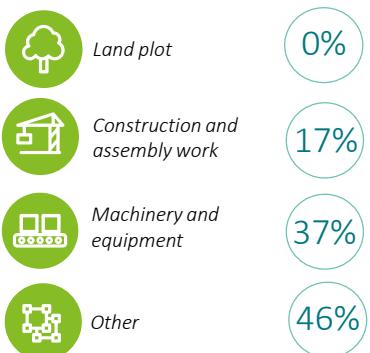
- "Kariba" juices and nectars;
- "Kariba" ice tea alcohol-free beverages;
- "Zhanym" milk;
- "Mirovoi" non-alcoholic beverages;
- "Balapan" children's food.

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

### Investment attractiveness of the Project

Financial indicators	Results
Investment, US\$ thousand	15,655
Project NPV, US\$ thousand	19,300
IRR, %	23,9%
EBITDA margin, %	22,5%
Payback period, years	7,4
Discounted payback period, years	10,3

### Investment structure



\$0.03 million

\$2.6 million

\$5.8 million

\$7.3 million

### 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

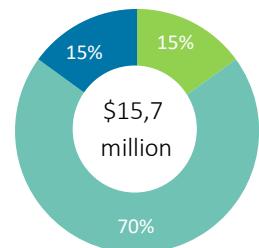


### Financing structure

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.

**Deloitte.**

# Production of organic and humic complex fertilizers

KAZAKH INVEST  
Investment proposal  
August 2020

## Agricultural sector

### 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:

- Crushing of oxidized brown coal, alkalization and addition of microelements, production of organomineral fertilizers.
- Preparation of marketable product (prepackaging operation, packaging and transportation).

### Key investment indicators of the Project

Indicator	Results
Investment amount, US\$ thousands	4,308
Project NPV, US\$ thousands	6,243
IRR, %	33%
EBITDA margin, %	22%
Payback period, years	5.6
Discounted payback period, years	6.9

### 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

### 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.

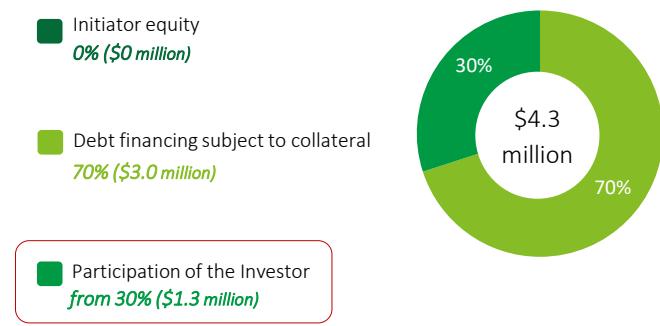
**Growing demand for organic fertilizers** - currently the concept of a "green" economy is gaining popularity in the world. The harmful effects of chemical fertilizers, leading to soil depletion, have contributed to the limitation of their use at the legislative level in several developed countries around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

### Project profitability



### Financing structure



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.

**Deloitte.**

# Cultivation of fodder crops for export using irrigation

KAZAKH INVEST  
Investment proposal  
November 2020

## Agro-industrial complex

### 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

Indicator	Results
Investment amount, US\$ thousand	9,744
Project NPV, US\$ thousand	16,140
IRR, %	27.3%
EBITDA margin, %	30.0%
Payback period, years	6.0
Discounted payback period, years	8.0

### Investment structure



Construction and assembly work



40%

\$3.91 million



Machinery and equipment



60%

\$5.83 million

### Prerequisites for Project implementation

#### Project location.

The Initiator holds the right of land use for two land plots for up to 49 years. The selected land plots are located near reservoirs, where the cost of water does not exceed 1 tg / cubic m, which is much cheaper than water from canals (17-25 tg / 1 cubic m).

#### Strong demand for hay in Kazakhstan.

The consumption of dry fodder by cattle in 2019 has increased 1.5 times compared to 2015. Average annual growth rate of cattle dry fodder consumption (CAGR) for the period of 2015-2019 was 8%, indicating a strong demand for the product. The average annual growth rate of total dry fodder consumption in the country (CAGR) for the period 2015-2019. amounted to 11%.

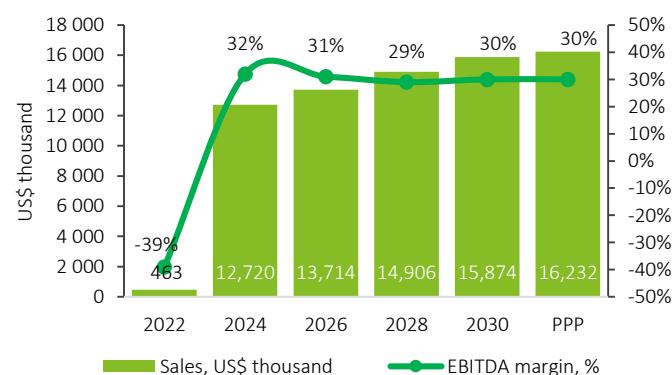
#### Guaranteed sales.

The company signed a memorandum for the supply of lucerne from July 30, 2020 to China in the amount of 180,000 tons with a Chinese company Kaz-Food (Alashankou) Import & Export Co. Ltd.

#### Governmental support.

The project belongs to investment priority projects, for which various types of state preferences are provided

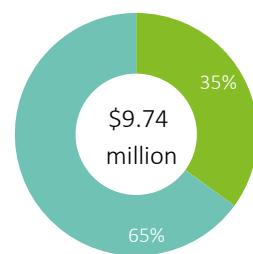
### Project profitability



### 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.

**Deloitte.**

# 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.

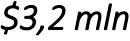
### Sales markets:

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

Indicator	Results
Investment amount, US\$ thousand	11,968
Project NPV, US\$ thousand	14,060
IRR, %	25.0%
EBITDA margin, %	53.0%
Payback period, years	6.0
Discounted payback period, years	7.9

### Investment structure

 Construction and assembly work	 67%	
 Machinery and equipment	 27%	
 Other capital expenses	 6%	

### 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.

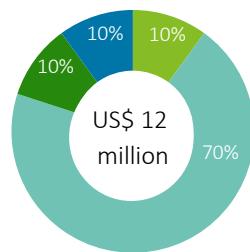
**Favourable location.** The moderately cold climate of the selected region is favourable for the selected crops. The growing season is 150-160 days per year. The absolute maximum temperature is observed in July, with an average monthly temperature of 19.8 °C and the absolute minimum temperature is in 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



### 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

### 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 Enbekshikazakh 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

### 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

Indicator	Results
Investment amount, US\$ thousand	6,968
Project NPV, US\$ thousand	5,520
IRR, %	22.9%
EBITDA margin, %	53.0%
Payback period, years	6.6
Discounted payback period, years	9.5

### Investment structure

 Construction and assembly work	 10%	<b>\$0.7 million</b>
 Machinery and equipment	 28%	<b>\$2.0 million</b>
 Other capital expenses	 62%	<b>\$4.3 million</b>

### 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 profitability



### 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

KAZAKH INVEST  
Investment proposal  
November 2020

### 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

Indicator	Results
Investment, US\$ thousand	38,974
Project NPV, US\$ thousand	55,145
IRR, %	18.3%
EBITDA margin, %	15%
Payback period, years	6.9
Discounted payback period, years	9.9

### Investment structure

 Construction and assembly work

29%

\$11.3 million

 Machinery and equipment

70%

\$27.4 million

 Other expenses

1%

\$0.3 million

### 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

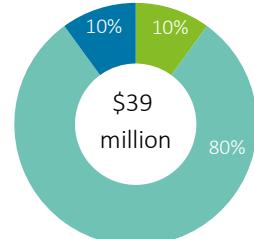


### Financing structure

 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.

**Deloitte.**

# Launch of a compound feed production plant

## Agricultural sector

### 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 m<sup>2</sup>.

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. На начальных этапах развития At initial stages, product will include compound feed for various bird types, according to age, including:

- Start – 13.1 thous. tonnes;
- Grower – 40.4 thous. tonnes;
- Finish – 65.3 thous. 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

Indicator	Results
Investment amount, US\$ thousand	3,633
Project NPV, US\$ thousand	26,417
MIRR, %	24.5%
EBITDA margin, %	13%
Payback period, years	2.0
Discounted payback period, years	2.1

### Investment structure



Initial working capital



\$3.6 mln

### 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.

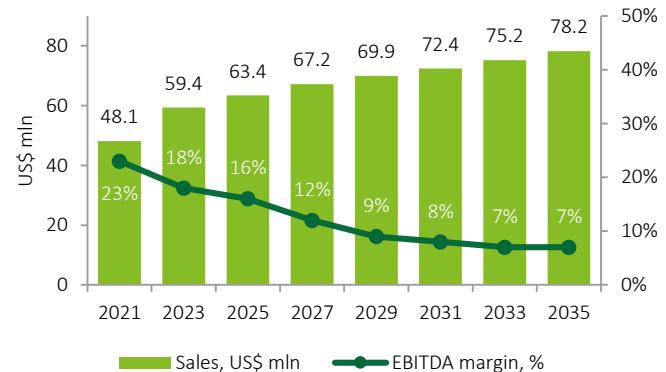
#### Sources of raw materials.

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



### Financing structure

Participation of the Investor  
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.

# Cheese plant construction in Almaty

KAZAKH INVEST  
Investment proposal  
November 2020

## Agro-industrial complex

### 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).

As it is the major milk producer in the region, the buyers of the company's products are large consumers such as FoodMaster, Danone, Raimbek Agro.

#### 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

Indicator	Results
Investment amount, US\$ thousand	23,292
Project NPV, US\$ thousand	36,995
IRR, %	31.4%
EBITDA margin, %	26%
Payback period, years	6.6
Discounted payback period, years	7.7

### Investment structure

 Construction and assembly work	 16%	<b>\$3.7 million</b>
 Machinery and equipment	 75%	<b>\$17.3 million</b>
 Initial working capital	 7%	<b>\$1.7 million</b>
 Other capital expenses	 2%	<b>\$0.6 million</b>

### 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.

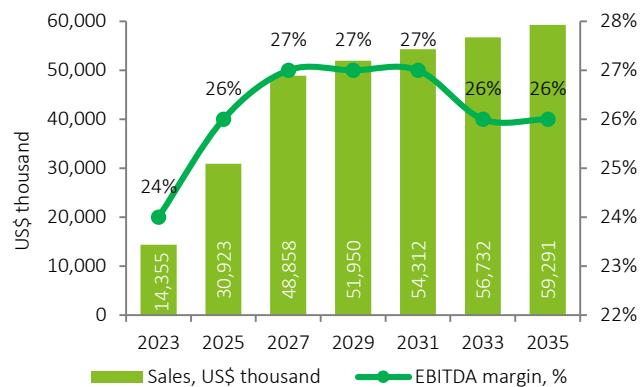
#### Demand for products.

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.

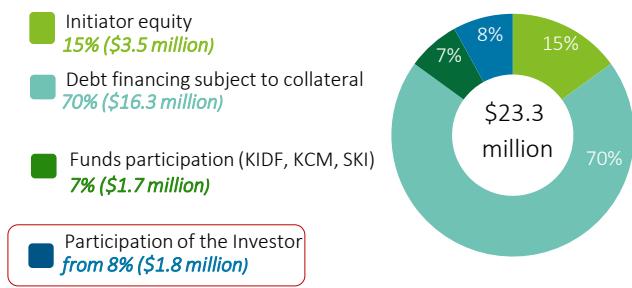
#### Proximity to substantial consumer markets.

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 profitability



### Financing structure



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 flax straw biofuel plant in Akmola Oblast

## Agro-industrial complex

### 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:

Konysbay 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.

### Manufacturing process:

Primary crushing - crushing - conditioning - mixing - granulating - cooling - sieving - bagging.

### Key investment indicators

Indicator	Results
Investment amount, US\$ thous.	4,488
Project NPV, US\$ thous.	7,712
IRR, %	28%
EBITDA margin, %	43%
Payback period, years	6.3
Discounted payback period, years	7.9

### Investment structure

 Buildings and structures	39%	\$1,7 mln
 Purchase machinery and equipment	60.9%	\$2,7 mln
 Other capital expenditures	0.1%	\$0.03 mln

### Market prerequisites:

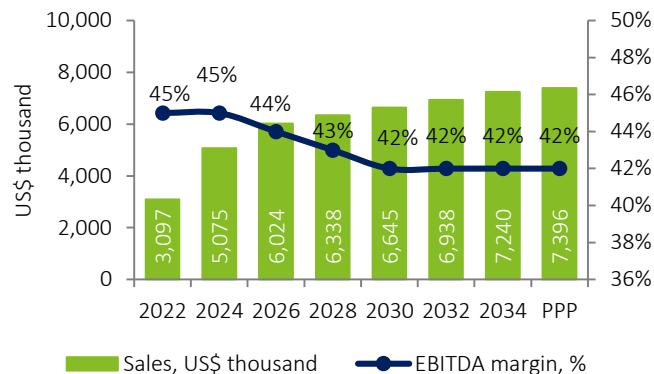
**Certified product.** Different countries have adopted different standards for the fuel pellets production. The company has the ENplus certificate, which is required for the sale of products in the EU countries, and the products fully comply with GOST 34092—2017 (ISO16993: 2015) standard.

**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 CO<sub>2</sub> and sulphur compounds when burned. In addition, ash can be used as fertiliser.

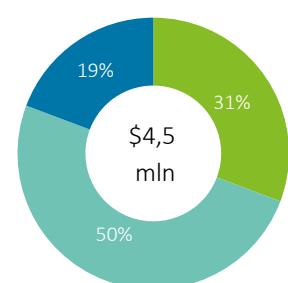
**Sales market.** Renewable and environmentally friendly sources and energies are in high demand in industrial enterprises in Europe and East Asia.

### Project profitability



### 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.

# Agroindustrial complex

## Production of potato starch

### Project description:

Construction of an integrated agro-industrial complex consisting of a potato starch production plant and a cattle fattening site for slaughter.

### Planned production capacity:

- Main: potato starch - up to 14 tonnes a year;
- Secondary: beef; potato juice, potato squash, cow subproducts.

### Location:

Pavlodar oblast, Pavlodar region, Kenesskiy rural district, Novoyamishevo village.

### Project initiator:

«Kerek Agro» LLP

### Market prerequisites

#### Export potential

Growing imports of potato starch by neighboring countries offers an opportunity to occupy a niche in the China, Russia and Uzbekistan markets. The total potato starch imported by these countries in 2018 amounted to about 74 thousand tonnes and has a tendency to increase. For example, the average annual growth rate of imports of potato starch by China over the past 5 years was 12.7% in physical terms.

#### No local production and high level of import dependency

There is no production of potato starch in the country, despite the fact that in the food, textile, paper industries potato starch is superior to corn starch in terms of quality. The average annual volume of imports of potato starch in Kazakhstan is relatively stable and in recent years has amounted to about 4.2 thousand tons for an amount of about US\$ 2.5–3 million.

### Key investment indicators

Indicator	Results
Investment amount, US\$ thous.	44,948
Project NPV, US\$ thous.	30,760
IRR, %	28.7
EBITDA margin, %	30-38%
Payback period, years	5.1
Discounted payback period, years	7.1

### Key facilities of the Complex:

#### Irrigation system

Creating an irrigation array with an area of 6000 hectares for growing additional raw materials and fodder crops (cultivation and processing - through the Initiator)

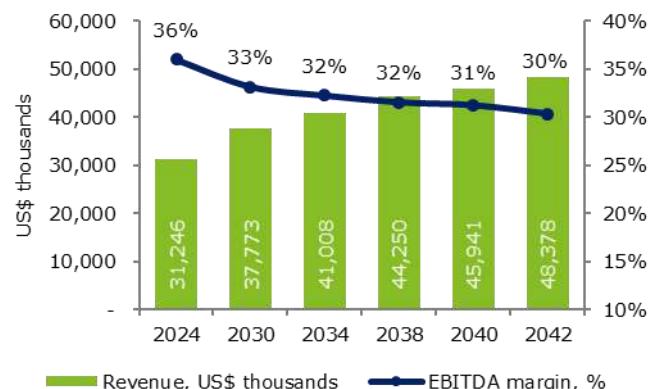
#### Starch plant

Production of potato starch with a capacity of 15,000 potatoes per hour and more than 2,000 starch per hour.

#### Cattle fattening site

The one-time capacity of the site is designed for 5000 heads. The number of cycles per year is two. Mainly breeding of Kazakh white-headed and Hereford breeds.

### Project profitability:



#### Location of the Project:

Pavlodar oblast



# Complex for the breeding and incubation of fish, the production of fish and related products

Agro-Industrial Complex

## 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.

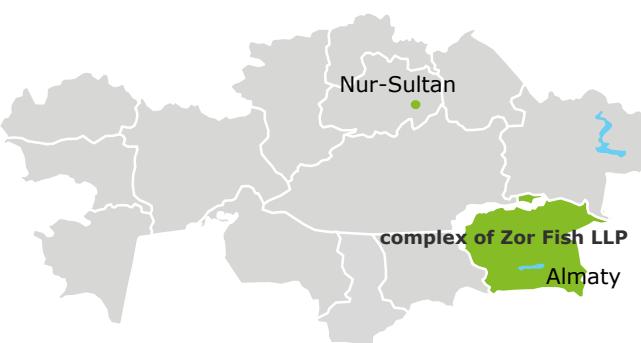
## Production process:

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

## Key investment indicators

Indicator	Results
Investment, US\$ thousands	18,716
Project NPV, US\$ thousands	23,739
IRR, %	23.38%
EBITDA returns, %	61.8%
Payback period, amount of years from the start of production	5.87
Discounted payback period, amount of years from the start of production	8.04

## Project location: Almaty Oblast



## Market assumptions

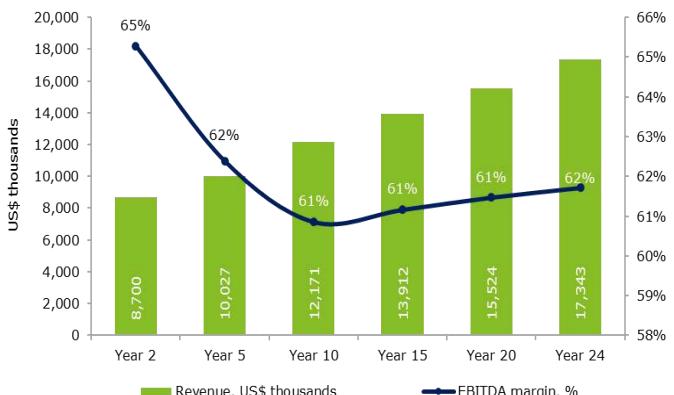
**Growing demand for fish** - According to the OECD and FAO UN projections, there will be an increase in total fish consumption in the world. The average annual growth rate (CAGR) will be equal to 1.8% in the years 2019-2025. So, if in 2018 fish consumption per capita was equal to 20.3 kg per capita,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

## Project profitability



## Land

Soil Type/Purpose	Area, sq. m
Building developments	13,786
Covering	10,887
Planting	43,569
Ponds	12,737
<b>Total</b>	<b>80,979</b>

# Construction of greenhouse in Pavlodar oblast

## 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 thous. tons of tomatoes and 3.9 thous. 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 Ekipastuz

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

## Key investment indicators

Indicator	Result
Investment amount, \$US thousands	21,891
Project NPV, \$US thousands	12,769
IRR, %	15.7%
EBITDA margin, %	43%
Payback period, years	8.0
Discounted payback period, years	14.5

## Location of project implementation: Pavlodar oblast



## Market prerequisites

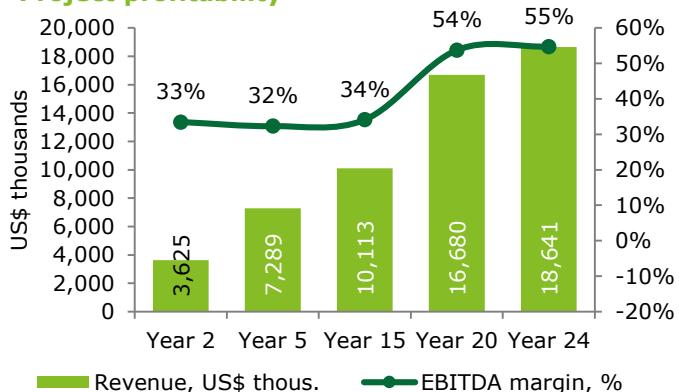
**Dependence of the country on imports of tomatoes and cucumbers** - Due to the climatic features of most regions of Kazakhstan during the off-season, there is a shortage of tomatoes and cucumbers. The deficit is covered by imports, which amounted to 65 thousand tons of tomatoes and 14.5 thousand tons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

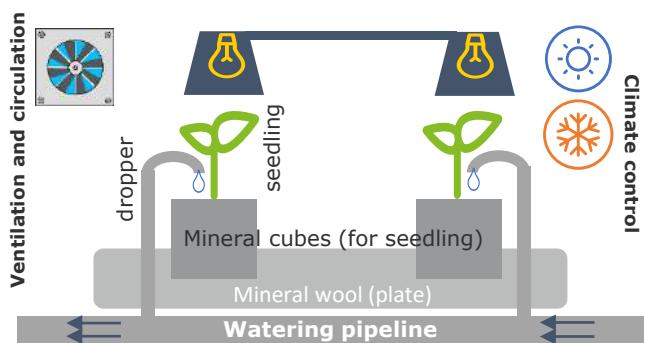
## Project profitability



## Technical process

### Photo culture (electric illumination)

- compensates lack of sunlight
- improves yielding capacity and product quality



# Agro-Industrial Complex

## Organizing a full production cycle of pork meat

### About the Project

Creation in Akmola oblast of the full cycle production (cluster) – from breeding a special breed of pigs using Danish technology to the production and sale of pork meat.

### Objectives & Scope:

Creation of a livestock complex (cluster), which includes a pig complex and a meat processing plant; Increase of meat production on the local market and increased exports of meat products;

Implementation of the use of innovative equipment and technologies in the Republic of Kazakhstan.

### Initiator:

AIC Bavaria Product LLP

### Project location:

Akmola oblast, Astrakhan region, Jarsuatian rural district, Jaltyr village

### Principal products:

chilled or frozen pork meat

### Project's peak capacity:

Breeding stock – 2,050 sows;

Pork meat production – 5,500 tonnes per year in slaughter weight

### Investment attractiveness of the Project

Indicator	Results
Investment amount, US\$ thous.	35,061
Project NPV, US\$ thous.	12,951
IRR, %	20.8%
EBITDA yield, %	29-37%
Payback period, years	6.6
Discounted payback period, years	10.7

### Project Location: Akmola oblast



### Prerequisites for implementation of the Project

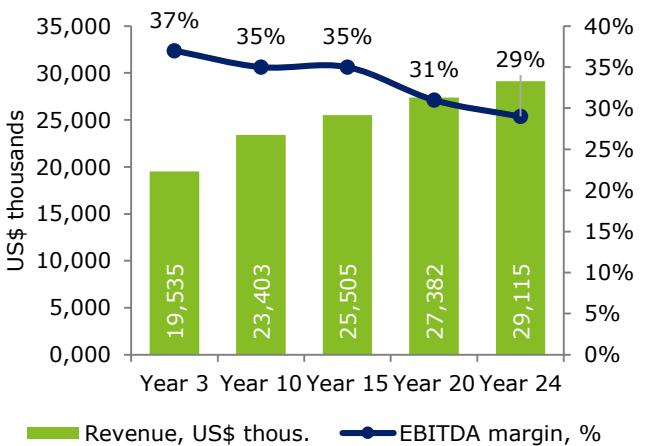
**Increase in pork imports to China** – Over the past 5 years, China's pork imports have more than doubled, and in 2018, they amounted to 1.1 million tonnes worth US\$ 2 billion. According to OECD forecasts, pork production in China will slightly lag behind consumption, and in the near future, China will import about 1.4 million tonnes of pork per year. This indicator will increase if the epidemic of African swine fever is not localized.

**Low cost of production** – The extensive and cheap fodder base for the Project - agricultural enterprises of northern Kazakhstan - will significantly reduce the cost of fattening and the maintenance of pigs. Also, the costs of manure disposal, water tariffs and employee wages are several times lower than at EU enterprises or other producers.

**Export of premium products** – China and Russia mainly import pork from countries in Europe and America, which forces suppliers to transport frozen meat. The geographical location of Kazakhstan allows for the supply of pork (by road) to both China and Russia in a chilled form, which will allow the Project to sell products at higher competitive prices.

**Geographical remoteness of the project implementation region from other pigfarms** – African swine fever has shown the vulnerability of the pig industry to epidemics and diseases. The factors protecting the Project's livestock from infection of this disease and other diseases are the remoteness of the Project's implementation site from other pig farms and households with infected pigs.

### Project Profitability



# Expansion of intensive apple orchards in the Almaty region

## 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

Indicator	Results
Investment amount, US\$ thous.	6,814
Project NPV, US\$ thous.	7,291
IRR, %	22.99%
EBITDA yield, %	58%
Payback period, years	7.2
Discounted payback period, years	9.5

## 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.

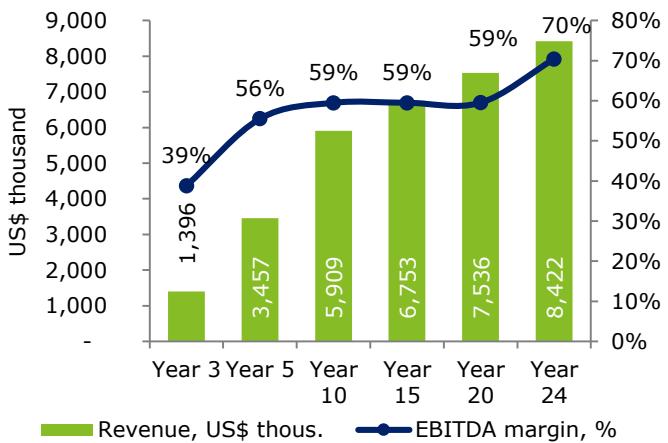
### Price differential with neighboring countries

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



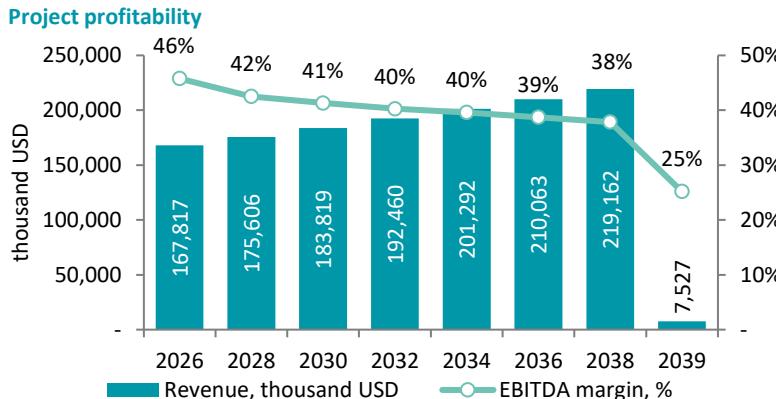


KAZAKH INVEST  
NATIONAL COMPANY



An aerial photograph of a massive open-pit mine, likely a coal or metal deposit. The image shows the deep, circular excavation site with its characteristic concentric terraces. Numerous winding roads and tracks crisscross the bottom of the pit and its upper levels. Small mining vehicles, such as haul trucks and tractors, are visible on the roads, highlighting the scale of the operation. The surrounding terrain is arid and sparsely vegetated.

# MINING AND SMELTING INDUSTRY



## Production and processing of nickel and cobalt ore at the Kempirsai group of fields

### Products

Upon reaching full design capacity in 2026, the following sales volumes are planned: nickel sulphate - 29,701 tonnes; cobalt sulphate - 1,824 tonnes.

The Company is planning to export 100% of its product to China.

### Investment attractiveness of the project:

Investment amount – 277,000 thousand USD;  
Project NPV – 31,425 thousand USD;  
IRR – 18.6%;  
Payback period – 6.7 years;  
Discounted payback period – 11.6 years

### Project

This investment project envisages the development and production of nickel and cobalt ore at the Kempirsai group of fields, as well as the construction of a nickel and cobalt sulphate production plant. The Project Initiator holds licenses Nos. 67, 68, 69, 70, 71, 72, 73, 74 and 75-ML from 26 June 2023 to produce solid minerals for 25 years at 9 of the Kempirsai group fields, as well as six-year licenses Nos. 2051, 2052, 2053, 2054, 2055, 2056, 2057 and 2058-EL from 26 June 2023 to develop solid minerals at the remaining 2 fields and 6 nearby sites. Current Project status:

- The Company has carried out laboratory research into nickel-cobalt ore processing at the Kempirsai group of fields.
- The Project is included in the Ministry of Industry and Construction integrated industrialization chart.

### Company

The Project Initiator is KazMetalGroup LLP, which was founded in 2017 to implement the Project.

### Market

- Global cobalt consumption increased from 135 thousand tonnes to 187 thousand tonnes in 2018-2022, with CAGR at 8.5%. Cobalt demand is expected to grow solidly due to the accelerated transition to electric vehicles.
- In 2022, global consumption of refined nickel was at 3,008 thousand tonnes. According to the EIU, this figure will reach 3,585 thousand tonnes by 2025, which is 19.2% higher than in 2022. The long-term demand for nickel will be supported by state reforms aimed at ensuring sustained access to electric battery feedstock.

### What is the attractiveness of the project?

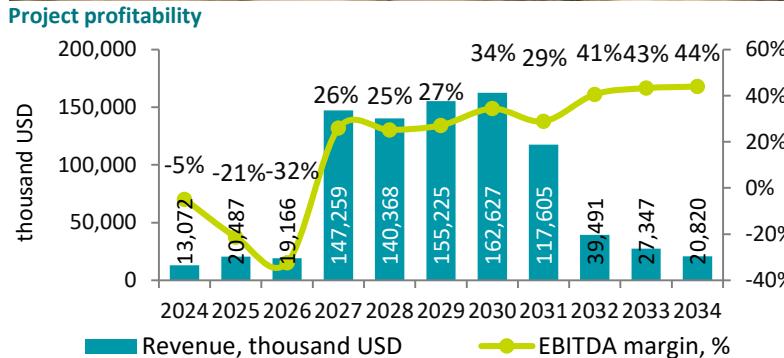
- **Initiator experience.** KazMetalGroup LLP is a subsidiary of KazProm Concern LLP, which has over 20 years of experience in the mining sector. The Concern's employees have implemented such projects as construction of a sulfuric acid plant, construction of a hydro-metallurgical plant for processing of rare metals, construction of a number of plants for production of construction materials. The Concern's employees also carry out work on stripping, development and processing of ores at mineral deposits.
- **Own raw materials base and advantageous location.** The availability of mining and exploration licenses guarantees the required product quality within the framework of the Project at a competitive price. To build the plant, the Initiator is planning to acquire a long-term lease for a 300 ha site in Kargali District of Aktobe Oblast, 10 km from the fields.
- **State support.** The Project is included in the integrated industrialization chart and recognized as an investment priority project and eligible for state concessions, such as tax breaks, subsidies and reduced-rate borrowing.

### Investment proposal

The Project requires investment of 277,000 thousand USD (at the rate of 449.2 tenge), of which:

- 70% (193,900 thousand USD) - debt financing subject to collateral;
- 30% (83,100 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 location



## Development of the Alashpay polymetal ore deposit

### Product

The processing plant is scheduled to be launched in 2023. Average production volumes are planned to be as follows:

- lead concentrate from oxidized ores – 23 404 tonnes per year;
- lead concentrate from sulphide ores – 47 020 tonnes per year.

### Project investment attractiveness :

Investment – 17,000 thousand USD

Project NPV – 36,577 thousand USD

IRR – 51.1%

Payback period – 4.99 years

Discounted payback period – 5.61 years

### Project

The project provides for the construction of a mining and processing plant at the Alashpay polymetal ore deposit to produce lead concentrate. The company intends export up to 100% of its products, mainly to China, Russia and Uzbekistan.

### Company

The project initiator is Saryarka Polimetally LLP, whose core activity is geological exploration and surveying. The Company team participated in construction of the Altay Polymetals LLP mining and processing complex and the development of lead-zinc ore from the Akzhal deposit. The company holds solid mineral extraction license No. 37 dated 17 March 2022.

### Market

- According to the International Trade Center, global lead ore and concentrate imports increased 23% in 2021 to 6.9 billion USD.
- According to the International Trade Center, global zinc ore and concentrate imports increased 54% in 2021 to 14.3 billion USD.
- Lead-zinc ore production in Kazakhstan reached 8,290 thousand tonnes in 2021. The leading zinc and lead producer in Kazakhstan is Kazzinc, which is responsible for up to 150 thousand tonnes of lead (C1-C grades) and over 300 thousand tonnes of zinc (TsV, TsVO, TsOA grades).

### What is the project's attractiveness?

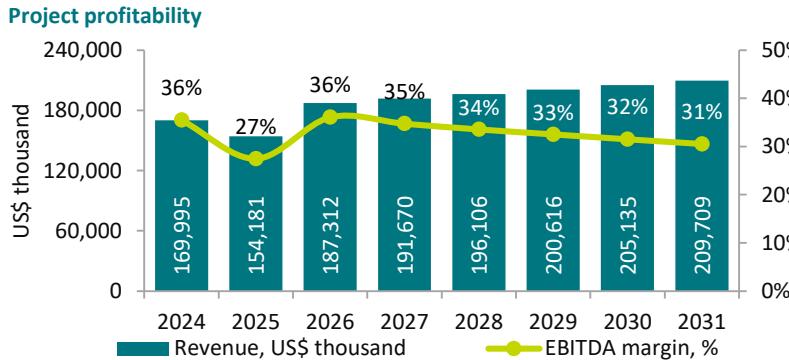
- **Own raw material base.** The holds solid minerals extraction license No. 37 dated 17 March 2022. The reserves of oxidized ores in categories C1 – 4.1 million tonnes, C2 – 1,419 million tonnes were approved in the State Reserves Committee of the Republic of Kazakhstan (2022). The reserves of sulphide ore in categories C2 – 2.79 million tonnes, P1 – 1.31 million tonnes, P1 – 5.33 million tonnes were approved by the Central Committee of the Republic of Kazakhstan (1991-1995). In the long term, this will reduce the cost of production, ensuring proper product quality at a competitive price.
- **Contractual Project development.** To sell the products, the Initiator plans to cooperate with the leading metal trading brokers Stardust Investment Trading LP and Trafigura PTE Ltd, with which preliminary negotiations have been held.

### Investment proposal

The Project requires investment of 17,000 thousand USD of which:

- 70 % (11,500 thousand USD) – debt financing subject to collateral
- 30 % (5,100 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.



## 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 investment attractiveness :

Investments – US\$ 99,935 thousand

NPV – US\$ 53 773 thousand

IRR – 28.0%

Payback period – 5.0 years

### 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.

### What is the project's attractiveness?

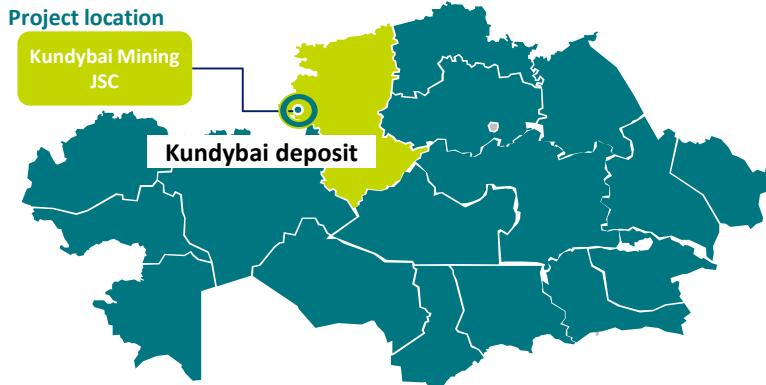
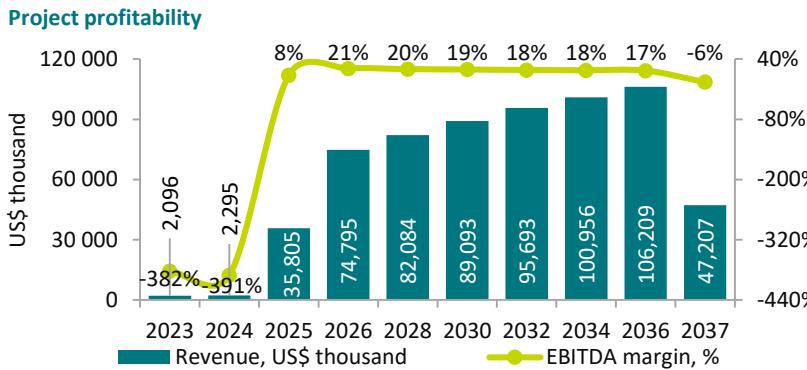
- Subsoil use right for exploration.** The Initiator is a subsoil user with a license for the exploration of solid minerals (nickel and cobalt) at the Belogorskoye deposit No. 326-EL dated 1 October 2019.
- Estimation of deposit reserves.** Belogorskoye is one of the richest nickel-cobalt deposits in 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 investment attractiveness :

Investments – US\$ 1,439 thousand

NPV – US\$ 16,100 thousand

IRR – 28.4%

Payback period – 6.7 years

### 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%.

### 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.

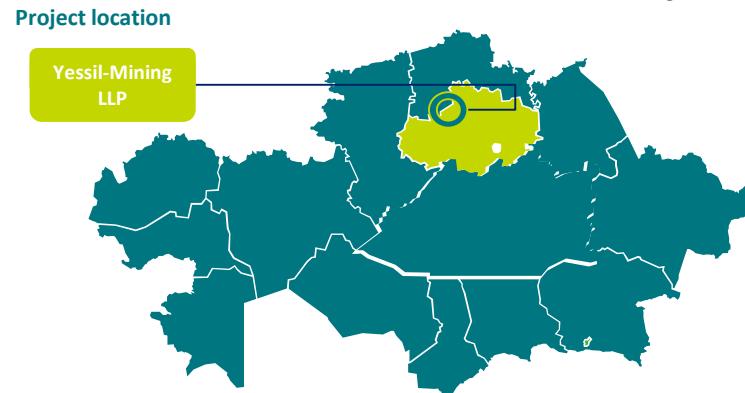
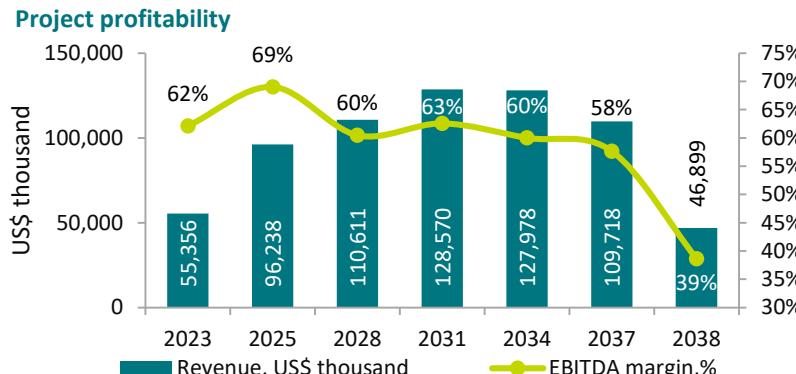
- Favorable conditions for mining.** The physical and geological properties of the ore from the Kundybai deposit make it possible to avoid drilling and blasting. Soft, dense or loose rocks are removed directly from the massif using an opencast method.

### 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.



## Development of the Aksoran deposit

### Products

Average annual capacity:

- 5,019 tonnes of tungsten in scheelite concentrate;
- 227 tonnes of molybdenum middlings.

### Project investment attractiveness :

Investment – US\$ 117,868 thousand  
Project NPV – US\$ 112,177 thousand  
IRR – 29.4%  
Payback period – 5.6 years

### 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.

### 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.

# Construction of a plant to produce aluminum foil in Pavlodar Special Economic Zone

## Mining and smelting complex

KAZAKH INVEST  
Investment proposal  
August 2020

### 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

Indicator	Results
Investment amount, US\$ thous.	19,098
Project NPV, US\$ thous.	38,208
IRR, %	28.9%
EBITDA margin, %	27.01%
Payback period, years	6.3
Discounted payback period, years	7.8

### Investment structure

 Construction and assembly work	7%	\$1.4 million
 Machinery and equipment	86%	\$16.3 million
 Initial working capital	7%	\$1.4 million

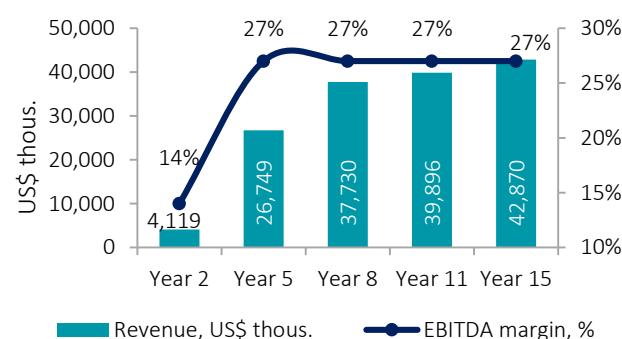
### Market prerequisites:

**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 Ekibastuz GRES-1, respectively, low prices for energy resources.

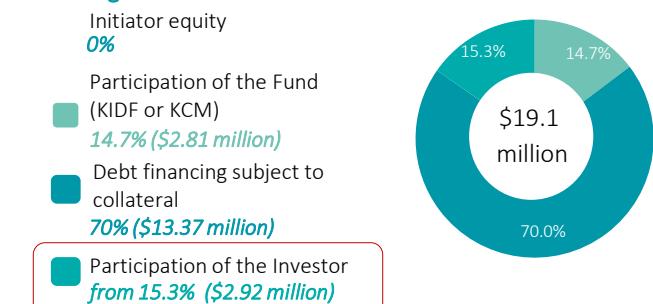
**Geographic proximity to aluminum suppliers.** Potential aluminum suppliers for the Project are located in close geographic proximity (40 km), which reduces transportation risks and associated overhead costs.

**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



### Financing structure



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.

# Hydrometallurgical plant for the production of copper from dumps of deposits

## Mining and metallurgical complex

### Description of the project:

Processing of copper-containing dumps of Sayak group deposits by acid leaching "in situ" method and subsequent processing at a liquid extraction and electrolysis machine (SX-EW) to obtain commercial cathode copper. The Project feature is the low level of geological risk as the mineral resources have already been removed from the subsoil, assessed and put on the State reserves balance by the Kazakhstan State Reserves Committee of the Republic of Kazakhstan. The production will employ 277 people.

### Location:

Karaganda region, Aktogay district, Sayak field.

### Initiator:

Advance Mining Technology LLP (AMT), with the ultimate beneficiary the Commonwealth American Partners L.P. (CAP) through First Eurasian Mining Pet. Ltd. (FEM). CAP is a company with 20 years of experience in the oil and mining industries around the globe, including CIS countries.

### Output, capacity and customers:

Products - cathode copper grades M00k or M0k according to GOST 859-2001 (LME class "A"). The maximum capacity of the plant is 10,000 tons per year. The company is considering selling its product through brokers such as Glencore, Noble Group, Traxys and Trafigura.

### Production process:

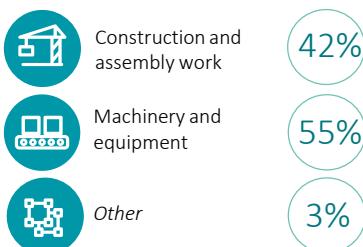
1. Sulfuric acid supply to dump, subsequent ore leaching in dumps, electrolyte solution production;
2. Electrolysis of the solution, copper cathode production.

### Investment attractiveness of the Project

Indicator	Results
Investment amount, US thous.	58,401
Project NPV, US\$ thous.	32,229
IRR, %	32.6%
EBITDA yield, %	34%
Payback period, years	4.16
Discounted payback period, years	4.75

### Investment structure

Required investments: 58.4 mln USD



\$24.6 mln

\$32.0 mln

\$1.9 mln

### Prerequisites for implementation of the Project

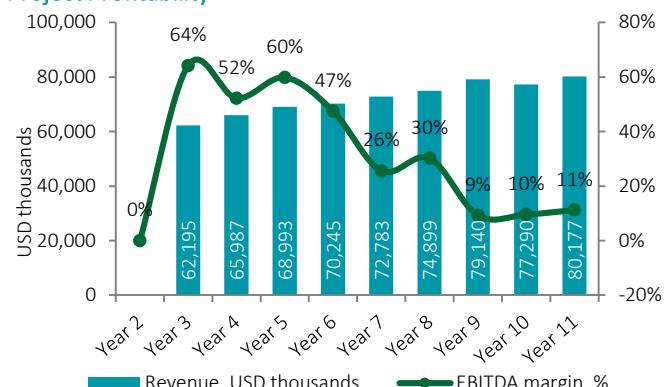
**Stable demand.** Copper cathodes are in high demand in the world market. Kazakhstan borders China, which is the largest importer of copper in the world. This provides short overland transport routes.

**Production technology advantages.** The tested low-cost technology helps retain a positive return when copper prices are low.

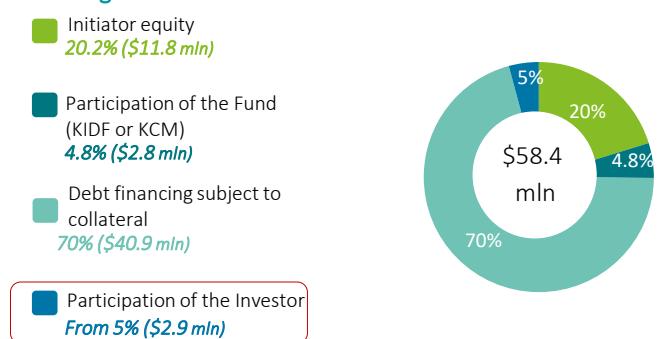
**Sufficient raw material base.** According to the State Reserves Committee of the Republic of Kazakhstan (protocol No. 1688-16-U dated July 14, 2016, No. 1788 -17-U dated February 24, 2017), the total reserves of resources to be extracted from the subsoil in C1 + C2 categories amount to 397,400 tons, with an average weight of copper at 0.125%. In 2019, Wardell Armstrong International confirmed reserves 394,200 tons of copper with an average weight of copper at 0.123%.

**Experienced team.** FEM's management team has a proven track record of similar successful SX-EW leaching projects in Kounrad (Kazakhstan) and Erdenet (Mongolia).

### Project Profitability



### Financing structure



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

KAZAKH INVEST  
Investment proposal  
November 2020

## 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

Indicator	Results
Investment amount, US\$ thous.	25,863
Project NPV, US\$ thous.	34,217
IRR, %	18%
EBITDA margin, %	11.12%
Payback period, years	8.13
Discounted payback period, years	10.54

### Investment structure

	Machinery and equipment		\$20.2 mln
	Construction and assembly work		\$1.5 mln
	Initial working capital		\$4.1 mln
	Others		\$0.02 mln

### 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 aluminium container imports for all substances shows that on average imports amounted to 5,716 thousand tonnes per year between 2015 and 2019.

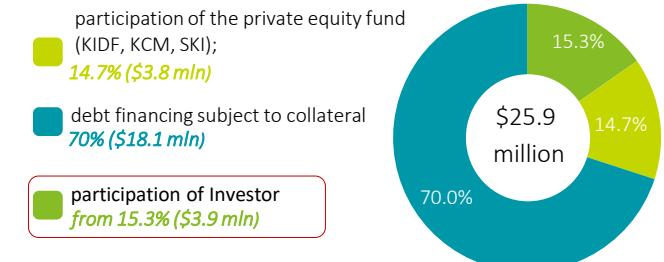
#### Logistic advantage.

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



### Financing structure



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 foundry in West Kazakhstan region

## Metallurgy

### 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

Indicator	Results
Investment amount, US\$ thous.	65,662
Project NPV, US\$ thous.	20,569
IRR, %	18.6%
EBITDA margin, %	53.3%
Payback period, years	7.7
Discounted payback period, years	13.8

### Investment structure

	Machinery and equipment		<b>\$53.0 million</b>
	Construction and assembly work		<b>\$9.1 million</b>
	Working capital		<b>\$2.4 million</b>
	Marketing program		<b>\$1.2 million</b>

### 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.

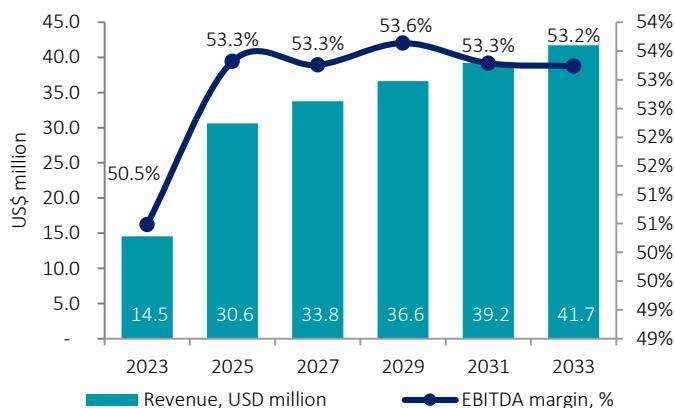
#### Favorable geographical location.

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.

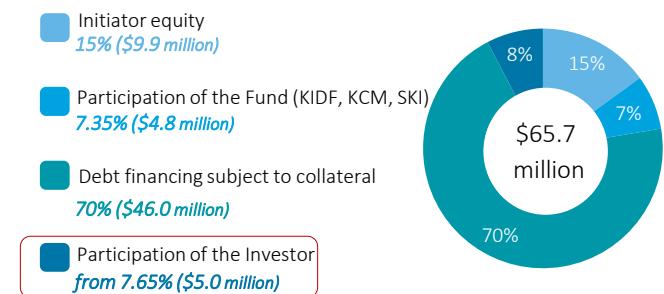
#### Industry experience.

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



### Financing structure



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

## Development of Kulan-Ketpes fluorite ore deposits

### Project description:

The Project involves development of fluorite ore deposits and ore enrichment plant construction at Kulan-Ketpes ore field

### Product:

- fluorspar (acid and ceramic grades containing 75%, 90%, 95%, 97% CaF<sub>2</sub>);
- manganese concentrate (37% content).

### Initiator:

Muyunkum-Mineral LLP

### Location:

Muyunkum district, Jambyl Region

### Potential markets:

large-scale manufacturers in chemical, steel, nuclear, and aluminium industries of CIS countries

### Key financial measures

Measure	Value
Project's life, years	24
<i>incl. development period, years</i>	3
<i>operational period, years</i>	21
Investment amount, USD thousands	68,157
Project's NPV, USD thousands	16,499
IRR, %	21.0%
EBITDA margin, %	26%
Payback period, years	8.5
Discounted payback period, years	11.5

### Project location: Muyunkum district, Jambyl Region



### Market conditions:

#### Rich resource base

The Kulanketpes ore field with a balance of fluorite reserves of 2,931 thousand tons is one of the largest deposits in Kazakhstan.

#### Pricing advantage

The favorable location of production plant near to its main consumers and tariffs imposed by the Eurasian Economic Union on fluorspar imports (9-10%) provide substantial geographical pricing advantage on the Russian fluorspar market.

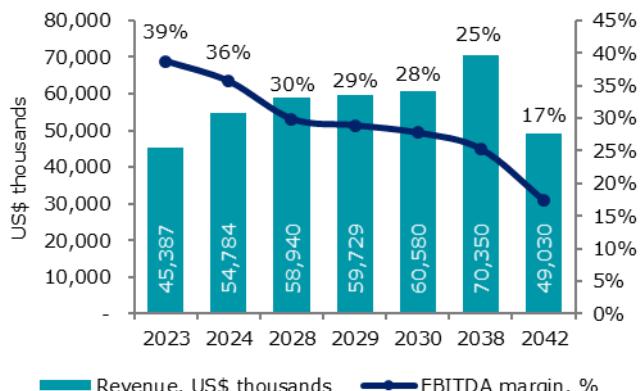
#### Growing demand and production volume contraction

Due to increasing operational and transport costs, a principal Russian fluorspar manufacturer halted fluorspar production.

#### Low production cost

High processability of the Kulan-Ketpes ore and homogeneity of its mineral content allow to configure an economical technological process with minimal manufacturing and operational costs while adhering to the highest international products quality standards.

### Project Profitability



### Deposit reserves, category C1+C2

Measure	Ore, thous. tons	Fluospar, thous. tons	Content, %
Vein deposits	5,764	1,667	28.92%
Stratified deposits	5,946	1,264	21.26%
<b>Total</b>	<b>11,710</b>	<b>2,931</b>	<b>25.02%</b>

## Mining and metallurgical complex

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

### Project description:

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 markets:** China, Russia

### Annual production capacity:

250 thousand tonnes of pig iron.

### Key investment indicators

Indicator	Results
Amount of investments, US\$ thousands	179,220
Project NPV, US\$ thousands	77,054
IRR, %	21.9%
EBITDA margin, %	45%
Payback period, years	6.5
Discounted payback period, years	9.5

### Project location: Mangystau district, Mangystau Oblast



### Project implementation assumptions:

**Existence of a rich resource base.** Beskempir deposit, located in the central part of the Karatau ridge, is the largest iron ore deposit in Mangystau oblast.

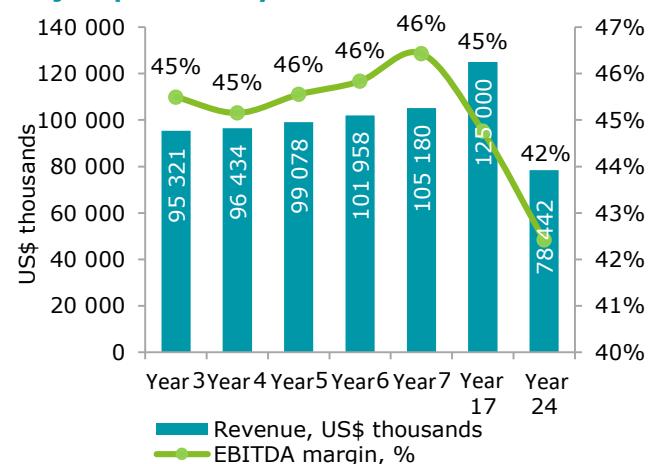
**Positive price dynamics.** After the downturn in 2014-2015, the last two years have shown prices for pig iron returning to a positive trend. According to the market analysts (available in the Bloomberg database), these prices will remain relatively stable in the medium term.

**Export potential for pig iron.** Currently, the export of pig iron in Kazakhstan is underdeveloped (in particular, there were no exports to China before 2018). Moreover, imports of pig iron in Russia is growing rapidly. Since 2018 China's interest in imports of intermediate pig iron from Kazakhstan is growing rapidly: in 2018 China imported 93 thousand tons of pig iron, of which 39 thousand tons were imported from Kazakhstan. In the period from 2017 to 2018, the import of pig iron in the Russian Federation increased from 96 thousand tons to 540 thousand tons (463%). These factors create preconditions for the development of export potential for Kazakhstani producers.

### Projected growth in demand for pig iron.

According to forecasts from the World Steel Association, global demand for steel (product obtained from pig iron processing) will increase by 1.4% and 1.7% in 2019 and 2020, respectively. Thus, taking into account the specifics of the pig iron and steel market, the growth in demand for pig iron is also expected.

### Project profitability



# 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

Indicator	Results
Amount of investments, US\$ thousands	14,123
Project NPV, US\$ thousands	14,999
IRR, %	32.5%
EBITDA margin, %	34-41%
Payback period, years	5.0
Discounted payback period, years	6.1

## 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.

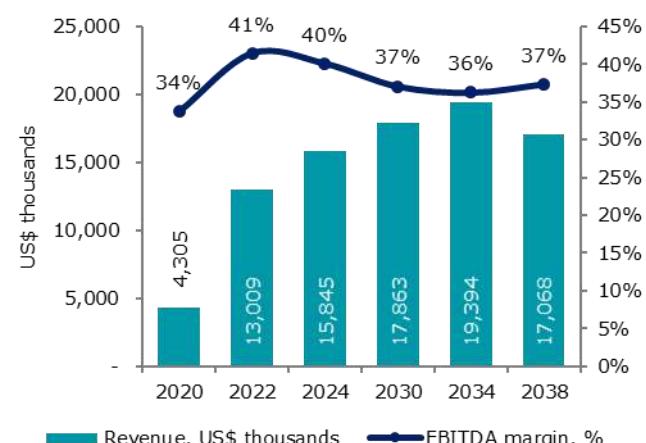
### Development of the oil and gas industry of Kazakhstan.

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



### Organization of the production of ferrosilicon aluminum in Pavlodar oblast

#### Description of the Project :

The investment project provides for the construction of a plant for the production of ferrosilicon aluminum in Ekibastuz.

#### Production and annual capacity :

Ferrosilicon aluminum labeled as FS45A10 till FS65A20 – 60 thousand tons per year.

#### Raw materials:

Carbonaceous rock, quartzite, coal

#### Initiator:

Vtormet Asia LLP

#### Location:

Ekibastuz, Pavlodar region

**Sales market:** domestic market, China, Russia.

#### Market background:

**Growth in demand for steel.** According to the forecasts of the International Steel Association, the global demand for steel and steel products will increase by 1.4% in 2019. Lucintel expects steel demand to grow. Compound annual growth rate (CAGR) will be 1.6% in the period from 2019 to 2024.

**Low competition.** The demand for FSA among steel producers is significant. Competition is made only by producers of ferrosilicon. However, the superiority of the FSA over the analogue will cover a significant share of domestic and foreign markets.

**Increased production, export and domestic consumption of ferrosilicon.** Ferrosilicon aluminum surpasses and replaces the traditional deoxidizers - ferrosilicon and aluminum, reducing the percentage of defective products and reducing the amount of sulfur, fluorine and other non-metallic parts. The growth of production by 8.8%, exports by 4.3% and consumption by 12.6% in 2017-2018 show growing demand for ferrosilicon and, accordingly, for PSA also as an analog product.

#### Key investment indicators:

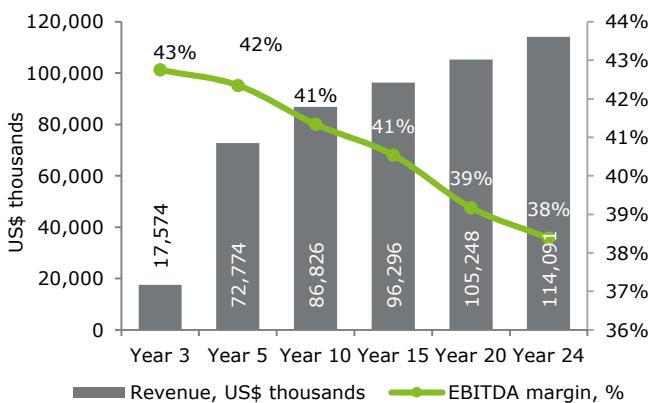
Indicator	Results
Investment, USD thousands	70,000
Project NPV, USD thousands	86,388
IRR, %	29.5%
EBITDA returns, %	38-43%
Payback period, number of years from the start of production	6.4
Discounted payback period, number of years from the start of production	7.9

#### Location of the Project:

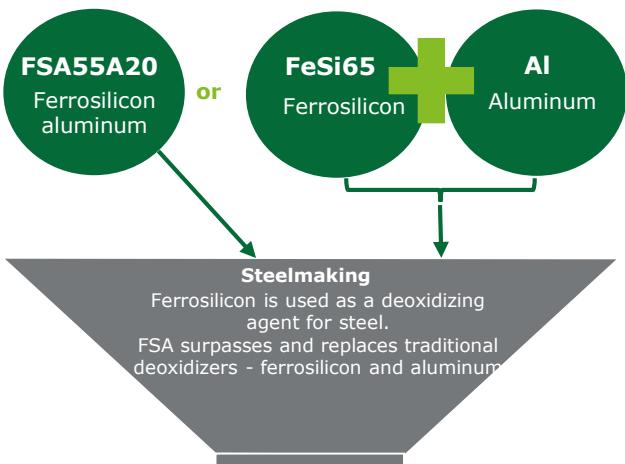
Ekibastuz, Pavlodar oblast



#### Project profitability



#### Ferrosilicon aluminum and its analogues:



## Organization of the production of refractory products in the Karagandy oblast

### 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:

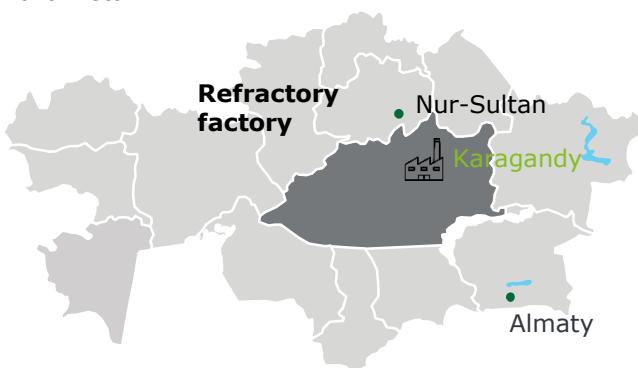
Republican State Enterprise "National Center for the Integrated Processing of Mineral Raw Materials of the Republic of Kazakhstan" ("RSE National Center IPMRM")

### Key Investment Indicators

Indicator	Results
Investment, USD thousands	7,763
Project NPV, USD thousands	5,405
IRR, %	25.0%
EBITDA returns, %	17-32%
Payback period, number of years from the start of production	5.0
Discounted payback period, number of years from the start of production	6.9

### Location of the Project

Karagandy city, Karagandy oblast, Republic of Kazakhstan



### 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.

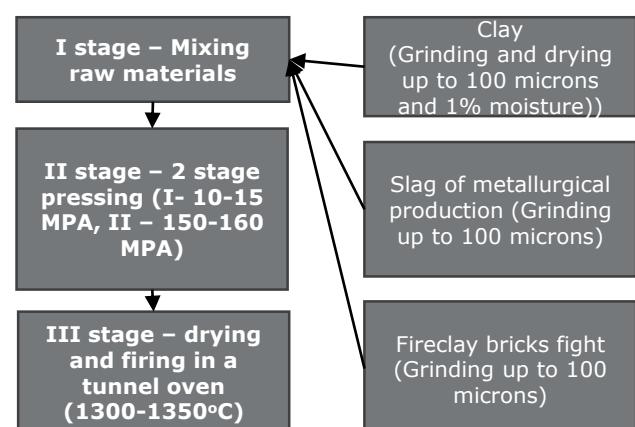
**Unique technology.** The technology of RSE NC IPMRM using chemically active mixtures allows the use of chemical energy in the system itself, which in turn accelerates the processes of solid-phase sintering, improves quality and reduces cost.

**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%.

### Project profitability



### Technical process



## 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

Indicators	Results
Investment amount, thous. USD	574,743
Project NPV, thous. USD	384,347
IRR, %	35.5%
EBITDA margin, %	58-61%
Payback period, years	4.2
Discounted payback period, years	4.9

### 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.

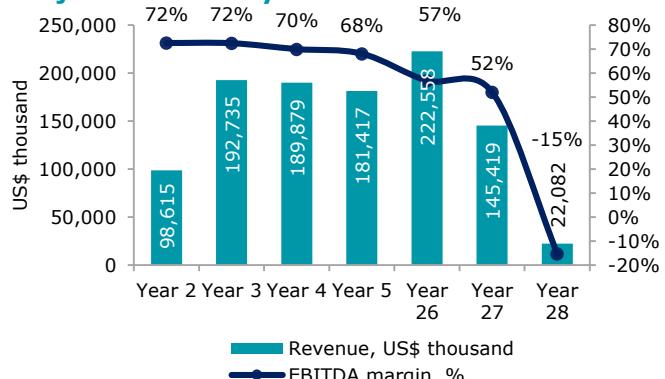
**Export potential.** The country's domestic demand for cobalt and nickel is low, so it is possible to cover it with excess. Nickel-cobalt ore reserves in Kazakhstan allow the export of this mineral in significant quantities to China, South Korea, Russia, Japan and Ukraine. China is the main importer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

Category	mln tones	%Ni	%Co	Ni, thous. tones	Co, thous. tones
<b>Inside Tenement</b>					
Indicated	36.01	0.68	0.037	243,366	13,221
Inferred	1.76	0.68	0.039	11,986	682
<b>Outside Tenement</b>					
Indicated	1.11	0.71	0.041	7,855	454
Inferred	0.39	0.55	0.045	2,140	173
<b>Total</b>					
Indicated	37.12	0.68	0.037	251,221	13,675
Inferred	2.15	0.66	0.040	14,126	855

# 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

Index	Results
Project implementation period, years	25
Investment, US\$ thousands	177,962
Project NPV, US\$ thousands	49,002
IRR, %	19.9%
EBITDA return, %	43%
Payback period, years	7.3
Discounted payback period, years	12.5

### Investment structure

	Construction and assembly work		<b>\$111.2 million</b>
	Machinery and equipment		<b>\$58.1 million</b>
	Other assets		<b>\$8.6 million</b>

### 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.

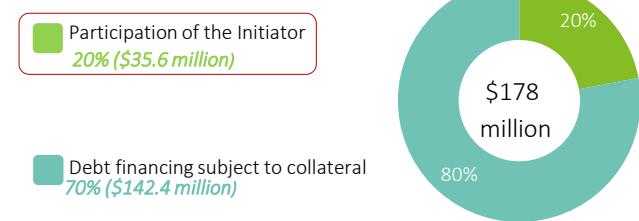
#### Import substitution

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



### Financing structure



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 metallurgical complex

# Construction of hydrometallurgical plant for cathode copper production

## Project description:

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

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

**Capacity:** 5000 tonnes of cathode copper per year.

### Production process:

extraction – open-pit;  
processing – flotation and heap leaching, and SX-EW.

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

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

**Potential markets:** Kazakhstan, Russia and China.

## Market conditions:

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

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

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

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

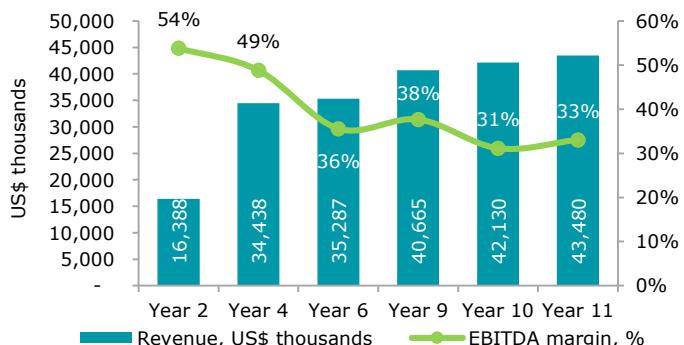
## Key investment indicators of the Project

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

## Project location: East-Kazakhstan Oblast



## Project profitability



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

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

Mining and metallurgical complex

# Development of South Zaur tungsten ore deposit

## Project description:

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

## Products:

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

## Production process:

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

## Maximum processing capacity:

4,000 thousand tonnes of commodity ore per annum.

**Initiator:** JV Saryarka Tungsten LLP.

**Location:** Karaganda Oblast, Shetsky district

**Project implementation period:** 35 years

## Market conditions:

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

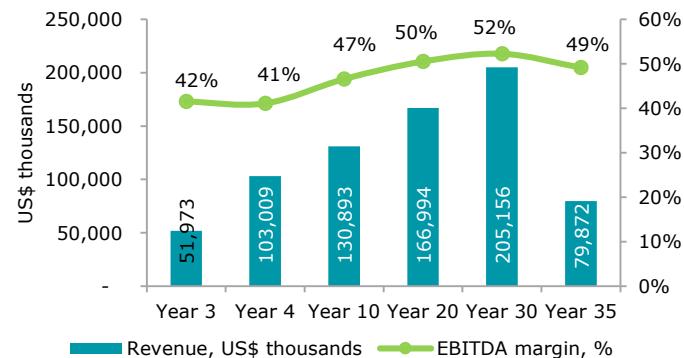
**Metal price growth** – The lack of readily available financing and low metal content in the ore deposits are the main reasons for the limited supply of metal in the market, which in the future, may serve as an incentive for further price increases for tungsten and molybdenum.

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

## Key investment indicators of the Project

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

## Project profitability



## Project location: Karaganda Oblast



## South Zaur deposit reserves (JORC)

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

# 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

### Market assumptions:

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

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

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

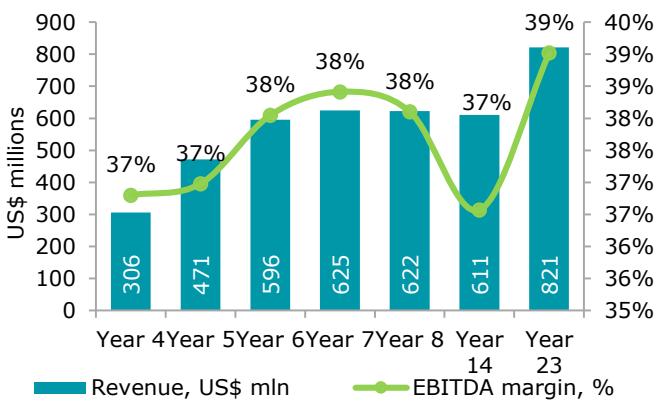
### Key investment indicators

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

### Project location: Kargalinsky district, Aktobe Oblast



### Project Profitability



### Estimation of resources according to JORC

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

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

## 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:** Tekhnogram Aktobe LLP

**Project implementation location:** Mangistau district, Mangistau Oblast

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

### Market assumptions:

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

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

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

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

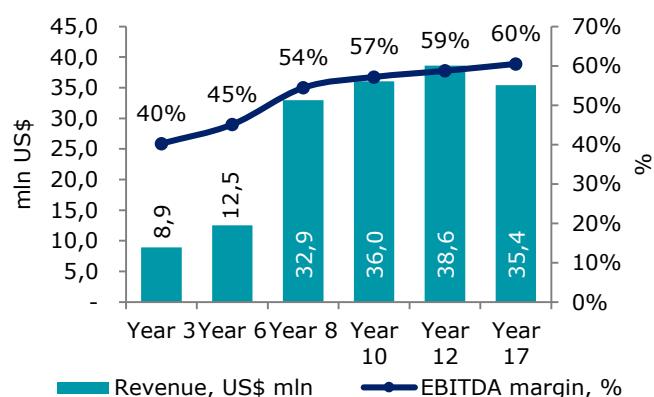
### Key investment data

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

### Project implementation location: Mangistau district, Mangistau Oblast



### Project economics



### Reserves of Project's deposits

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

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

## **Project Description:**

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

## **Product and average annual production:**

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

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

## **Processing power:**

360 thousand tonnes of ore

## **Initiator:**

"Varsa Mining" LLC

## **Location:**

Kurshim district, East Kazakhstan Oblast

## **Consumer markets:**

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

## **Key investment indicators**

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

## **Project location: Kurshim district, East Kazakhstan Oblast**



## **Market assumptions:**

### **Growing demand.**

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

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

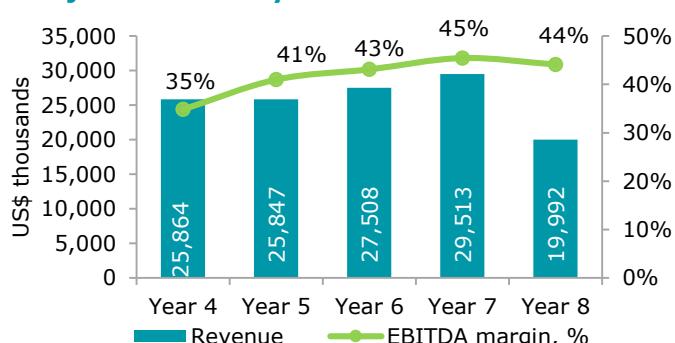
### **Potential for exporting.**

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

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

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

## **Project Profitability**



## **Alexanderovskoye deposit reserves**

Indicators	Category	Ед. изм.	Calculation of reserves
Sulphide zinc-copper ore	C <sub>1</sub> -C <sub>2</sub>	thousand tonnes	13,000
Zinc content	%	3.83	
Copper content	%	0.34	
Calculation of zinc reserves	tonnes	49,799	
Calculation of copper reserves	tonnes	4,394	

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

# Hydrometallurgical enterprise for ash processing

## Project overview:

Construction of a hydrometallurgical enterprise to process 100 thousand tonnes of ash per year.

## Products and capacity:

- Amorphous silica (silicon dioxide): 56 thousand tonnes per year
- Alumina: 23 thousand tonnes per year
- Iron concentrate - 10 thousand tonnes per year

## Raw material:

Ash and slag waste from Ekibastuz Thermal Power Plant, Ekibastuz Hydroelectric Power Plant-1, Ekibastuz Hydroelectric Power Plant-2

## Project applicant:

Dmitriev Leonid Nikolaevich

**Location:** Pavlodar Oblast

**Sales market:** Kazakhstan, EEU countries

## Market assumptions:

**Potential for import substitution and export of silicon dioxide.** As far as amorphous silica is not produced in Kazakhstan and produced only in small amounts in the EEU, there are perspectives of selling these goods in the domestic market and abroad.

## Further growth of demand for silicon dioxide.

As forecasted by Technavio, the world market of precipitated silicon dioxide will grow up to US\$ 3,313.2 mln by 2021. The growth rate of the world market of precipitated silicon dioxide is expected to accelerate in 2018-2021, and the compound annual growth rate will be 6.64%.

**Cheap raw materials.** Use of the ash and slag waste (ASW) as a relatively cheap raw material for the production of goods; reduction of the cost of finished products, which gives an undeniable advantage to an industry participant.

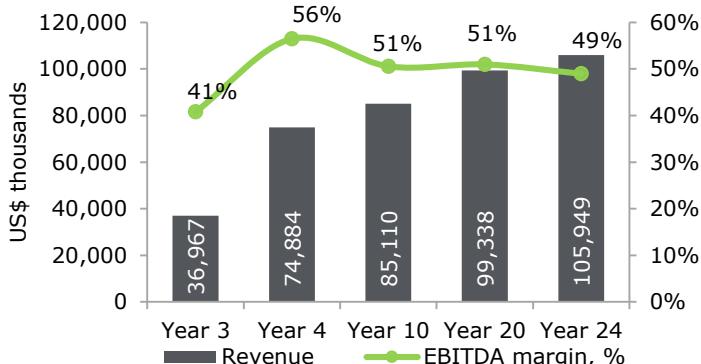
## Key investment data

Index	Results
Project implementation period, years	24
<i>including investment period, years</i>	2
<i>operation period, years</i>	22
Investment, US\$ thousands	57,088
Project NPV, US\$ thousands	106,259
IRR, %	29.9%
EBITDA return, %	52%
Payback period, years	5.4
Discounted payback period, years	6.7

**Project implementation location:**  
Pavlodar Oblast, Ekibastuz district



## Project profitability



## Innovative ASW processing technology

More than 300 technologies are known to process and use ASW, but they are mainly focused on ash application in the construction industry and the production of construction materials and don't imply extraction of useful and valuable components from ash.

The patented hydrometallurgical technology "Aluminosilicate Raw Material Processing Method" (patent No. 28163 registered with the State Register of Inventions of the Republic of Kazakhstan on January 21, 2014; patent No. 2574252 registered with the State Register of Inventions of the Russian Federation on December 30, 2015) help efficiently extract amorphous silica, alumina and iron concentrate from ASW, which is industrially and economically viable.

# 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**

Indicator	Results
Amount of investments, US\$ thousands	497,047
Project NPV, US\$ thousands	653,709
IRR, %	55.2%
EBITDA margin, %	66%
Payback period, years	5.1
Discounted payback period, years	5.5

**Project location: Shalkar district, Aktobe Oblast****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 profitability**

# Kokbulak iron ore deposit

## Project overview:

Development of Kokbulak iron ore deposit and build concentrate enrichment plant

**Investment amount:** US\$ 418,986 thousand

**Capacity:** 8-million tonne/year

## Product:

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

## Location:

Aktobe Oblast, Aktobe-Steel Production LLP

## Project implementation period:

24 years, including construction period

## Selling market:

Domestic market, Russia and China

## Market prerequisites:

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

## Key investment indicators

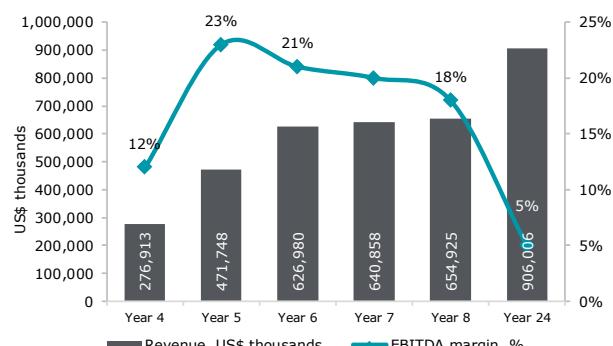
Indicator	Result
Investment amount, US\$ thousands	418,986
Project NPV, US\$ thousands	36,668
IRR	14.9%
EBITDA margin	24%
Payback period, years	9.4
Discounted payback period, years	16.3

## Project location:

*Aktobe Oblast, Shalkar district*



## Project profitability



## Kokbulak deposit reserves

Class	Reserves, million tonnes	Fe, %	P <sub>2</sub> O <sub>5</sub> , %	Sulphur, %
Central zone				
B	163.1	41.3	1.67	0.06
C1	198.1	37.8	1.48	0.09
Total:	361.2	39.4	1.57	0.08
North zone				
C1	561.9	42.1	1.46	0.06
C2	49.3	37.9	1.36	0.06
Total:	611.2	38.1	1.39	0.06
South zone				
C2	295.9	35.2	1.38	0.09
Total:	295.9	35.2	1.38	0.09
Off-balance				
C1	410.7	26.6	0.99	0.11
C2	238.1	28.3	1.09	0.1
Total:	648.8	27.2	1.03	0.11

# Cobalt-nickel ore processing

## Project overview:

Construction of cobalt-nickel ore processing complex to produce nickel, matte, cobalt and commercial FN-20 ferronickel through the innovative upgrading of an existing industrial enterprise to ensure the efficient use of natural resources and improve product quality

**Investment amount:** US\$ 252,504 thousand

## Capacity:

1.9 million tonnes of ore and 9,500 tonnes of nickel in matte (or 63,000 tonnes of matte) per year

**Product:** nickel, stein, cobalt and FN-20 ferronickel

## Location:

East-Kazakhstan Oblast, Beskaragay District

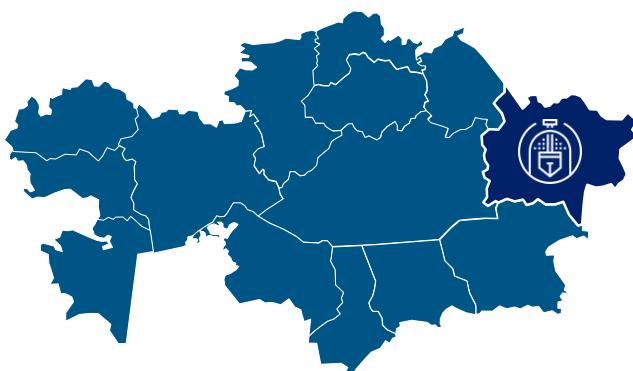
## Project implementation period:

19 years (until 2036)

## Key investment indicators

Indicator	Result
Investment amount, US\$ thousands	252,504
Project NPV, US\$ thousands	73,613
IRR	18%
EBITDA margin	57% - 63%
Payback period, years	7.0
Discounted payback period, years	12.0

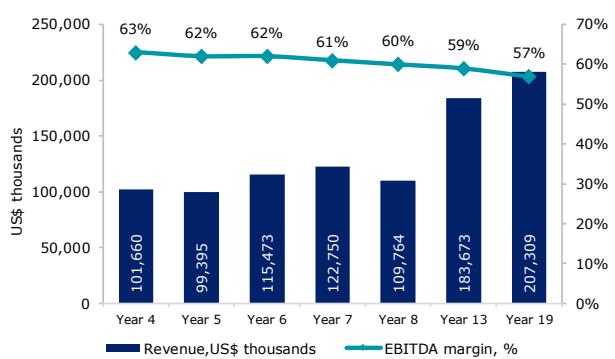
## Project location: East-Kazakhstan Oblast, Beskaragay District



## Market prerequisites:

- Kazakhstan is in the top 20 countries in terms of nickel reserves with 1.5 million tonnes or 2% of the global total. Its cobalt reserves amount to at least 100 thousand tonnes or 1.4% of the global total.*
- Potential to export - Domestic demand for cobalt and nickel is low and may be covered by surplus reserves, once exports have been made major consumers such as China and Russia.*
- Production costs are low due to the availability of cheap raw materials.*

## Project profitability



## Deposit reserves

Cut-off grade	Capacity (m³)	Tonnes (thous)	Ni (%)	Metal Ni (thous)	Co (%)
<b>Indicated</b>					
0.5	30,694,458	38,982	0.74	289	0.054
<b>Inferred</b>					
	12,358,506	15,695	0.75	117	0.056

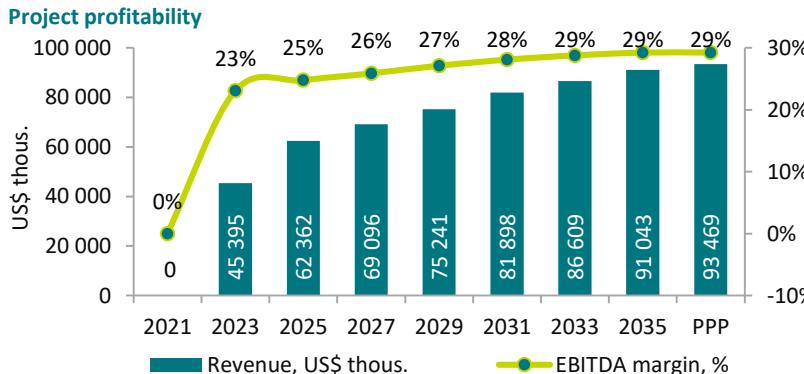


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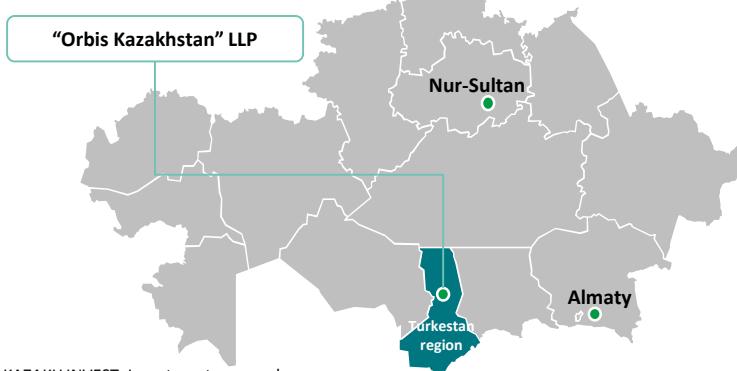


## MACHINERY CONSTRUCTION AND METALLURGY





## Location



## 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?

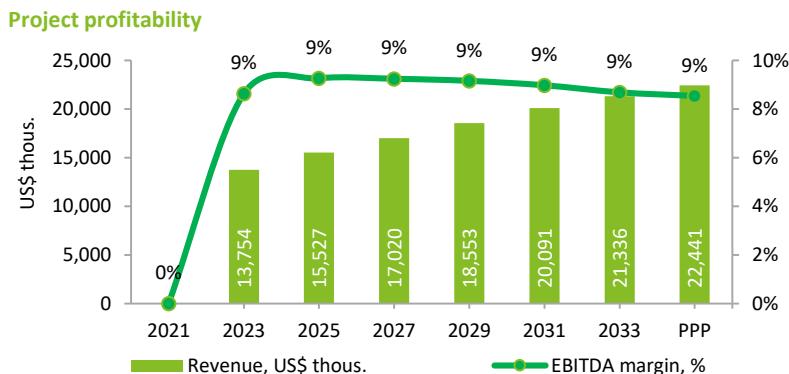
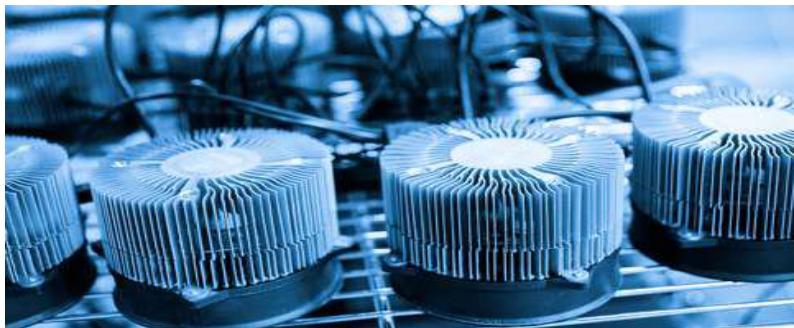
- Project location.** Turkestan region has an extensive road transport and logistics infrastructure: the region has highways of republican and regional significance with access to the regions of Uzbekistan (Tashkent), Kyrgyzstan (Bishkek) and the cities of Kazakhstan (Shymkent, Taraz, Almaty, Kyzylorda, 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

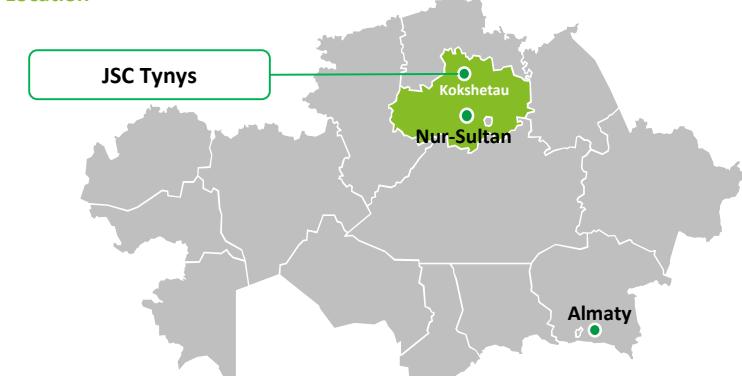
The Project requires investment of US\$ 65,424 thousand, of which:

- 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.



#### Location



## Production of personal protective equipment (gas masks)

### Commercial products

Annual capacity:

- OM-90 – 25 thousand units;
- CM-6 – 25 thousand units.

### Investment attractiveness of the project:

Investment – US\$ 3,236 thousand

Project NPV – US\$ 3,072 thousand

IRR – 20.8%

Payback period – 6.48 years

### 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.

### 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.

# Organization of a manufacturing line for the production of railway springs

## Mechanical engineering and metallurgy

### Project description:

Organization of a manufacturing line for the production of railway springs on the territory of a machine-building plant with creation of 87 new workplaces.

### Project location:

East Kazakhstan oblast, Semey

### Project Initiator:

Semipalatinsk Machine-Building Plant JSC (SMP JSC) - an enterprise of the military-industrial complex.

### Product and output:

External air suspension spring 100.30.002-0 – 45,000 units per year.

Internal air suspension spring 100.30.003-0 – 45,000 units per year.

Other types of air suspension springs -12,500 units per year.

### Sales market:

It is planned to sale products on domestic market with further expansion to the markets of Uzbekistan, China, and Kyrgyzstan.

### Production process:

1. Cutting, heating, winding, heat treatment and compression of spring steel bars, PRT.
2. Preparation of marketable product (coloring, preservation and packaging).

### Key investment indicators of the Project

Indicator	Results
Investment amount, US\$ thous.	848
Project NPV, US\$ thousands	1,334
IRR, %	31.4%
EBITDA margin, %	21%
Payback period, years	5.0
Discounted payback period, years	6.6

### Investment structure



Construction and assembly work



\$65 ths.

8%  
Machinery and equipment



92%  
\$783 ths.

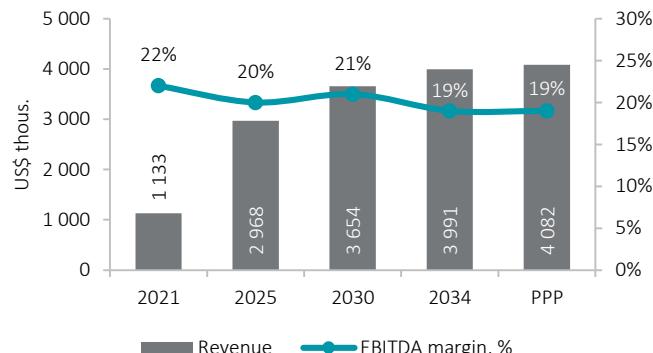
### Prerequisites for Project implementation

**Growth in railway traffic and large depreciation of rolling stock** - In 2019, the freight turnover of railway transport in Kazakhstan amounted to 289 mln tonne-kilometers (tkm), exceeding the value of 2015 by 23%. The number of rolling stock reached 143 thous. units. Most of the rolling stock (97% or 138.5 thousand units) is occupied by freight wagons. About 50% of the rolling stock is over 10 years old, which indicates a high level of depreciation.

**Import substitution** - In 2019, imports of coil springs made of ferrous metal amounted to 2,812 tonnes, an increase of 74% compared to the same period in 2015. The production of railway springs will meet the demand of companies specializing in freight transportation, partially reducing import dependence.

**Export potential** – the volume of export supplies of springs remained at an insignificant level. Given the current demand and planned production volumes, there is a potential for increasing export volumes.

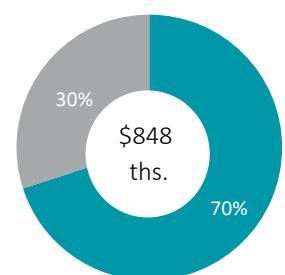
### Project profitability



### Financing structure

Debt financing subject to collateral  
70% (\$594 ths.)

Participation of the Investor  
from 30% (\$254 ths.)



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.

# Household appliances manufacturing

KAZAKH INVEST  
Investment proposal  
November 2020

## Mechanical engineering

### 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

Indicator	Results
Investment amount, US\$ thousand	7,190
Project NPV, US\$ thousand	6,400
IRR, %	34.4%
EBITDA margin, %	13.8%
Payback period, years	4.0
Discounted payback period, years	5.5

### Investment structure

 Buildings and structures	16.2%
 Machinery and equipment	50.7%
 Initial working capital	33.1%

**\$1.2 million**

**\$3.6 million**

**\$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).

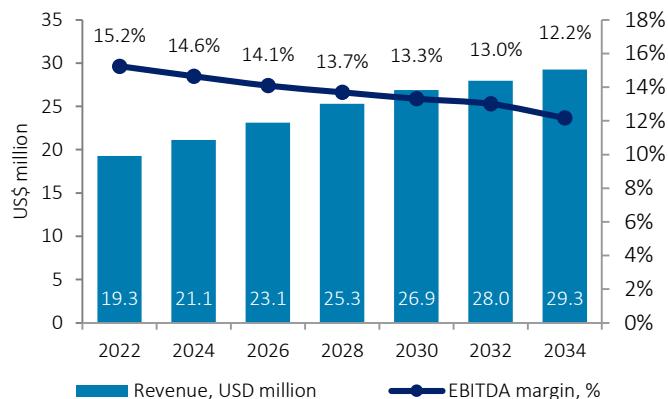
#### High quality products.

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.

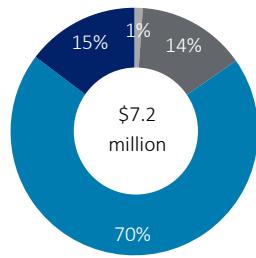
Household appliances are mainly imported to Kazakhstan. Manufacturing in Kazakhstan will significantly reduce the cost of production, as expenses on transport, taxes and customs duties will decrease.

#### Project's profitability



### 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.

# Electric motor manufacturing line

KAZAKH INVEST  
Investment proposal  
November 2020

## Machine manufacturing

### 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 of 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

Indicator	Results
Investment amount, US\$ thousand	28,000
Project NPV, US\$ thousand	28,092
IRR, %	25.9%
EBITDA margin, %	23%
Payback period, years	7.5
Discounted payback period, years	10.5

### Investment structure

 Buildings and structures	 16%	 \$5.0 million
 Machinery and equipment	 73%	 \$23 million
 Initial working capital	 11%	 \$3.5 million

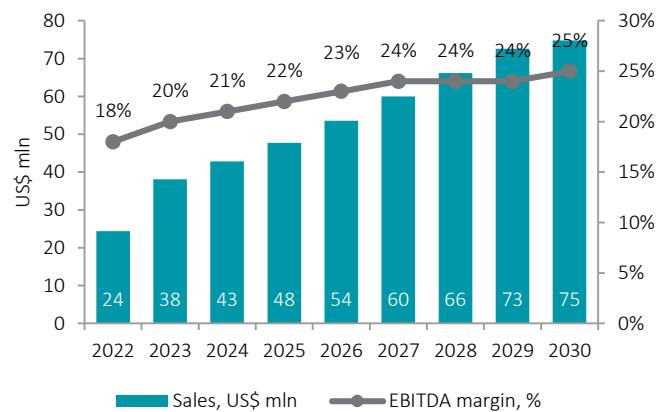
### Prerequisites for implementation of the Project

**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.

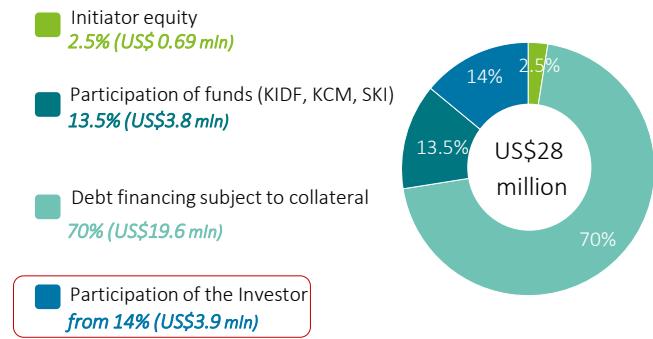
### Relevant industry experience and established customer base.

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



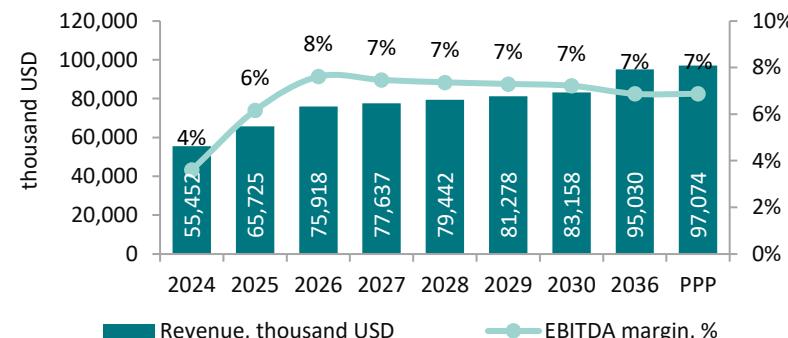
### Financing structure



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.



**Project profitability**



**Project location**



## Construction of a plant for processing non-ferrous scrap

### Products

Sales volumes upon reaching full design capacity in 2026 will be as follows:

- aluminum ingots – 6,300 tonnes;
- copper bars – 6,300 tonnes.

The Company plans to export 100% of the output to Turkey.

### Project

This investment project envisages the construction of a plant for the processing of non-ferrous scrap and the production of metal bars with a capacity of 12,600 tonnes per year in the city of Ust-Kamenogorsk, East Kazakhstan Oblast. To implement the Project, the Initiator has acquired a production base with a total area of 6 thousand sq. m with an adjacent land plot (6.9389 ha) in the city of Ust-Kamenogorsk, East Kazakhstan Oblast. The site is connected to engineering communication networks and a developed road transport and logistics infrastructure.

The Company has signed contracts for the supply and installation of equipment, as well as construction and installation works at the production base are in progress.

### Project Initiator

The Project initiator, KAZMETALEXPORT LLP was founded in 2023 to implement the Project for the processing of non-ferrous scrap and the production of metal bars.

### Market Overview

- Over 2018-2022, the global market for metal scrap processing grew from 527 million tonnes to 710 million tonnes at a CAGR of 7.8%. The market was shared between ferrous (52%) and non-ferrous (48%) metals. According to Technavio, the global market will reach 1,051 million tonnes by 2027 with a CAGR of 8.5% (2023-2027) as a result of growing urbanization and demand for waste processing services in big cities.
- In 2022, 3,638 tonnes of secondary aluminum were produced in Kazakhstan with a CAGR of 3.2% (2017-2022).
- As of 2022, the total output of copper-based alloys amounted to 4,657 tonnes in Kazakhstan.

### Investment attractiveness of the project:

Investment amount – 6,890 thousand USD;

Project NPV – 6,065 thousand USD;

IRR – 29.8%;

Payback period – 5.55 years;

Discounted payback period – 8.34 years.

### What is the attractiveness of the project?

- Advantageous location.** To implement the Project, the Initiator acquired a production base with an adjacent land plot in the city of Ust-Kamenogorsk. The site has in the immediate vicinity A-3 nationwide-significance highway (25 km), railway stations Ust-Kamenogorsk (15 km), Oskemen-1 (18 km) and Novo-Ust-Kamenogorsk (22 km). More than 54 enterprises in the region specializing in the sale of scrap metal will supply the raw materials required.

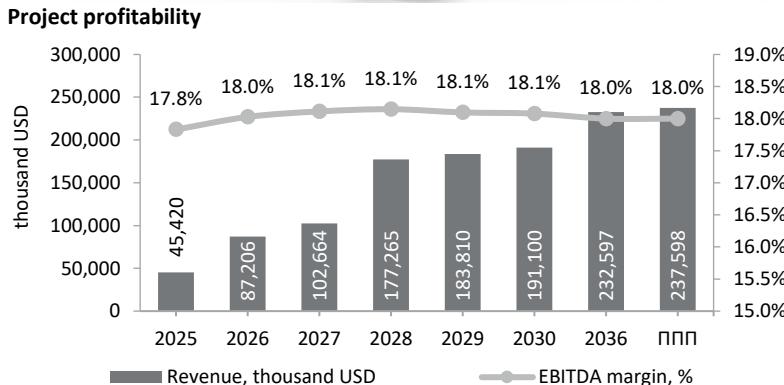
- State support.** As prescribed by the Kazakhstan Environmental Code, gathering scrap ferrous and non-ferrous metals at landfills is prohibited. Waste owners are obliged to go into safe waste management themselves or ensure safe waste management by transferring waste to businesses involved in waste management operations. To increase the load on local enterprises experiencing a shortage of scrap, the ban on exports of non-ferrous and ferrous metal wastes and scrap was extended for 6 months from 7 November 2023, by order of the Minister of Industry and Construction dated 18 October 2023.

### Investment proposal

The Project requires investment of 6,890 thousand USD (at the rate of 449.2 tenge), of which:

- 70% (4,823 thousand USD) - debt financing subject to collateral;
- 30% (2,067 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 location



## New aluminium product production plant

### Products

Full design capacity, which is due to be reached in 2028, should equate to the following annual sales: unpainted profile – 18,150 thousand tonnes, painted profile – 11,880 thousand tonnes and anodised profile – 1,320 thousand tonnes.

All product is due to be sold domestically in Kazakhstan. In the long term, the company is also considering the possibility of exporting its products to the countries of Central Asia, the CIS, and Europe.

### Project

This investment project envisages the construction of a plant to produce 31 thousand tonnes of extruded aluminium alloy products per year in the city of Pavlodar. For the purposes of the Project, the Initiator is planning to purchase a 13.5 ha site close to the raw material supplier – the Pavlodar Aluminium Plant.

The Company has signed a contract with JSC Aluminium Kazakhstan to supply aluminium product raw materials, as well as strategic agreements have been signed for product sales to construction companies.

### Project Initiator

ALPROF LLP is a manufacturer of aluminum profiles with state licenses №15020306 from 19.11.2015 for legal entities to collect (procure), store, process and sell ferrous and non-ferrous metal scrap and waste and №17004299 from 10.03.2017 for category 3 project activities. Since 2003, the Company has sold over 60 thousand tonnes of product and completed 1 thousand construction projects in Kazakhstan. The Company's Almaty plant produced 7.2 thousand tonnes of product in 2022. The Company's products are certified for compliance with ISO 9001 quality standard.

### Market Overview

- As of 2022, the volume of consumption of profiles and similar products made of ferrous metals or aluminum in the Republic of Kazakhstan amounted to 234 thousand tonnes, which is 2% higher than in 2021.
- In 2022, import of other aluminum alloy profiles in Kazakhstan amounted to 19.3 mln USD and were mainly came from Russia (74%).
- In 2022, the volume of the construction industry of the Kazakhstan amounted to 13.6 bln USD. According to Marketline, the construction industry of the Republic of Kazakhstan in 2023-2026 will grow at an average annual rate of 8%.

### Investment attractiveness of the project:

Investment amount – 63,400 thousand USD;  
Project NPV – 29,931 thousand USD;  
IRR – 29.5%;  
Payback period – 6.7 years;  
Discounted payback period – 9.8 years.

### What is the attractiveness of the project?

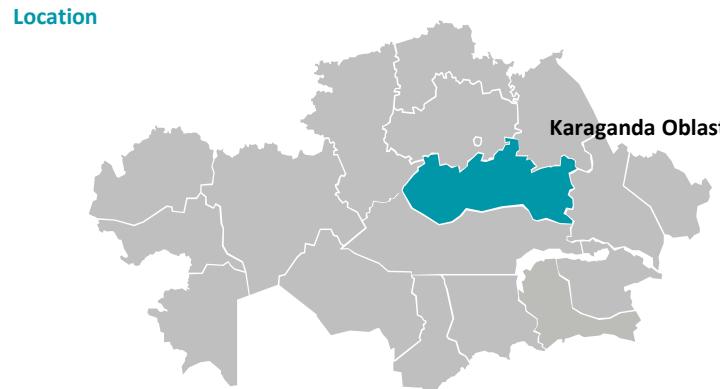
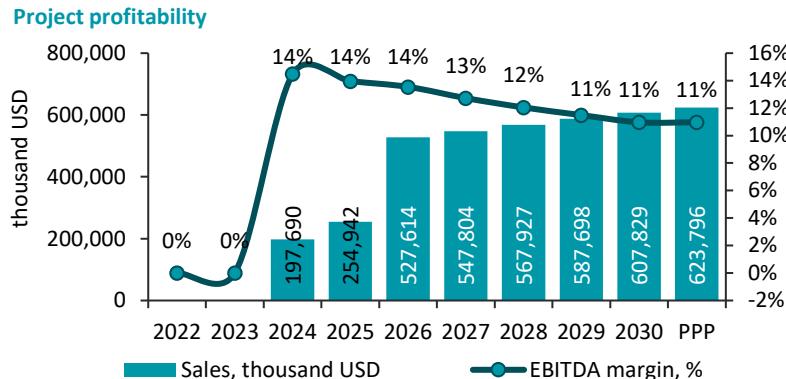
- Advantageous location.** Having production based in the city of Pavlodar will provide access to the consumer markets of Pavlodar Oblast, Astana, Abai, North-Kazakhstan, Akmola and Karaganda Oblasts, which are home to over 3 thousand construction sector organisations. In addition, access to a well-developed and extensive rail and road system will help manage both raw material and plant finished product deliveries. Proximity to the source of raw materials (Pavlodar Aluminium Plant) will reduce transportation and overhead costs, and also improve production performance.
- Capacity increases and new sales markets.** Access to resources and the use of innovative processing technology will help increase production capacity and vary the Company's product range, which will enable it to develop new markets.

### Investment proposal

The Project requires investment of 63,400 thousand USD (at the rate of 449.2 tenge), of which:

- 70% (44,380 thousand USD) - debt financing subject to collateral;
- 30% (19,020 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 galvanized steel coils with a polymer coating

### Commercial products

The manufacturing capacity is 400 thousand tonnes per year.

Planned product range:

- Coiled galvanized steel – 300 thousand tonnes;
- Pre-painted galvanized steel coil – 100 thousand tonnes.

### Investment attractiveness of the project:

Investment – US\$ 52,000 thousand

Project NPV – US\$ 116,403 thousand

IRR – 36.0%

Payback period – 5.75 years

### Project description

The Project envisages the construction of a plant to produce a range of zinc-plated steel coil, as well as polymer-coated steel coil. The Project is due to be implemented in Karaganda Oblast's Saran industrial zone.

### Company

Asia Prom Steel Ltd. was created in 2022 to implement a Project to produce zinc-plated steel coil, as well as polymer-coated steel coil. The founders have been operating on the metallurgy market in Kazakhstan for over 10 years, producing profiled metal, metal tile roofing and steel pipes.

### Market

- Exports of rolled metal product with galvanised or other coatings from Kazakhstan in 2017-2021 averaged 482 thousand tonnes per year. Imports in 2021 reached 163 thousand tonnes, of which 50% were from Russia.
- According to MarketLine, the Kazakhstan construction sector is due to grow to 7.9 trillion tenge by 2025. The positive trend in construction is the driver of the increase in demand for steel products, including polymer-coated rolled metal.

### What is the attractiveness of the project?

- **User-friendly location.** The Initiator has been provided with a 180 ha site in the Saran new industrial zone to create and manage production.
- **Import substitution and synergy.** There is currently one zinc-plated steel coil manufacturer in Kazakhstan. The Project will help reduce import dependence, supply raw materials to construction and industrial sector companies, and also achieve production synergy with company founders producing metal products (profiled metal, metal tile roofing and steel pipes).

### Investment proposal

The Project requires investment of US\$ 52,000 thousand, of which:

- 70 % (US\$ 36,400 thousand) – debt financing subject to collateral
- 30 % (US\$ 15,600 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.

### Launch of long products manufacturing at Aktau Foundry in Aktau city

#### 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.

#### Key investment indicators

Indicator	Results
Investment amount, US\$ thousands	79,348
Project NPV, US\$ thousands	59,687
IRR, %	15.9%
EBITDA margin, %	19%
Payback period, years	9.7
Discounted payback period, years	16.4

#### Project location:

Mangystau oblast, Aktau, Industrial area



#### Market background:

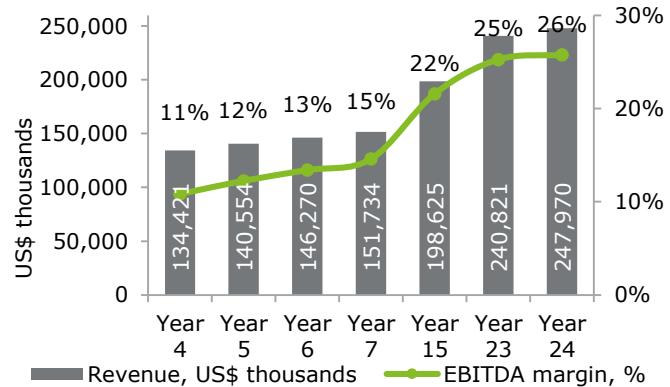
##### Growth in consumer demand for long products.

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%.

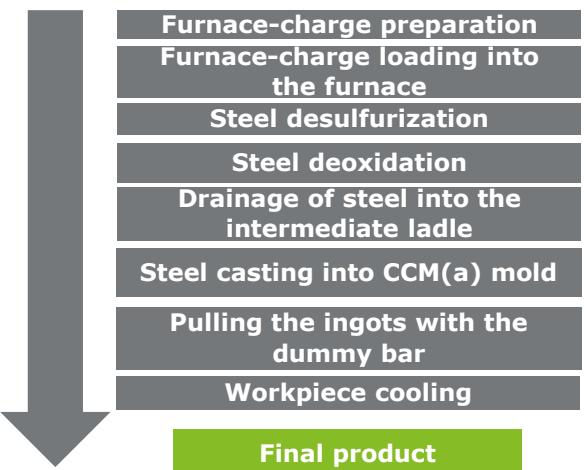
**Import substitution.** Growth in consumer demand has sharpened competition between domestic producers and suppliers from the Russian Federation. Also, in Kazakhstan there are no enterprises producing a full range of long products.

**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.

#### Project profitability



#### Technological process:



# Production of metal powder



## Project overview:

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

**Investment amount:** US\$ 23,308 thousand

## Products:

PZhR Iron powder

## Location:

South Kazakhstan Oblast

## Project implementation period:

24 years, including 1 year of construction

**Target markets:** Kazakhstan, Russia and China

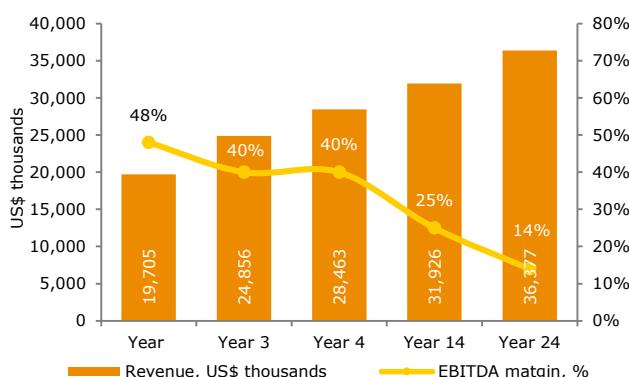
**Suppliers:** local metallurgical enterprises and scrap buyers

**Consumers:** production sites

## Market prerequisites:

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

## Project profitability



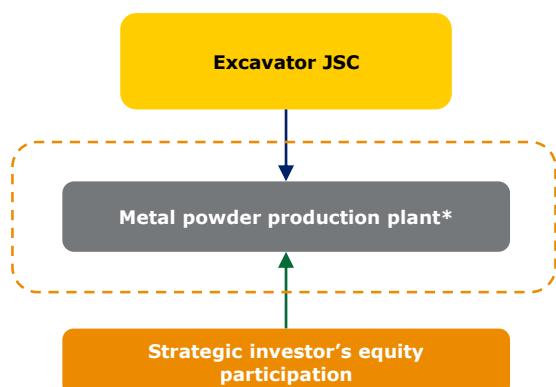
## Key investment indicators

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

## Initiator of the project

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

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



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

# Production of copper pipes

## Machinery construction and metallurgy



### Project overview:

This investment project involves the construction of a copper pipe production plant for production of copper pipes with an external diameter of 6-46 mm under the American Society for Testing and Materials (ASTM) standard. The area of the plant's territory will be 14.5 hectares.

The project aims creation of more than 45 permanent jobs.

### Location:

Special Economic Zone (SEZ) in Karaganda.

### Project Initiator:

Temir men Mys LLP, which main activity is study and research of potential opportunities in the mining and metallurgical complex of the Republic of Kazakhstan and conduct of feasibility studies in the organization of production of the third, fourth and fifth redistributions.

### Commodity production and capacity

Copper pipes with external diameter of 6-46 mm as per ASTM standard - 13 000 tones per a year.

**Sales markets:** domestic market and exports to Russia, China, Belarus, Ukraine and Austria.

### Key investment indicators

Indicator	Result
Investment amount, US\$ thousands	59,345
Project NPV, US\$ thousands	22,587
IRR, %	21.4%
EBITDA margin, %	19%
Payback period, years	6.4
Discounted payback period, years	9.6

### Investment structure

	<i>Construction and assembly work</i>		<b>\$16.7 million</b>
	<i>Machinery and equipment</i>		<b>\$35.8 million</b>
	<i>Other capital expenditures</i>		<b>\$6.8 million</b>

### Market prerequisites:

#### Import substitution

Kazakhstan does not have copper pipes production plant. Demand in the domestic market is fully covered by imported goods. Compound annual growth rate of copper pipe imports to the country was 8% during the period 2015-2019.

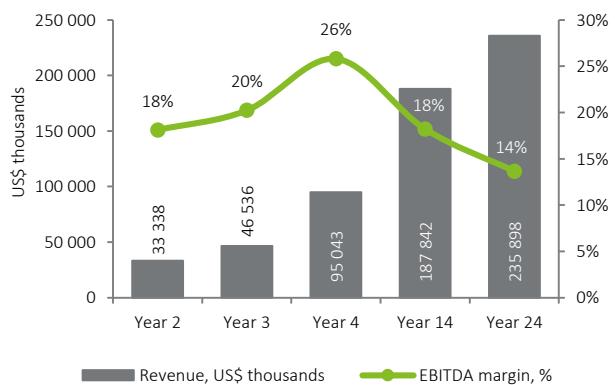
#### Export potential.

Copper pipe imports in China and Russia totaled US\$165 billion and US\$97 billion, respectively. Proximity to high-capacity sales markets in Russia and China allows for exports to take a significant share of their consumption markets.

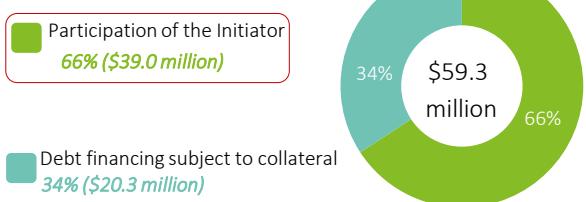
#### Stable growth of raw materials production

During 2020 Kazakhstan produced 481 thousand tones of refined, unprocessed and unalloyed copper.

### Project profitability



### Financing structure

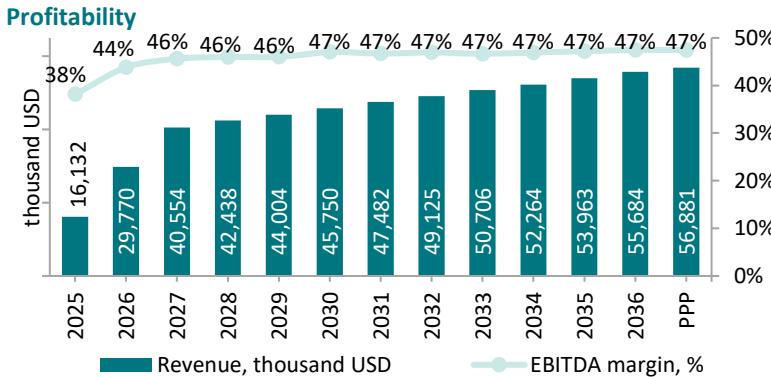


*The proposed financing structure is indicative, the final financing and Project participation structures will be determined based on the results of negotiations with the Investor.*



KAZAKH INVEST  
NATIONAL COMPANY

# CHEMISTRY AND PETROCHEMISTRY



## Project location



## Construction of a caustic soda and hydrochloric acid production plant

### Product

At full capacity, which is planned for 2027, the plant will be producing: caustic soda 47% – 36,000 tonnes; caustic soda 100% – 18,000 tonnes; hydrochloric acid (33% solution) – 54,000 tonnes; sodium hypochlorite – 3,906 tonnes.

100% of product is due to be sold domestically in Kazakhstan.

### Project

This investment project (the “Project”) covers the second phase of the construction of a 124,700 tonne/year caustic soda and chlorine-containing product production plant on an 11 ha site in the “Aktau Seaport” Special Economic Zone in Aktau, Mangistau Oblast. Phase 1, which has been completed, involved the construction of calcium chloride facilities and the 411 m railway branch No. 1.

### Initiator

Topan Chemical Industries LLP is a subsidiary of Topan LLP, specialising since 1999 in the production of laboratory equipment, processing solutions and gases, as well as water treatment coagulants. The Company also has a well-developed client base, which includes Tengizchevroil LLP, JSC Caspian Pipeline Consortium, JSC NC KazMunaiGas, JSC KazTransOil and JSC CNPC-Aktobemunaigas. Topan LLP owns production sites in Uralsk (4.5 ha) and Aksai (1.5 ha).

### Market

- In 2022, the global caustic soda market was valued at 45 billion USD. According to Fortune Business Insights, the market is projected to reach 55.6 billion by 2027. The market is expected to grow at a CAGR of 4.3% between 2023 and 2027.
- The volume of the world market of hydrochloric acid amounted to 2.5 billion USD in 2022. The global hydrochloric acid market is expected to reach 3.4 billion USD by 2027 at CAGR (2023-2027) – 6.34%.
- The average annual rate of decline in the production of caustic soda in Kazakhstan for the period 2018-2022 amounted to 3.7%. The share of imports in the market is 59.7%. In Kazakhstan, the only major producer of caustic soda is Caustic JSC.

### Project payback

Investment amount – 62,715 thousand USD

Project NPV – 17,562 thousand USD

IRR – 29.6%

EBITDA return – 46%

Payback period – 5.24 years

Discounted payback period – 8.51 years

### What are the advantages of the project?

- Advantageous location.** Having production based in Aktau will help give access to a consumer market of over 560 industrial companies in the local oblast. Access to a well-developed and extensive rail, road and sea transport network will aid the supply of feedstock and product exports. As a SEZ member, the Company may be eligible for tax and customs concessions, reduced land use charges, and a simplified procedure for employing overseas nationals.
- Company experience.** The Initiator parent company has been specialising since 1999 in laboratory equipment production, processing solutions and gases, as well as water treatment coagulants. Topan LLP owns production sites in Uralsk (4.5 ha) and Aksai (1.5 ha). It also has a well-developed client base, which includes Tengizchevroil LLP, JSC NC KazMunaiGas, JSC KazTransOil, JSC Caspian Pipeline Consortium and JSC CNPC-Aktobemunaigas.

### Investment and financing structure

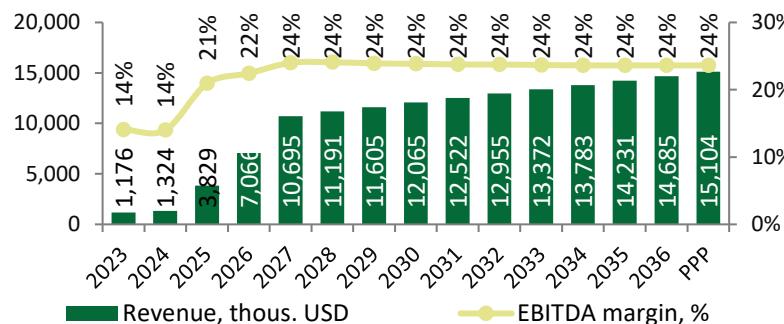
The Project requires investment of 62,715 thousand USD (exchange rate: KZT 449), of which:

- 70% (43,900 thousand USD) – debt financing subject to collateral;
- 30% (18,814 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



#### Location



## Industrial waste (big bags and plastic) processing and granule production

#### Products

Full design capacity, which will be achieved in 2027, should result in the following annual sales: derivative HDP plastic granules – 2,316 tonnes; LDP plastic granules – 1,158 tonnes; PP plastic granules – 2,316 tonnes; ABS/polystyrene plastic granules – 1,158 tonnes; crushed LDP plastic – 1,158 tonnes; crushed PP plastic – 1,158 tonnes; crushed HDP plastic – 1,158 tonnes; crushed ABS/polystyrene plastic – 1,158 tonnes.

The plan is to sell product domestically in Kazakhstan.

#### Project

This investment project envisages the launch of derivative plastic granule and crushed plastic production of 12 thousand tonnes per year in Pavlodar, Pavlodar Oblast. The following five types of plastic waste will be used as product feedstock: high density polyethylene ("HDP"), low density polyethylene ("LDP"), polypropylene ("PP"), acrylonitrile butadiene styrene ("ABS") and polystyrene. Today, the production site at the disposal of the Initiator has all the necessary infrastructure. The company also leased a land plot of 0.42 hectares for the placement and maintenance of a railway access track.

#### Company

Ak-Service LLP is a project company created to implement the Project. It holds a category 3 construction and assembly work license. In 2020, to implement the Project, the Company purchased a 6.3 ha industrial site with a covered warehouse and administrative block.

#### Market

- According to Technavio, the global market for plastic materials and synthetic resins was worth 808 billion USD in 2022. It is predicted that by 2027 the figure will reach 1,339 billion USD (CAGR - 10.5%).
- According to the Bureau of National Statistics of the Republic of Kazakhstan, in 2022, 148,501 tons of plastic waste were sorted in the Republic of Kazakhstan, 89% (132,810 tons) of which were sent to third-party organizations for processing. By comparison, in 2019, only 30% of sorted plastic waste was recycled. The share of plastic waste recycling has increased due to the introduction of a ban on the disposal of plastic in landfills.

#### Investment attractiveness of the project:

Investment amount – 2,200 thousand USD;  
Project NPV – 9,459 thousand USD;  
MIRR – 32.7%;  
Payback period – 3.04 years;  
Discounted payback period – 3.28 years.

#### What is the attractiveness of the project?

- Access to a raw materials base.** In September 2023, there were 96 large companies operating in Pavlodar Oblast, as well as 3,557 small and medium-sized industrial companies. In 2022, the 16 waste collection companies operating in the oblast sorted 1,940 tonnes of plastic waste. Having the Project based in Pavlodar Oblast will create feedstock for production.
- State support.** Project activities are recognised as a priority for state support and concessions, such as lower interest rates, land grants, tax breaks and others. Project activities are also actively supported by the Ecological Code, whereby landfill sites cannot accept plastic waste, plastic materials and polyethylene, polyethylene terephthalate packaging, while waste owners are obliged to ensure safe waste management themselves by transferring it to waste management companies.

#### Investment proposal

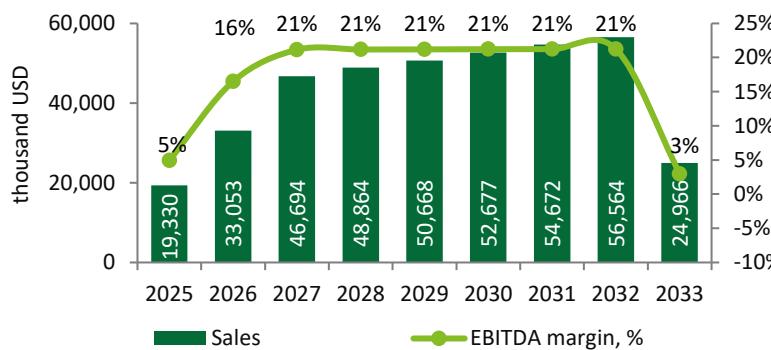
The Project requires investment of 2,200 thousand USD (at the rate of 449.2 tenge), of which:

- 70% (1,540 thousand USD) - debt financing subject to collateral;
- 30% (660 thousand USD) – investor participation.

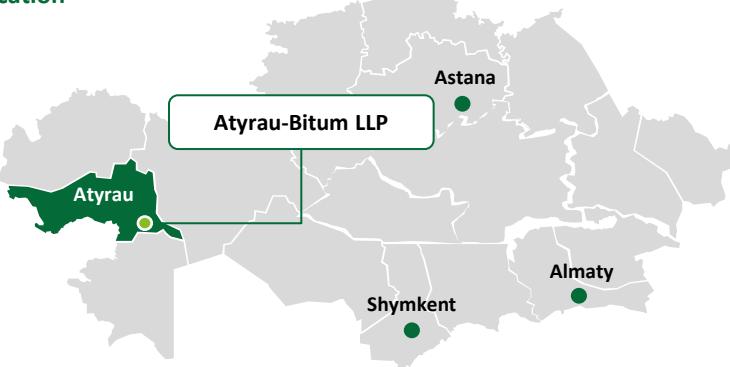
The proposed financing structure and state support measures are indicative/ The final financing structure and the stake in the Project will be determined based on the results of joint negotiations with the investor.



## Project profitability



## Location



## Development of the Munaily-Mola bitumen rock (mineral tar) field

### Products

When design capacity is achieved in 2027, plant production levels will be as follows:

- bitumen – 7,815 tonnes
- mineral tar mixture – 65,124 tonnes
- mineral tar – 660,243 tonnes

All product is due to be sold domestically.

### Investment attractiveness of the project:

Investment – 5,737 thousand USD  
Project NPV – 4,977 thousand USD  
IRR – 33.8%  
Payback period – 4.5 years  
Discounted payback period – 6.0 years.

### What is the attractiveness of the project?

- Advantageous location.** Having production based in Atyrau Oblast will provide access to the country's western markets, where road construction is currently in full force. For example, oblast road construction and repairs in 2022 were worth 161 billion tenge (18.8% of the national figure). The production site's access to a well-developed and extensive rail and road system will help manage both feedstock supplies and finished product supplies to customers. Proximity to a feedstock source (the Munaily-Mola field) will reduce transportation and overhead supply costs, which will improve Project performance.
- Own source of raw materials.** The Project has its own source of raw materials, which will help reduce production costs, ensuring the required product quality at a competitive price. The Initiator holds a 10-year license for the use of a subsoil plot to produce common mineral resources (with the option to extend).

### Investment proposal

The Project requires investment of 5,737 thousand USD (at the rate of 449.2 tenge), of which:

- 70% (4,016 thousand USD) – debt financing subject to collateral;
- 30% (1,721 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

This investment project envisages the production of bitumen rock (mineral tar) at the Munaily-Mola field for further advanced processing. Rock processing involves crushing and pounding mineral tar, removing and modifying bitumen, and also producing various mineral tar mixtures at an asphalt production unit.

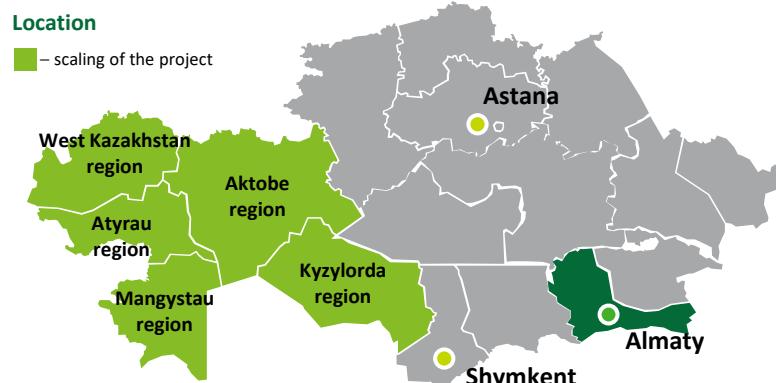
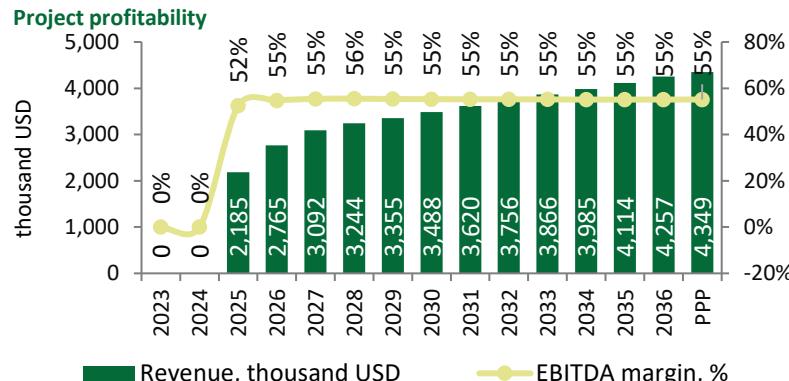
The Zhylyoi District Akimat (Atyrau Oblast) has allocated a 75.5 ha site on Munaily-Mola field territory (until 17 March 2031 with the option to extend).

### Company

Atyrau-Bitum LLP was founded in 2020 to implement the Project to develop and produce bitumen rock (mineral tar) at the Munaily-Mola field. The Project Initiator holds 10-year license No. 70/2021 from 17 March 2021 for the use of a subsoil plot to produce common mineral resources with the option to extend once contracts expire.

### Market

- According to the Ministry of Energy of the Republic of Kazakhstan, the annual demand for bitumen is 1.3 million tons.
- Construction and reconstruction of 10.5 thousand km of highways in the Republic of Kazakhstan is planned for 2023.
- In 2022, Kazakhstan's production of oil and shale bitumen amounted to 961 thousand tons. In 2018-2022, the average annual growth rate of oil and shale bitumen production amounted to 0.9%.
- According to the results of 2022, 90% of the volume of bitumen mixtures imported to Kazakhstan (23.4 thousand tons) came from Russia.



## Oil-contaminated waste treatment using innovative technology

### Products

The Company plans to process 45.8 thousand cubic meters of oil-contaminated waste per year once full design capacity is achieved. The Company intends to occupy at least a 30% share of the domestic oil-contaminated waste and heavy petroleum feedstock processing market.

### Project

The Project envisages refining and upgrading complex petroleum feedstock using integrated centrifugal technology. The Project will incorporate services to treat hazardous waste such as oil and petroleum sludge, drilling mud and other refining waste. At the moment, commercial facilities are in operation and advanced commercial oil extraction to over 98% has been achieved.

### Company

CT Solutions LLP has been operating in the oil sector since 2004. It is a member of the Alatau Innovative Technology Park Special Economic Zone ("SEZ") and is currently involved in processing oil-contaminated waste, category one commercial oil, purified water and solid phase tailings. For its first order, between 1 October 2021 and 30 October 2022, the Company processed 4,505 m<sup>3</sup> of oil sludge, from which it generated 2,110 m<sup>3</sup> of refined oil. The company cooperates with the AIFC Green Finance Centre and is a member of the National ESG Club.

### Market

- According to the Kazakhstan Ministry of Energy, the country's total geological oil reserves amount to roughly 13.2 billion tonnes, of which recoverable reserves amount to 3.3 billion tonnes.
- 118 thousand tonnes of oil sludge were processed and reused in 2021. In the same year, 208 thousand tonnes of oil refining waste were rendered harmless, processed and reused in Kazakhstan. The majority of oil sludge were being stored in Mangistau Oblast (42%), Kyzylorda Oblast (26.7 thousand tonnes or 14%) and West-Kazakhstan Oblast (5 thousand tonnes or 2%).
- According to the Ministry of Energy, bottom sludge (119.4 thousand tonnes) and waste water processing sludge (31.1 thousand tonnes) comprise the greatest share of oil refining waste. Mangistau, Aktobe and Atyrau Oblasts are the main bottom sludge polluters.

### Investment attractiveness of the project:

Investment – 3,009 thousand USD  
Project NPV – 4,442 thousand USD  
IRR – 45.1%  
Payback period – 3.8 years  
Discounted payback period – 4.6 years.

### What is the attractiveness of the project?

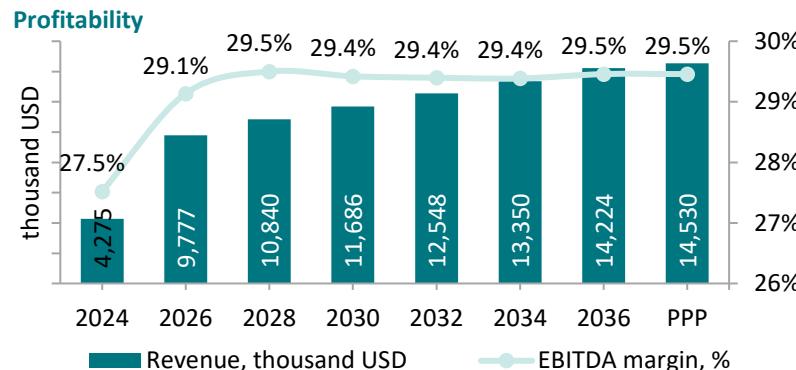
- Positive ecological effect.** According to the Kazakhstan Ministry of Ecology, over 1.5 million ha of land are polluted by oil and petroleum products. The Project will help significantly improve the unfavourable ecological situation in oil production areas.
- State support.** Kazakhstan adopted a new Ecological Code on 1 July 2021 that establishes stricter permissible waste accumulation and burial limits, including oil-contaminated waste, thus creating infrastructure for significant increases in hazardous waste recycling and processing services.
- Initiator experience.** Mobile equipment (in containers) is able to process oil-contaminated waste at customer sites. The Company already processes oil-contaminated waste, generating category one commercial oil, purified water and solid phase tailings. Between 1 October 2021 and 30 October 2022, as part of an order, the Company processed 4,505 cubic m of oil sludge, which generated 2,110 cubic m of refined oil. A patent of the Republic of Kazakhstan for invention No. 33883 dated 25.07.2018 for a method of processing oily waste was obtained.

### Investment proposal

The Project requires investment of 3,009 thousand USD (at the rate of 449.17 tenge), of which:

- 70% (2,106 thousand USD) – debt financing subject to collateral;
- 30% (903 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 location



## Polypropylene wicker bag production in the SEZ "ChemPark Taraz" in Zhambyl Oblast

### Product

The Project is scheduled to be commissioned by 2024, with the goal of reaching its design capacity by 2025. At full capacity annual production of polypropylene wicker bags and protective wagon liners will be 2,029 tons and 220 tons per year, respectively. The following range of product sizes and densities is planned: polypropylene wicker bags - 45x75 (60 g/m<sup>2</sup>), 56x96 (74 g/m<sup>2</sup>), 56x92 (74 g/m<sup>2</sup>), 50x64 (74 g/m<sup>2</sup>), 60x60x10x15 (65 g/m<sup>2</sup>) and protective wagon liners - 13x3x2.5m.

### Project

This investment project (the "Project") envisages the construction of the plant construction to produce polypropylene wicker bags and protective wagon liners on the territory of the SEZ "ChemPark Taraz" in the Zhambyl region. Product will be sold in Kazakhstan. The Project will create roughly 212 new jobs and produce export-focused products.

### Initiator

«Arion Invest Eco-Plast» LLP is a project company established for the construction of the plant construction to produce polypropylene wicker bags and protective wagon liners.

### Market

- In 2021, the global packaging market in monetary terms was worth USD 1,002.5 billion. According to Mordor Intelligence, this figure should increase 21.3% between 2022 and 2027 to USD 1,275.1 billion.
- In 2020, the volume of polypropylene bags production in Kazakhstan amounted to 2,720 thousand items in physical terms, having decreased by 54% compared to 2017.
- CAGR for polypropylene bag imports in Kazakhstan in 2018-2022 was 22.5%. In 2022, imports in Kazakhstan reached USD 39 million. In 2022, the majority of imports to Kazakhstan were from China (41%), Turkey (31%) and Russia (5%).

### Project payback

Investment amount – USD 4,286 thousand

Project NPV – USD 8,236 thousand

MIRR – 24.6%

Payback period – 3.98 years

Discounted payback period – 4.70 years

### What are the advantages of the project?

- Well-developed infrastructure.** The required infrastructure (water, heating and electricity supplies) has been created to ensure continuous operations. Transport infrastructure has also been developed. For example, the SEZ has a rail link and access to roads. The transportation infrastructure is well-developed, with railroads and highways providing access to nearby regions of Kazakhstan and Kyrgyzstan, connected to the SEZ territory.
- Project contracts.** The initiator has concluded a number of off-take contracts with three major key consumers of polypropylene products.

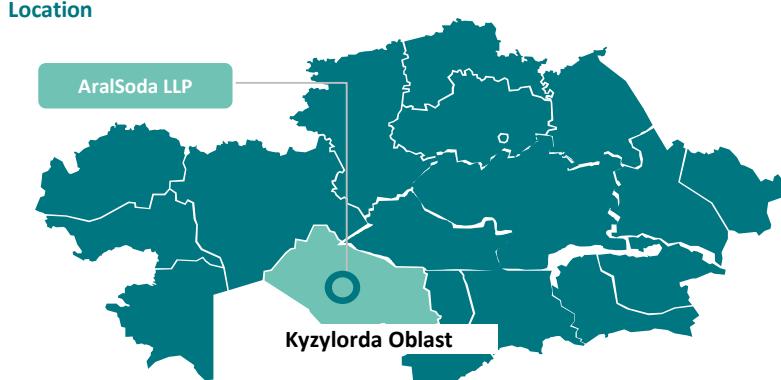
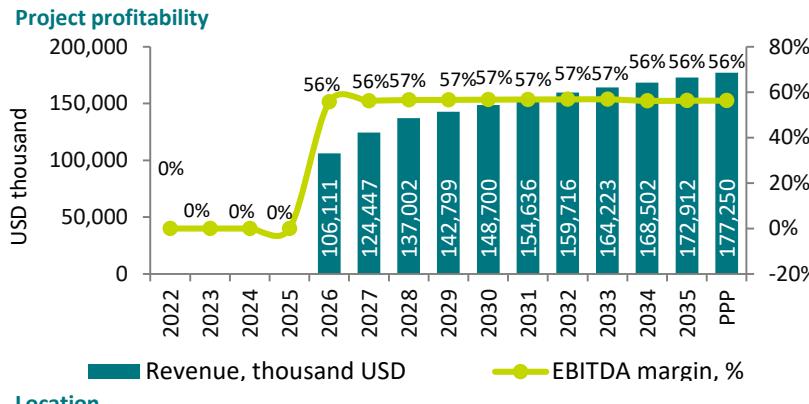
### Investment and financing structure

The Project requires investment of USD 4,286 thousand (exchange rate: KZT 449), of which:

- 55% (USD 2,357 thousand) – debt financing subject to collateral;
- 30% (USD 1,286 thousand) – investor participation;
- 15% (USD 643 thousand) – initiator's 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. The investment allocation is as follows:

- 73% (3,142 thousand USD) – equipment;
- 16% (698 thousand USD) – others;
- 10% (446 thousand USD) - buildings and structures.



## Construction of a plant for the production of soda ash

### Products

Production capacity will amount to 300 thousand tonnes per year. There is a possibility to produce both 300 thousand tonnes per year of soda grade A and 300 thousand tonnes per year of soda grade B, depending on the market needs. The planned product range will be as follows:

- Type A soda ash – 240 thousand tonnes;
- Type B soda ash – 60 thousand tonnes.

### Project

This investment project (the “Project”) envisages the construction of a soda ash production plant with a capacity of 300 thousand tonnes per year in Kyzylorda Oblast’s Aral District, sourcing raw materials locally.

### Company

AralSoda LLP is an affiliate of AralTuz JSC, the largest salt producer in Kazakhstan and the CIS. The Company was created to implement the Project to launch soda ash production.

### Market

- There was a stable CAGR of 1.9% in the soda ash market during 2017-2019. However, the COVID-19 pandemic and related quarantine measures resulted in an insignificant decline in the soda ash market, which has since recovered.
- According to IMARC, the soda ash market should reach 65.6 million tonnes by 2026 with CAGR in 2021-2026 reaching 1.7%.
- Soda ash supplies to Kazakhstan in the last five years fluctuated between 302-350 thousand tonnes.
- According to Merchant Research & Consulting Ltd, demand for soda ash is due to the growth in 2022-2025 with CAGR reaching 4.7%. Kazakhstan imports soda ash in large volumes because the country does not have its own domestic production.

### Investment attractiveness of the project:

Project NPV – US\$ 104,292 thousand

IRR – 15.7%

Payback period – 7.78 years

Discounted payback period – 12.86 years

### What is the attractiveness of the project?

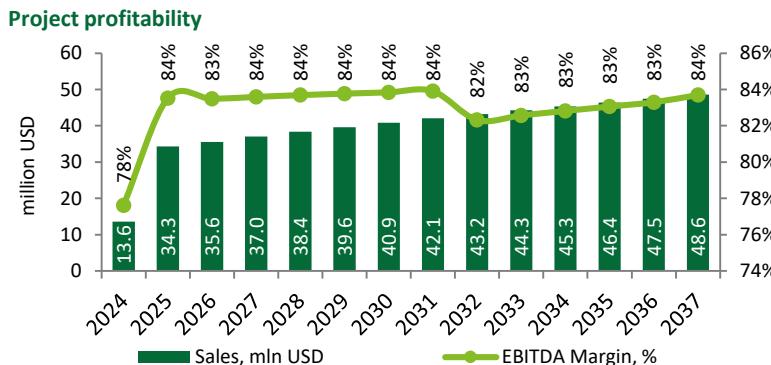
- **Infrastructure.** A lease on a 100 ha site has been provided for 49 years by Kyzylorda Oblast’s Aral District Akimat. Land lots were also allocated for construction of a sludge reservoir – 501.42 ha, protective cofferdam of a sludge reservoir – 300 ha, engineering infrastructure of a sludge reservoir (motor road, technological pipelines) – 2.17 ha and infrastructure facilities (motor roads, railroad, FOCL, power, gas supply, motor roads) – about 170 ha. Construction of engineering infrastructure (water supply, gas supply, railway dead-end, power supply) will be carried out at the expense of public funds.
- **Contractual nature of the Project.** Preliminary arrangements are in place with local soda customers: Aluminium Kazakhstan JSC – 140 thousand tonnes per year, AZKS JSC – 130 thousand tonnes, Orda Glass Ltd – 50 thousand tonnes and Kazphosphat LLP – 20 thousand tonnes.

### Investment proposal

The Project requires investment of US\$ 329,570 thousand, of which:

- 80% (US\$ 263,656 thousand) – debt financing subject to collateral;
- 20% (US\$ 65,914 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 location



## Construction of a potash fertiliser plant at the Satimola deposit

### Products

The plant is due to be commissioned in 2024, while design capacity will be achieved in 2025. Production capacity will amount to:

- potassium chloride – 94 thousand tonnes.

### Investment attractiveness of the project:

- Investment – 83,268 thousand USD
- Project NPV – 32,027 thousand USD
- IRR – 25%
- Payback period – 5.88 years

### Project

The aim of the Project is to construct a plant to produce potash fertiliser at the Satimola deposit in the Akzhaik district of West-Kazakhstan Oblast.

The Project aims to:

- create own production of potash fertiliser;
- further industrialise activity and increase the volume of domestic production, import substitution;
- create about 200 additional jobs in the region for the local population.

A 172.18 m<sup>2</sup> site has been provided for construction of the plant. It is under lease from the Akzhaik district Akimat in West-Kazakhstan Oblast for a period of 49 years.

### Project Initiator

PC SRPMR Ltd, which was established in 2020 to implement the Potash Plant Project at the Satimola deposit.

### Market overview

- According to IFA forecasts, the annual growth rate of demand for potash fertiliser will average at 1.8% in 2025-2026. Between 2021 and 2026, annual growth in global fertiliser demand is expected to remain at around 1%. Global population growth and trade tensions between China and the US will be key drivers of growth in demand for mineral fertiliser in the near term.
- The current potash fertiliser market in Kazakhstan has significant potential for development, since the capacity of local potash fertiliser production does not cover domestic demand: the deficit between 2017 and 2021 was 95%.

### What is the attractiveness of the project?

- Use of modern production processes.** The Company plans to use in-situ leaching for potash production. This method was chosen due to the morphological structure of potassium deposits, as well as environmental and economic benefits, including lower capital costs compared to the traditional mining method of extraction.
- The Company's own infrastructure and raw materials base.** Engineering infrastructure (water supply, power supply, power lines, rotational camp, cellular communications) is available. The existence of its own raw material base will allow the Company to reduce the cost of production and ensure good quality products at a competitive price. The Initiator plans to develop its own deposits to supply resources. An application has been submitted for a license to extract minerals from the Satimola deposit. According to the Initiator, the deposit has 525 million tonnes of approved reserves (State Reserves Committee of Kazakhstan, 2011).

### Investment proposal

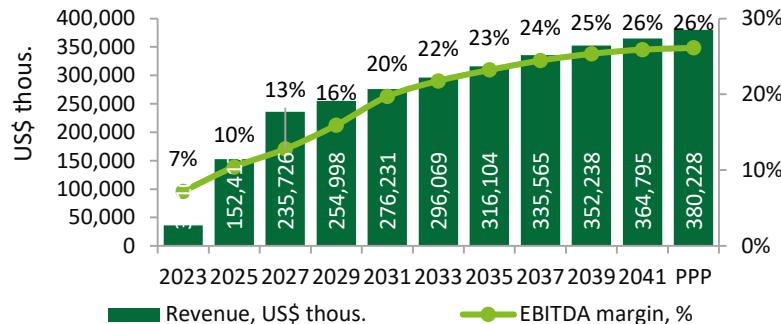
The Project requires investment of 83,268 thousand USD, of which:

- 70% (58,120 thousand USD) – debt financing subject to collateral
- 30% (24,908 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



## Project location



## Construction of an ion-exchange resin production plant

### Products

The production capacity of the plant will be 60,000 cubic meters of ion-exchange resin per year, reaching the design capacity is planned in 2027. Within the framework of the Project, it is planned to export products to Iran, Russia, Kyrgyzstan, Uzbekistan, Russia and Ukraine.

### Project

The project envisages the construction of an ion-exchange resin production plant in Shymkent in the Ontustik Special Economic Zone ("SEZ"). Ion-exchange resin is a solid, insoluble substance capable of exchanging its ions to the solution surrounding it. It has a wide range of applications in the atomic, biopharmaceutical, food, hydrometallurgical and petrochemical sectors.

### Project Initiator

Kazkhimprom REAGENT LLP is an enterprise created to implement the Project.

### Market

- **Opportunity to export product to neighbouring countries.** The use of quality equipment and raw materials will help increase production capacity, and also expand the geography of product sales. Kazakhstan's EAEU membership helps the export of product to neighbouring countries without hindrance.
- **Lack of similar production in Kazakhstan.** The lack of direct market competitors will allow the Company a significant market share, once it implements an import substitution strategy. The construction of an ion-exchange resin production plant will help the production of various resin types, applying an individual approach to each consumer, its technical specifications and requirements.

### Investment attractiveness of the project:

- Investment – US\$ 30,000 thousand
- Project NPV – US\$ 61,757 thousand
- IRR – 33.2%
- EBITDA margin – 19.5%
- Payback period – 5.9 years
- Discounted payback period – 8.1 years

### What is the attractiveness of the project?

- **SEZ benefits.** As the Company operates in a SEZ, then the Project makes it eligible for CIT, property tax and land tax concessions, as well as concessions on the charge for land use. SEZ members are also entitled to use the simplified procedure for hiring foreign nationals, special customs and tax regimes, and the opportunity to support the Project according to the "one-stop-shop" principle.

- **Benefits when participating in state tenders.** The Company's CT-KZ domestic producer certificate gives it advantages over other state tender participants

### Investment proposal

The Project requires financing of US\$ 30,000 thousand, of which:

- 70% (US\$ 21,000 thousand) - debt financing subject to collateral;
- from 30% (US\$ 3,000 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.



## 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.

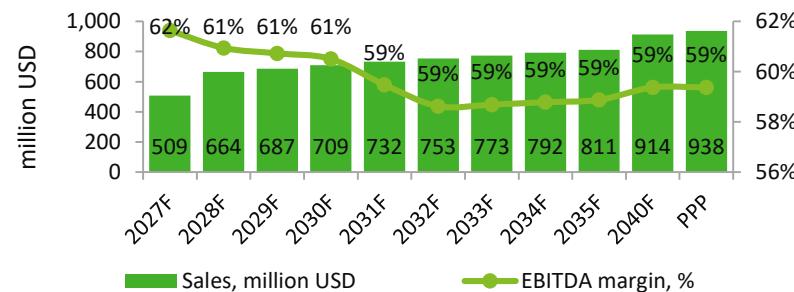
### Project Initiator

- 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 product 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.

### Project profitability



### Project location



### Investment attractiveness of the project:

- Investment – 1,386 million USD
- Project NPV – 572,211 thousand USD
- IRR – 17.1%
- EBITDA margin – 60% (2027-2040)
- Payback period – 8.6 years
- Discounted payback period – 14.7 years

### What is the attractiveness of the project?

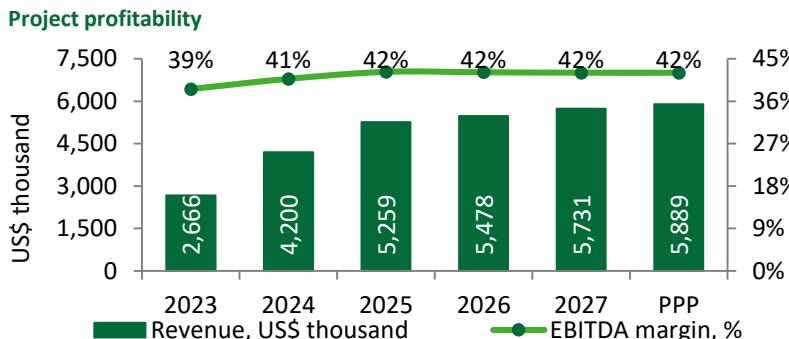
- **Source of raw materials.** The Company produces natural gas from its own Shagyrly-Shomyshty field. It also has a contract in place with the Ministry of Energy to explore and produce hydrocarbons at the Kosbulak field. Gas production from its own field significantly reduces ammonia and nitric acid 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.



## Location



# 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.

## Investment attractiveness of the project:

Investment – US\$ 3,358 thousand  
NPV – US\$ 6,250 thousand  
IRR – 44.4%  
Payback period – 4.3 years

## 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%).

## 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.

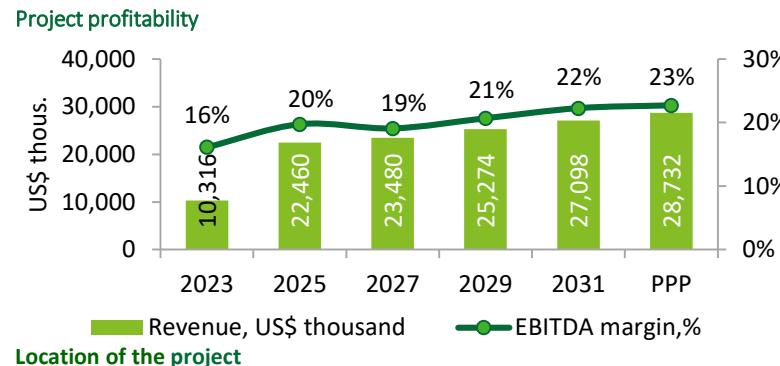
- **Unique mobile equipment.** The mobile disposal equipment installed at the plant (in containers) can be used for utilization of petroleum waste resistant to separation of raw materials (emulsions) both at its own landfill and at the customer's site.

## 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.



#### Location of the project



## Production of ammonium sulfate

### Products

Annual capacity: - 100 thousand tons (50% - domestic market, 50% - export)

### Project investment attractiveness :

Investment – 12,000 thousand USD

Project NPV – 10,895 thousand USD

IRR – 38.0%

Payback period – 4.7 years

### 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 sulfate, the average annual growth rate of production reached 11.6%. Average annual ammonia sulphate import growth in 2016-2020 was 51.7%.

### 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.

# Modernisation and relaunch of a synthetic detergents plant in Shakhtinsk Chemistry

KAZAKH INVEST  
Investment proposal  
November 2020

## 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:** Acceptance and storage of liquid and bulk raw materials - composition preparation and maturation - spent heat carrier flushing - basic powder storage - finished product preparation - fill and finish.

## Key investment indicators

Indicator	Results
Investment amount, US\$ thous.	2,059
Project NPV, US\$ thous.	9,627
IRR, %	31.7%
EBITDA margin, %	9%
Payback period, years	6.9
Discounted payback period, years	8.2

## Investment structure



Buildings and structures



\$1.1 mln



Purchase machinery and equipment



\$1.0 mln

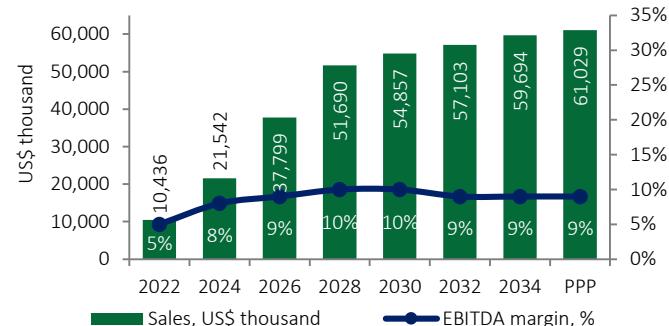
## Market prerequisites:

**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

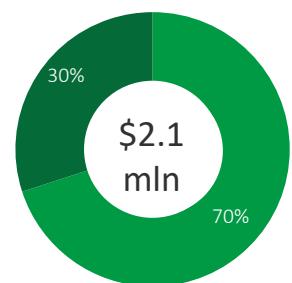


## Project financing scheme

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.

**Deloitte.**

# 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.

**Manufacturing process:** load raw materials into a bowl, create dispersion - interim quality control - solution dispersion - finished product - quality analysis - pour into packaging - prepare packaging - finished product warehouse - production line cleaning.

### Key investment indicators

Indicator	Results
Investment amount, US\$ thous.	4,232
Project NPV, US\$ thous.	4,694
IRR, %	21.8%
EBITDA margin, %	22.8%
Payback period, years	8.5
Discounted payback period, years	12.1

### Investment structure



Buildings and structures



\$2.0 mln



Purchase machinery and equipment



\$2.2 mln

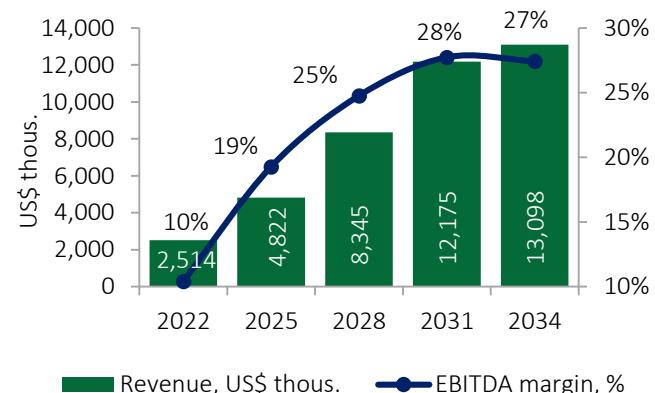
### Market prerequisites:

**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



### 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

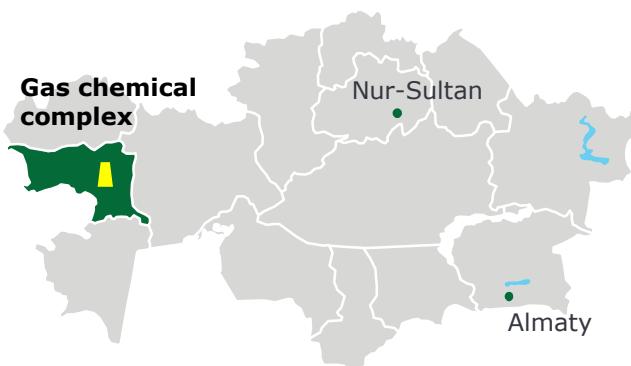
**Project location:** SEZ "NIPT", Atyrau Oblast

**Consumer markets:** Domestic market, China, Russia

## Key investment indicators

Indicator	Results
Investment, US\$ thousands	70,000
Project NPV, US\$ thousands	55,646
IRR, %	22.2%
EBITDA returns, %	49%
Payback period, amount of years from the start of production	6.1
Discounted payback period, amount of years from the start of production	8.8

**Project location:** SEZ "NIPT", Atyrau Oblast



## 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.

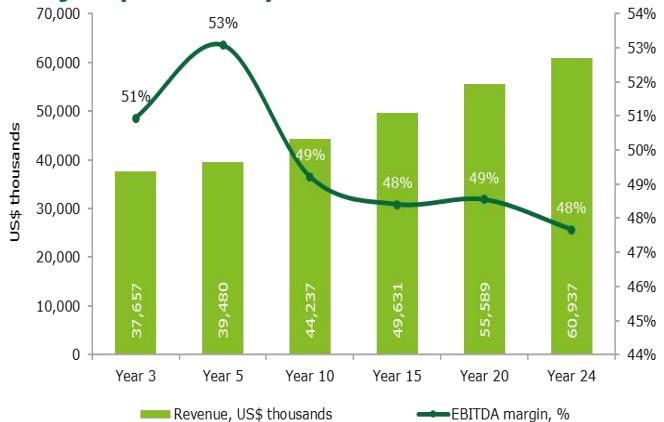
### Growing demand for hydrochloric acid and coagulants

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.

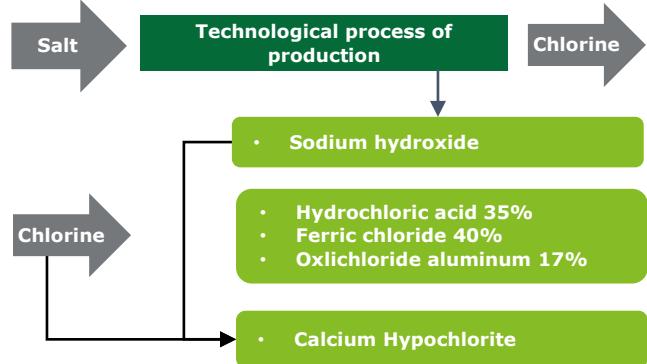
### Raw materials availability

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





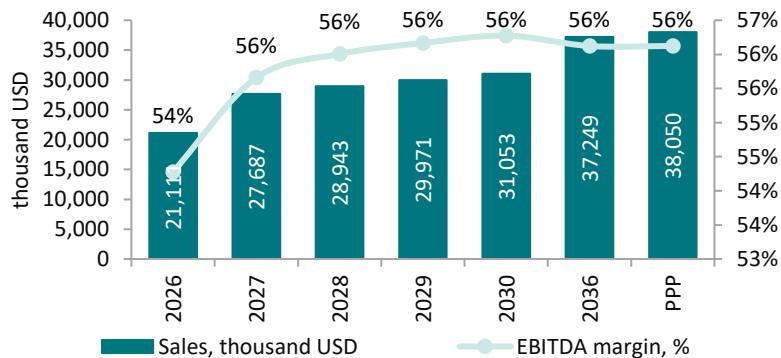
KAZAKH INVEST  
NATIONAL COMPANY



# CONSTRUCTION MATERIALS



## Project profitability



## Project location



## Ceramic item production plant in Karaganda

### Products

At full design capacity in 2027, sales volumes of brick tiles will reach 1,000,000 m<sup>2</sup>.

60% of product is due to be sold domestically, and the remainder exported to Russia, Uzbekistan and Kyrgyzstan.

### Project

The project envisages the construction of a plant to produce 1 million m<sup>2</sup> of ceramic products per year in the city of Karaganda. The initiator has received license No. 2034-EL dated 5 June 2023 to explore common minerals (clay) for 6 years, with an option to extend. It is also working on receiving licenses to produce clay at the Saransk field, site No. 1 (18 km from the plant) in Karaganda Oblast and Tankeris field (270 km from the plant) in Akmola Oblast.

### Project Initiator

QAZCLINKER LLP was founded in 2022 to realise a project to build a plant producing brick tiles in Kazakhstan. Key company staff have been involved in the construction of a brick plant in Kazakhstan at SG Brick LLP with capacity of 120 million units per year for the company G-park.

### Market Overview

- According to the National Statistics Bureau, the Kazakhstan construction sector grew annually at an average annual rate of 9% between 2018 and 2022. At the same time, Marketline is predicting that the Kazakhstan construction sector will grow in 2023-2026 at an average annual rate of 8%.
- In 2022, the total area of building facades in Kazakhstan was 13,207 thousand m<sup>2</sup>, with CAGR for 2018-2022 at 5%.
- Consumption of bricks, tiles and building products made from baked clay in the Kazakhstan in 2022 amounted to 140,490 thousand USD (CAGR for the period 2018-2022 was 28%).
- In 2022, exports of ceramic bricks, blocks, tiles made from silica stone flour from the Kazakhstan amounted to 58 tonnes, and imports – 23,143 tonnes.

### Investment attractiveness of the project:

Investment amount – 48,819 thousand USD;

Project NPV – 11,304 thousand USD;

IRR – 26.3%;

Payback period – 5.52 years;

Discounted payback period – 9.92 years.

### What is the attractiveness of the project?

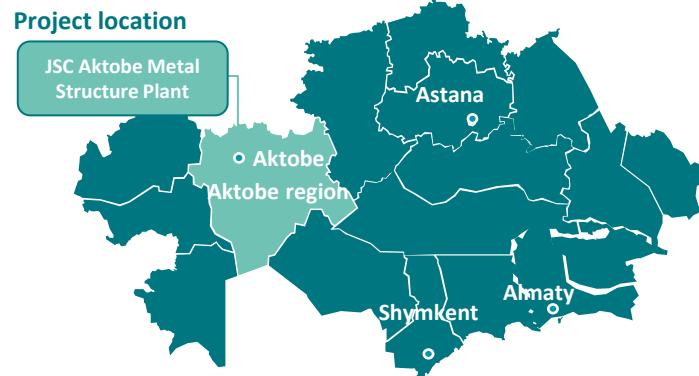
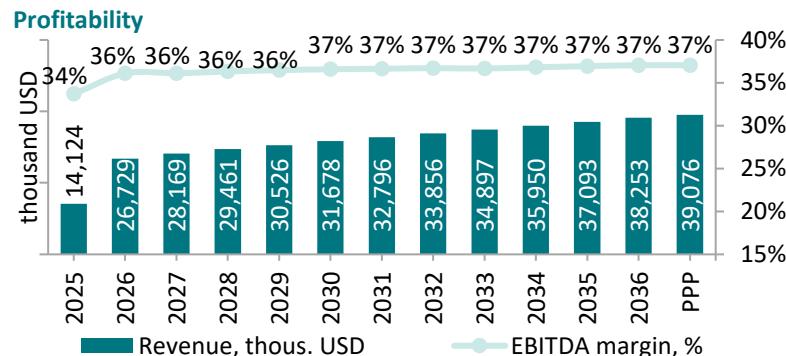
- Advantageous location.** Karaganda Oblast has a raw materials production base. Its own raw materials base will help reduce production costs and ensure quality product is supplied at competitive prices.
- State support.** The Project is recognised as a priority sector for state support, which takes the form of concessions and land grants. Current state support programmes for residential construction in Kazakhstan ("Bakyty Otbasy" and "5–10–20"), as well as the development of infrastructure and transport systems help increase demand for construction materials, including ceramic products.
- Professional Project team.** Key Company personnel have 10 years of construction sector experience. The Project team has also entered into strategic product sales agreements with distribution companies Asia Klinker LLP (11,500 thousand units) and ASG LLP (400 thousand m<sup>2</sup> per year), and also to supply 160 thousand m<sup>2</sup> of tiles annually to the RGB Group LLP construction company.

### Investment proposal

The Project requires investment of 48,819 thousand USD (at the rate of 449.2 tenge), of which:

- 85% (USD 41,496 thousand) – debt financing subject to collateral;
- 15% (USD 7,323 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.



## Production of mineral insulation material

### Product

At full capacity, which is planned for 2026, the plant will be producing: light plates,  $50 \text{ kg/m}^3$  – 11,250 tons; light plates,  $75 \text{ kg/m}^3$  – 6,750 tons; hard plates,  $100 \text{ kg/m}^3$  – 9,000 tons; hard plates,  $125 \text{ kg/m}^3$  – 9,000 tons; super hard plates,  $150 \text{ kg/m}^3$  – 4,500 tons; super hard plates,  $175 \text{ kg/m}^3$  – 4,500 tons.

Finished products will be sold in Aktobe, Atyrau, Aktau, Uralsk, Kyzylorda and Kostanai, as well as Russian cities, such as Omsk, Chelyabinsk, Yekaterinburg, Kazan, Tyumen and others).

### Project

The Project to create new mineral-cotton slab production is due to be realised at the currently operational Aktobe Metal Structure Plant ("Plant") in the city of Aktobe and will involve upgrading one of the plant production units. The 8 ha Plant site is connected to the utilities infrastructure required for production purposes.

### Initiator

JSC Aktobe Metal Structure Plant, which was founded in 2001, specialises in the production of complete, modular and mobile buildings, metal structures, non-standard equipment, sandwich panels, steel tanks, tanks, arched metal pit supports and control rooms. The Company has successfully implemented 140 projects in a range of directions.

### Market

- In 2021, the global mineral wool market was valued at 47.4 billion USD. According to Market Research Future, the market is projected to reach 110.7 million by 2030. The market is expected to grow at a CAGR of 11.18% between 2022 and 2030.
- From 2018 to 2022, CAGR of mineral wool product imports into Kazakhstan was 20.4%, reaching 2.27 thous. tons in 2022. The main import source in 2022 was Russia (95%).
- The volume of mineral wool product exports from Kazakhstan was 2.12 thous. tons. These products were primarily exported to Russia (77%) and Uzbekistan (19%).

### Project payback

Investment amount – 30,000 thousand USD

Project NPV – 9,660 thousand USD

IRR – 28.6%

EBITDA return – 36%

Payback period – 5.02 years

Discounted payback period – 8.45 years

### What is the advantages of the project?

- Advantageous location.** Having production based in the city of Aktobe will provide access to the consumer markets of Aktobe Oblast, which has a population of over 535 thousand, and neighbouring regions, which are home to over 2.1 million people. In addition, access to a well-developed and extensive rail and road system helps ensure both the supply of raw materials and finished products to customers. Aktobe Oblast also has the required mineral resources base for the Plant at its disposal.
- Company experience.** The Initiator has been operating in the construction material since 2001. It has completed 140 projects, including the planning and production of metal structures for the new Aktobe airport terminal and Atyrau Oil Refinery. Company permanent clients include large corporations, including Tengizchevroil, Hyundai Engineering & Construction, Kazchrome, KazTransOil, Kazakhoil Aktobe and others.

### Investment and financing structure

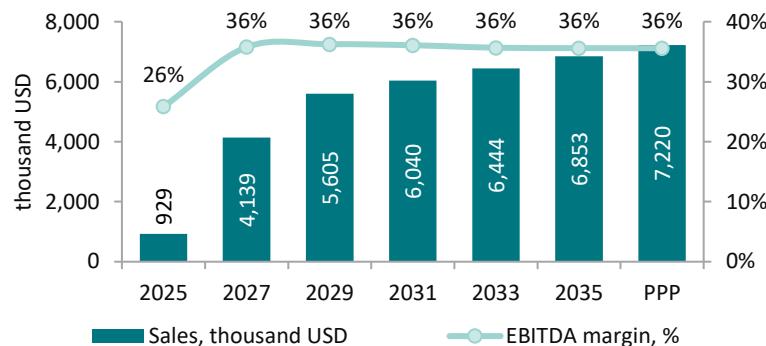
The Project requires investment of 30,000 thousand USD (exchange rate: KZT 449), of which:

- 80% (24,000 thousand USD) – debt financing subject to collateral;
- 20% (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 profitability



## Project location



## Construction of a brick factory

### Products

The factory is due to be commissioned in the end of 2024 and full capacity reached in 2028. At full capacity, annual sales volume will reach 20 million ceramic bricks per year. It is planned to sell 95% of production in the domestic market of Kazakhstan, and export the remainder to Ukraine, Kyrgyzstan and Uzbekistan.

### Project

The Project envisages construction of a factory for production of ceramic bricks in the industrial zone of Avariniy village of Ulytau Oblast. In 2021 for a period of 3 years, the Initiator was allocated land plots with a total area of 5 ha (1 ha and 4 ha) for the construction of the factory.

The main raw material (clay) is planned to be extracted from the Zhidelisai field (Block 2C1) with reserves of 2,340.3 thousand cubic meters. The field is located 16 km away from the Project site.

The Initiator plans to extend the lease term of the land sites. Negotiations are underway with equipment suppliers, as well as with the office of the Ulytau Oblast Akim on obtaining a license for clay extraction at the Zhidelisai field.

### Project Initiator

Intermarketing-M LLP was created in 2015 and obtained a license to perform category III construction and assembly work in 2019. In August 2023, it completed construction of four residential buildings and a fountain on Pervostroitelei Square in Zhezkazgan. It is also planning to build two five-storey houses.

### Market Overview

- According to the National Statistics Bureau, the Kazakhstan construction sector grew annually at an average annual rate of 9% between 2018 and 2022. At the same time, Marketline is predicting that the Kazakhstan construction sector will grow in 2023-2026 at an average annual rate of 8%.
- In RK the production of ceramic products in value terms amounted to 75,532 thousand USD, which is 47% higher than in 2021.
- Imports of ceramic bricks in the RK in 2022 amounted to 1,002 thousand tonnes, and exports of these products from the RK amounted to 28 tonnes.

### Investment attractiveness of the project:

Investment amount – 4,906 thousand USD;

Project NPV – 1,176 thousand USD;

IRR – 25.1%;

Payback period – 6.60 years;

Discounted payback period – 11.69 years.

### What is the attractiveness of the project?

- Advantageous location.** Having production based in the village of Avariniy in Ulytau Oblast helps supply the region's consumer markets with a population in excess of 221.7 thousand, as well as Karaganda and Kyzylorda Oblasts, which are home to over 1.9 million people. The region's well-developed and extensive rail and road system helps manage both the delivery of raw materials and finished products to consumers.
- Raw materials base.** The brick clay Zhidelisai field is located 16 km from the Project site. Clay reserves at field Block 2C1 cover roughly 2,340.3 thousand cubic meters.
- State support.** The Project is recognised as a priority sector for state support, which takes the form of concessions and land grants.
- Initiator experience.** The Company has significant experience in residential and housing construction. Professional construction experience affords the Company an extensive understanding of brick demand, including the required characteristics and quality.

### Investment proposal

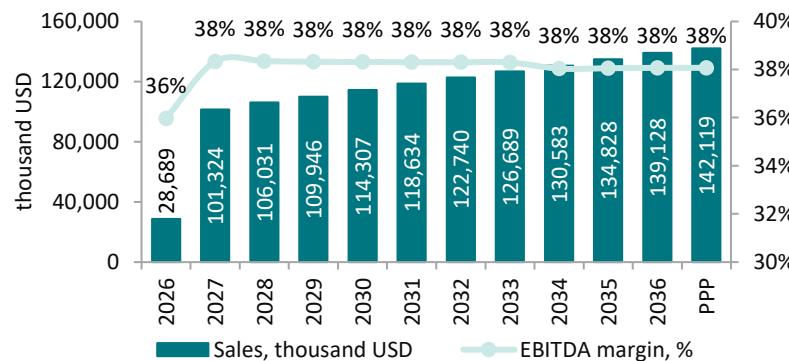
The Project requires investment of 4,906 thousand USD (at the rate of 449 tenge), of which:

- 70% (3,434 thousand USD) – debt financing subject to collateral;
- 30% (1,472 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



## Project location



## Construction of a cement production plant on the territory of Taskalin District

### Products

All cement products will be sold domestically. The plant is due to be commissioned in 2026 and full capacity reached in 2027. At full capacity, annual sales volume of cement will be 1 mln tonnes.

### Investment attractiveness of the project:

Investment amount – 100,000 thousand USD;

Project NPV – 58,965 thousand USD;

IRR – 29.7%;

Payback period – 5.6 years;

Discounted payback period – 8.1 years.

### What is the attractiveness of the project?

- **Own raw materials base.** The Project has its own source of raw materials, which helps reduce production costs and ensure production quality at competitive prices. The Initiator holds the required 25-year groundwater subsoil study and feedstock production licenses, with the option to extend them once contracts expire.
- **Production technology advantages.** The Plant plans to produce Portland cement using the dry method, which will halve electricity costs compared to those of the wet method.
- **State support.** The Project is an investment priority project, which is eligible for state concessions. Participation in a number of state programmes for tax concessions, subsidies and reduced-rate financing will help reduce capital costs and improve production profitability.

### Investment proposal

The Project requires investment of 100,000 thousand USD (at the rate of 449.2 tenge), of which:

- 70% (70,000 thousand USD) - debt financing subject to collateral;
- 30% (30,000 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

The project envisages the construction of a 1 mln tonnes/year cement production plant on the territory of Taskalin District of West-Kazakhstan Oblast. The local Akimat has provided a 60 ha site for a private ownership.

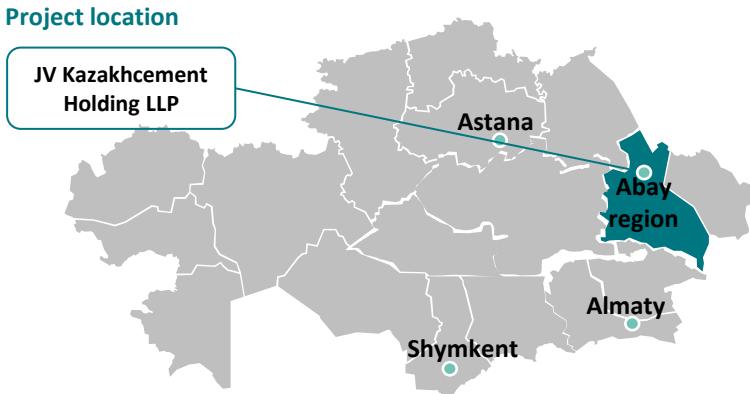
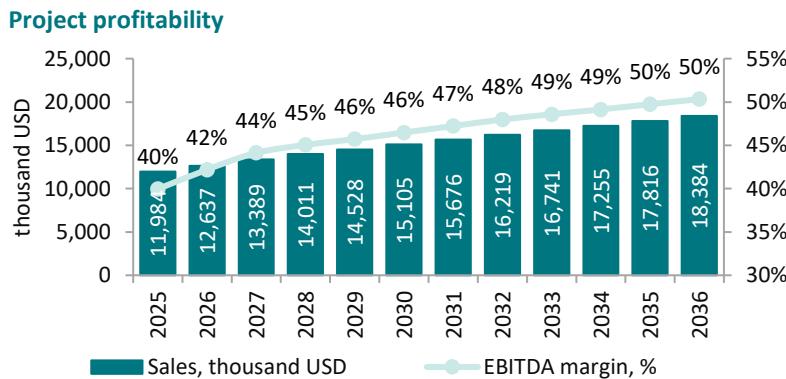
The Initiator holds the required 25-year groundwater subsoil study and feedstock production licenses (№013/19, №014/19, №015/19 from 18.01.2019 for chalk, clay raw materials and silica clay) with the option to extend them once contracts expire. The Taskalin District Akimat has also provided 145 ha, 145 ha and 76 ha sites for chalk, clay raw materials and silica clay production until 18 January 2044.

### Project Initiator

SpetsStroiService LLP holds a category 1 state construction and assembly work license №17005273 from 28.03.2017. It has also acted as the general contractor for social facilities such as Karachaganak Petroleum Operating BV (KPO B.V.), JSC Zhaikteploenergiya, ME Vodokanal and others.

### Market Overview

- According to the National Statistics Bureau, the Kazakhstan construction sector grew annually at an average annual rate of 9% between 2018 and 2022. At the same time, Marketline is predicting that the Kazakhstan construction sector will grow in 2023-2026 at an average annual rate of 8%.
- According to the National Statistics Bureau, 12,088 thousand tonnes of Portland cement were produced in 2022. Portland cement production levels increased 23% in 2018-2022. CAGR in 2018-2022 was at 4%.



## Construction of a high-quality lime production plant

### Products

All the volume of lime products is planned to be sold in the domestic market. From 2025 the target is to produce 49 thousand tonnes of quicklime of the 1st grade and 21 thousand tonnes of hydrated lime per annum.

### Project

This Project envisages the construction of a lime plant with a capacity of 120 thousand tonnes per year on its own raw material base in Abai region. The plant will be built on a land of 7 hectares, provided for a long-term lease (until 2052) by the Mayor' Office of Zharma district, Abai region.

### Project Initiator

JV Kazakcement Holding LLP is engaged in the production and sale of activated mineral powder MP1 and limestone stone, has a license No. 300 from 25 July 2007 for the exploration and production of limestone (reserves of 50 million tonnes) and clay (reserves of 8 million tonnes) at the Ortabulak deposit in Zharma district of Abay region.

### Market Overview

- According to the Bureau of National Statistics of the Kazakhstan Agency for Strategic Planning and Reforms, the production of lime in Kazakhstan reached 932 thousand tonnes in 2022. Over the period from 2018 to 2022, the volume of lime production increased by 5.2%, with CAGR of 1.3%.
- In 2022, unslaked quicklime imports amounted to 16 million USD in value terms. CAGR of lime imports in physical terms in 2018-2022 was 12.9%. Imports of hydrated lime amounted to 2.1 million USD. CAGR of lime imports in physical terms in 2018-2022 amounted to 9.8%. The share of imports in total lime consumption in Kazakhstan increased from 13.4% in 2018 to 19.3% in 2022.
- In 2022, quicklime exports decreased by 52% compared to 2021. The compound annual rate of decline in lime imports in physical terms for the period 2018-2022 was 24.9%.

### Investment attractiveness of the project:

Investment amount – 15,708 thousand USD;  
Project NPV – 11,421 thousand USD;  
IRR – 31.5%;  
Payback period – 5.2 years;  
Discounted payback period – 7.5 years.

### What is the attractiveness of the project?

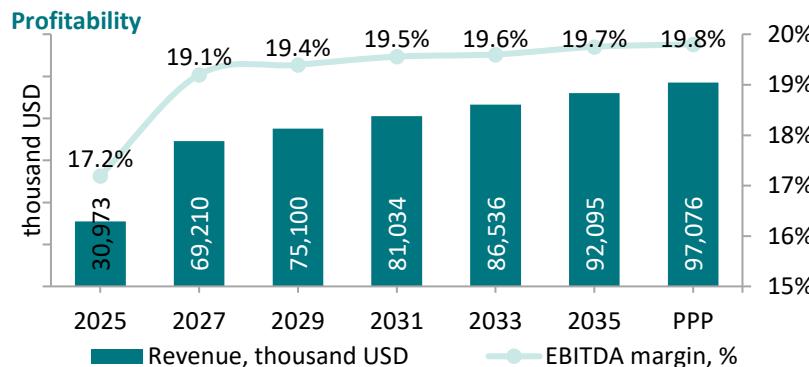
- Initiator's experience and own raw material base.** It has established a customer base that includes Todini Construction Generali S.p.A., KazGer, Yarus, Silicate and others. Furthermore, the Company holds a license for the exploration and production of limestone and clay at the Ortabulak deposit until 2052. This license ensures cost-effective production and the ability to deliver products of proper quality at competitive prices.
- Advantageous location.** Large backbone metallurgical plants in the region serve as significant consumers of lime. Additionally, Abay region benefits from a well-developed transport infrastructure, ensuring the timely and high-quality delivery of the company's products to customers nationwide.

### Investment proposal

The Project requires investment of 15,708 thousand USD (at the rate of 449.2 tenge), of which:

- 70% (10,996 thousand USD) - debt financing subject to collateral;
- 30% (4,712 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 location



## Factory for the production of fiber cement products

### Product

The Project is scheduled to be commissioned by 2025, with the goal of reaching its design capacity by 2026. At full capacity annual production will be 33,500 tonnes per year with a thickness of 6 mm – 28,475 tonnes, 8 mm – 5,025 tonnes. Production will be as follows: with a thickness of 6 mm – 28,475 tonnes, 8 mm – 5,025 tonnes. All finished products will be sold domestically.

### Project

This investment project (the "Project") envisages the construction of a fibre cement products plant in the Industrial Zone "Ondiris" in Kyzylzharma village, Kyzylorda region, providing a capacity of 33,500 tonnes per year. The finished fibre cement products are intended to be sold in Kazakhstan. The project aims to obtain raw materials from the Saryshoky quartz sand deposit, located in the same region. The company is actively pursuing the necessary license for subsoil use in this area.

### Initiator

Samga Eurotrade LLP is a project company established for the construction of a fibre cement products plant.

### Market

- In 2021, the global fibre cement market was valued at USD 15,229.9 million. According to Market Research Future, the market is projected to reach USD 21,393.2 million by 2028, with an increase of 40.4% compared to 2021. The market is expected to grow at a CAGR of 4.97% between 2021 and 2028.
- From 2018 to 2022, CAGR of fibre cement product imports into Kazakhstan was 26.9%, reaching \$11.5 million in 2022. The main import sources in 2022 were Lithuania (75%) and Belgium (18%).
- According to Trade Map data, the volume of fibre cement product exports from Kazakhstan was insignificant during the period 2018–2021, with only \$6,000 in 2021. These products were primarily exported to Germany (90%) and Russia (10%). Fibre cement boards are still relatively new as a finishing material in the Kazakhstan market, and local production is in the initial stages of development.

### Project payback

Investment amount – US\$ 39,439 thousand

Project NPV – US\$ 19,705 thousand

IRR – 28.1%

Payback period – 5.20 years;

Discounted payback period – 8.05 years.

### What are the advantages of the project?

- Advantages of production technology.** The plant will use cutting-edge energy-saving production technology, as well as a system for collecting and analysing data from the production process, which will optimise the production process.
- Environmental friendliness and fire resistance of products.** The fibre cement products fully comply with environmental requirements and can be completely recycled. They adhere to the RoHS directive, which strictly regulates the content of heavy metals. In addition, these fibre cement products possess high thermal conductivity, ranging from 0.217 to 0.430 watts/m·K. This characteristic indicates their high fire resistance.
- Availability of state support measures.** The production of fibre cement products is a priority sector of Kazakhstan economy, for which benefits and economic conditions are provided to reduce the financial burden of enterprises within the framework of the programmes The Economy of Simple Things and the Concept of Development of the Manufacturing Industry of Kazakhstan for 2023–2029.

### Investment and financing structure

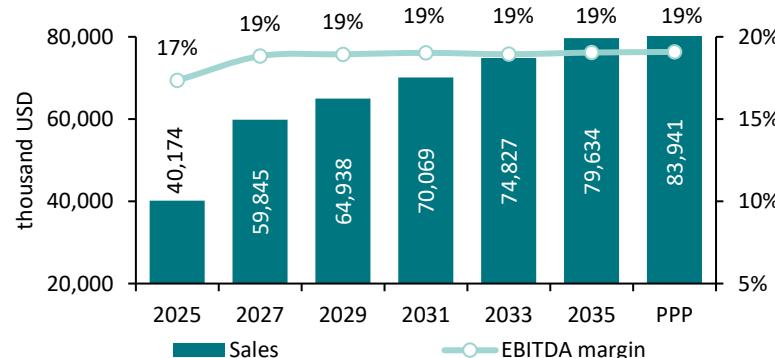
The Project requires investment of US\$ 39,439 thousand, of which:

- 70% (US\$ 27,607 thousand) – debt financing subject to collateral
- 30% (US\$ 11,832 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



## Project location



## Autoclaved aerated concrete production plant

### Products

The plant is due to be commissioned in 2025 and full capacity reached in 2026. At full capacity, annual sales volume of cement will be 450 thousand cubic meters per year. 25% of the volume of aerated concrete products is planned to be sold on the domestic market, 75% in neighboring countries (Russia, Uzbekistan, Azerbaijan and Georgia).

### Investment attractiveness of the project:

Investment amount – US\$ 39,075 thousand USD;  
Project NPV – US\$ 12,824 thousand USD;  
IRR – 25.1 %;  
Payback period – 5.5 years.  
Discounted payback period – 9.4 years

### What is the attractiveness of the project?

- Product sustainability.** Autoclaved aerated concrete products demonstrate energy efficiency and high thermal insulation properties, resulting in reduced energy consumption for heating and cooling of buildings.
- Advantages of production technology.** The plant will employ the autoclave method for the production of aerated concrete, which allows reduction in energy consumption, approximately 2 times lower compared to the foaming method.
- Availability of state support measures.** The production of aerated concrete is a priority sector of Kazakhstan economy, for which benefits and economic conditions are provided to reduce the financial burden of enterprises within the framework of the programmes The Economy of Simple Things and the Concept of Development of the Manufacturing Industry of Kazakhstan for 2023-2029.

### Investment proposal

The Project requires investment of US\$ 39,075 thousand, of which:

- 70% (US\$ 27,352 thousand) – debt financing subject to collateral;
- 30% (US\$ 11,722 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. The investment allocation is as follows:

- 64% (US\$ 12,165 thousand) – equipment;
- 31% (US\$ 25,142 thousand) – buildings and constructions;
- 5% (US\$ 1,768 thousand) – other.

### Project

The project envisages the construction of a plant for the production of aerated concrete blocks and reinforced slabs in Ondiris Industrial Zone in Kyzylzharma village, Kyzylorda region.

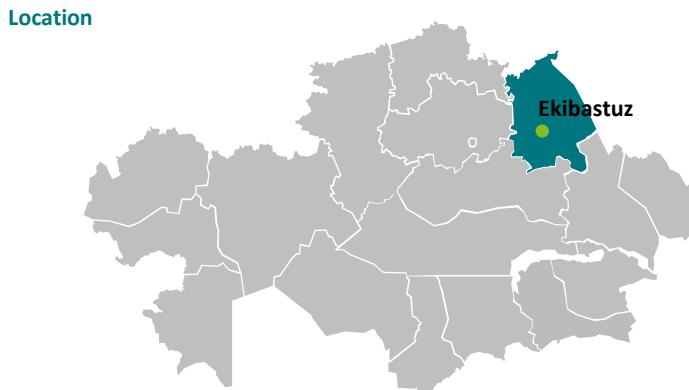
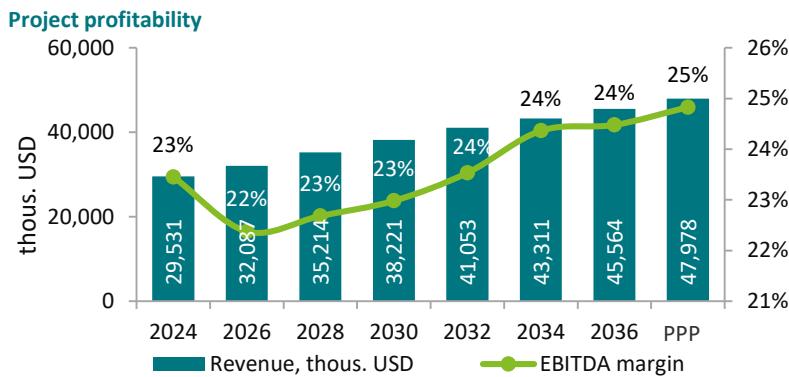
At the moment, the Initiator has submitted an application for a license for the subsurface use of the raw material base on the Saryshoky- Zapadny. The explored quartz sand deposit is located in the Aral district of the Kyzylorda region, has reserves of 10.5 million tons of quartz sand and is planned to be used by the Initiator to extract the main raw materials for the production of aerated concrete.

### Project Initiator

Orda Porenbeton LLP is a construction company of a plant for the production of autoclaved aerated concrete.

### Market Overview

- Global cement production in 2022 reached \$364.2 billion. The compound annual growth rate (CAGR) for global cement exports in 2022-2027 is expected to reach 7.7%. It is expected that by 2027 the global market of cement and reinforced concrete products will grow to \$527.8 billion, with a 44.9% increase compared to 2022.
- Among the different types of cement and concrete products, ready-mixed concrete held the largest market share worldwide in 2022, accounting for 55% of the total. Concrete products and cement accounted for 20% and 15% respectively, while concrete pipes, bricks and blocks made up 10% of the overall market.
- Imports of aerated concrete products increased from US\$ 1,948 thousand in 2018 to US\$ 2,728 thousand in 2022 with CAGR of 9%.
- Exports of aerated concrete products increased from US\$ 148 thousand in 2018 up to US\$ 475 thousand in 2022 at a CAGR of 34%.



## Sand-lime brick production using Ekibastuz Power Plant fly ash

### Products

Project deliverables should include: building solid brick, coloured - from 52 million units per year; face hollow brick, white - from 19 million units per year; face hollow brick, coloured - from 23 million units per year.

### 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%.

### Investment attractiveness of the project:

Investment – 29,851 thous. USD

NPV – 7,711 thous. USD

IRR – 25.4%

Payback period – 6.0 years

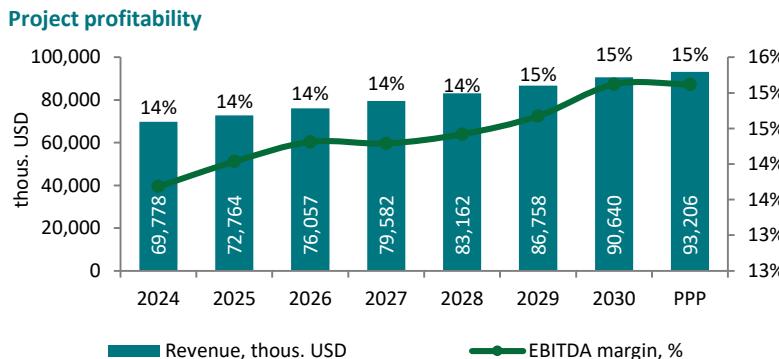
### What is the attractiveness of the project?

- **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).

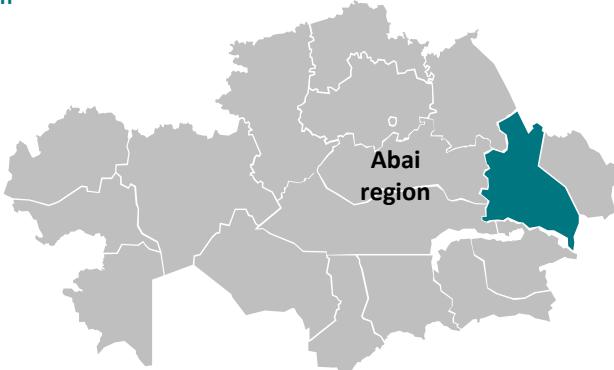
### Investment proposal

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.



## Location



## Production of granite building materials

### Products

Production and sales will be as follows: granite slabs – 1,000 m<sup>3</sup>; granite tiles – 25,000 m<sup>3</sup>; granite paving stones – 1,000 m<sup>3</sup>; granite kerb stones – 1,000 m<sup>3</sup>; granite strips – 1,000 m<sup>3</sup>; granite steps – 500 m<sup>3</sup>; Skala granite tiles – 5,000 m<sup>3</sup>; granite balustrades – 500 m<sup>3</sup>; callipers – 500 m<sup>3</sup>; and granite breccia – 500 m<sup>3</sup>.

### Project

The aim of this investment project (“Project”) is the construction of a plant to produce 36,000 m<sup>3</sup> 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, Kalbatau 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?

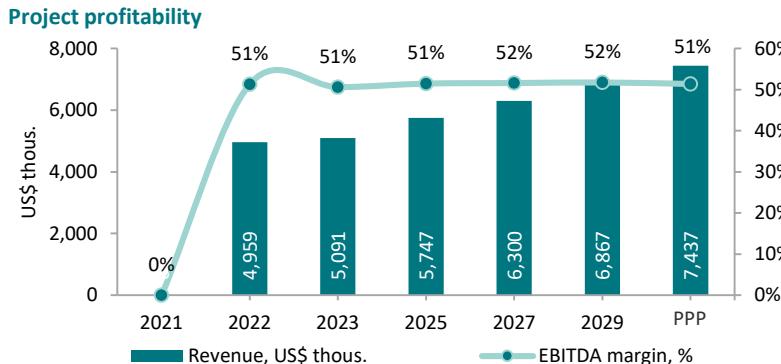
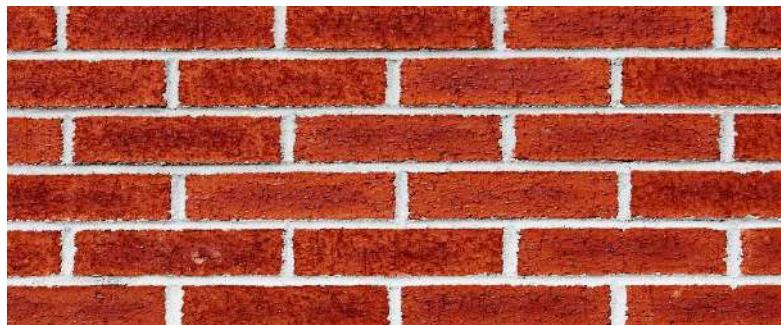
- The Company has its **own source of raw materials** with granite reserves in excess of 17 million m<sup>3</sup> (A2+B+C1), which helps reduce the cost of production, and ensure the quality of plant product at a competitive price.
- Advantageous production location.** The plant has a strategic location 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

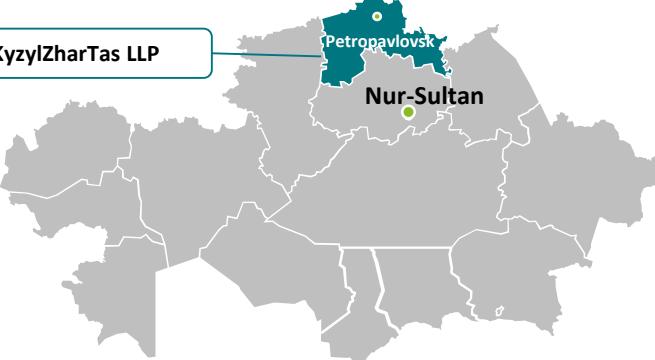
The Project requires investment of 30,434 thous. USD, of which:

- 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.



## Location



## Construction of a brick factory in North Kazakhstan Region

### Commercial products

Annual production: 45 million units of ceramic brick of grade M-125

### Investment attractiveness of the project:

Investment – US\$ 14,425 thousand

Project NPV – US\$ 3,976 thousand

IRR – 21.6%

Payback period – 6.5 years

### 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.

### 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.

# Modernisation and expansion of the existing brick factory in Zhambyl Oblast

KAZAKH INVEST  
Investment proposal  
November 2020

## 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:

**Manufacturing process:** acceptance of loam - gauging of metal raw materials - mix grinding - soft-mud molding - bar cutting - burning - tempering and cooling – storage.

### Key investment indicators

Indicator	Results
Investment amount, US\$ thous.	1,685
Project NPV, US\$ thous.	927
IRR, %	19.3%
EBITDA margin, %	49.7%
Payback period, years	6.6
Discounted payback period, years	10.3

### Investment structure



Construction and assembly work

3%

\$58 thous.



Machinery and equipment

97%

\$1,627 thous.

### 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.

### Project profitability



### Financing structure

Initiator equity  
15% (\$253 thous.)

Debt financing subject to collateral  
70% (\$1,180 thous.)

Participation of the Investor  
from 15% (\$253 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.

**Deloitte.**



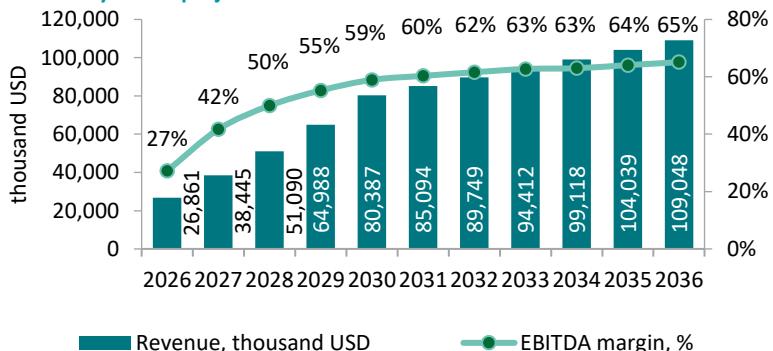
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## ***TRANSPORT AND LOGISTICS***



## Profitability of the project



## Construction site



## Alakol Port

### Production

Within the framework of the project, services will be provided for the transportation and transshipment of bulk and bulk cargoes for exported Kazakh products to China. When reaching full capacity in 2030, annual exports to China through Alakol Port will amount to 5.3 million tons of cargo per year, including transshipment of agricultural products (1.6 million tons per year), transshipment of other dry cargo (0.37 million tons per year), transshipment of solid minerals (3.3 million tons per year).

### Project

As part of this investment project, it is planned to build a logistics center Alakol Port with a capacity of 4.3 million tons per year in the Abay region. Alakol Port will provide full control and coordination of all stages of bulk cargo transshipment from the moment of their arrival to shipment to the Alashankou station in China.

There is a need to reduce the queues at the stations of the Republic of Kazakhstan and China, which are formed due to the difference in the width of the railway track of the Republic of Kazakhstan and China.

At the moment, negotiations are underway with Chinese equipment suppliers, and active efforts are being made to process the land plot and obtain construction permits for the facility.

### Company

SG Solutions LLP was created in 13 February 2023 to implement the project to build the Alakol Port Logistics Centre.

Main activity: rail cargo handling (CCEA 4920)

### Market

- Kazakhstani exports to China increased by 35% in 2022 compared to the previous year, reaching \$13 billion. In 2022, the export of bulk and bulk cargo from Kazakhstan to China increased by 31% and reached 6.7 million tons. At the same time, the share of iron ore in the export of bulk and bulk cargo to China was 82.7% (5.6 million tons). Kazakhstan is also actively exporting flax, sunflower and other oilseeds, the export of which in 2022 reached 405 thousand tons.
- In 2022, rail freight turnover in Kazakhstan increased by 4%, amounting to 308 billion t-km.

### Investment attractiveness of the project:

The amount of investment is 120,807 thousand USD

NPV – 60,275 thousand USD

IRR – 22.8%

The payback period is 7.37 years

Discounted payback period is 11.46 years

### What is the project's attractiveness?

- Advantageous location.** Abai Oblast is in the east of Kazakhstan and simultaneously borders Russia and China, as well as Karaganda and Pavlodar Oblasts, which are home to Pavlodar and Saryarka SEZ. Abai and East-Kazakhstan Oblasts are also home to potential hub users – large metallurgical concerns such as Kazzinc LLP, JSC Ust-Kamenogorsk Titanium and Magnesium Plant and JSC Ulba Metallurgical Plant. The distance to the Alashankou border cargo station is only 40 km.

- Multimodal haulage.** The logistics hub allows different types of transport to be used simultaneously, significantly increasing capacity and traffic. Exporters are given the choice of the best form of transport for each type of cargo, distance and required delivery dates. The variety of transport solutions optimises logistics processes and improves international haulage performance.

### Investment proposal

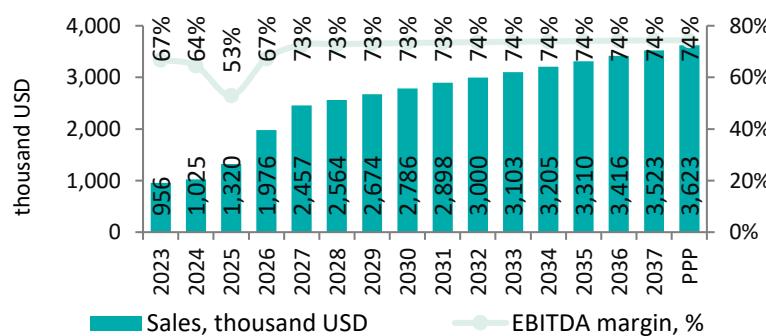
The Project requires investment of 120.8 thousand USD (at the rate of 449 tenge), of which:

- 66.23% (79.2 million USD) – investor participation;
- 33.7% (40.8 million USD) – 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.



## Project profitability



## Location



## Wholesale distribution centre

### Products

When reaching full design capacity in 2027, it is planned to lease the following areas:

- **current areas:** vegetable warehouses (refrigerator) – 2,000 sq. m, vegetable warehouses (deep freeze) – 2,000 sq. m, market – 9,500 sq. m;
- **new areas:** new warehouses – 3,000 sq. m; wholesale-shopping center – 5,580 sq. m.

WDC clients include fruit and vegetable producers from Dzhambul Oblast and neighbouring regions, as well as Kyrgyzstan and Uzbekistan.

### Project description

This investment project envisages the upgrade and expansion of a wholesale distribution centre (WDC), as well as the construction of wholesale trading centre in Taraz, Dzhambul Oblast. The Project will be based at the site of a major food market on a 32.71 ha site.

The WDC will incorporate a complex of 8 warehouse facilities with refrigeration, ventilation and a regulated gas environment with capacity for 50 thousand tonnes to store vegetables, fruit and other food items; phytosanitary and veterinary laboratories; customs clearance areas and a customs post.

The Initiator has registered a site and also build an administrative building, 3 warehouses and other structures. The WDC already has road and rail access.

### Company

WDC Taraz LLP has been storing and selling agricultural produce since 2019. It is an affiliate of Auyl Bereke LLP, which owns a large food market in Dzhambul Oblast.

### Market

- Transport and warehousing services increased 6.1% in 2022 to 8,322 billion tenge. CAGR in 2018-2022 was at 2.5%. Total warehouse facility area in Kazakhstan grew 27% in 2022 to 1,273 thousand m<sup>2</sup>.
- The number of warehouse facilities in Kazakhstan grew to 2,788 in 2022 (66 more than in 2021). The total number of warehouse facilities in Kazakhstan grew 17% between 2017 and 2022. Warehouses for food products as well as fruit and vegetables accounted for 5% and 0.5%, respectively.
- Kazakhstan is experiencing a severe shortage of free warehouse space. Average occupancy rates across the country are 97%, while in large cities they can reach 100%.

### Investment attractiveness of the project:

- Investment amount – 5,917 thousand USD;
- Project NPV – 3,358 thousand USD;
- MIRR – 18.4%;
- Payback period – 5.39 years;
- Discounted payback period – 7.56 years.

### What is the attractiveness of the project?

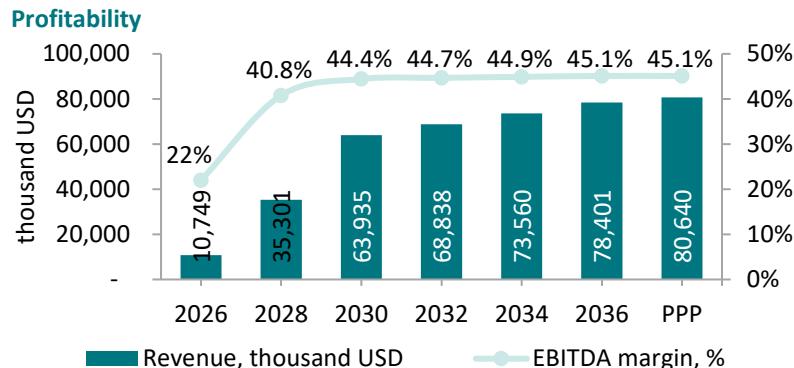
- **Advantageous location.** The region's well-developed and extensive road and rail system helps manage the supply of agricultural produce from the country's neighbouring regions and other countries. Dzhambul Oblast is also a leader in Kazakhstan in terms of fruit and vegetable production.
- **Initiator experience.** WDC Taraz LLP has been storing and selling agricultural produce since 2019. It is an affiliate of Auyl Bereke LLP, which owns a large food market in Dzhambul Oblast. The market serves between 20 and 30 thousand people per day.
- **State support.** The Project is recognised as a priority for state support, and is eligible for a number of concessions, preferences and land grants. Access to resources, state support tools and also innovative production techniques are all used to increase production capacity, factoring in export potential.

### Investment proposal

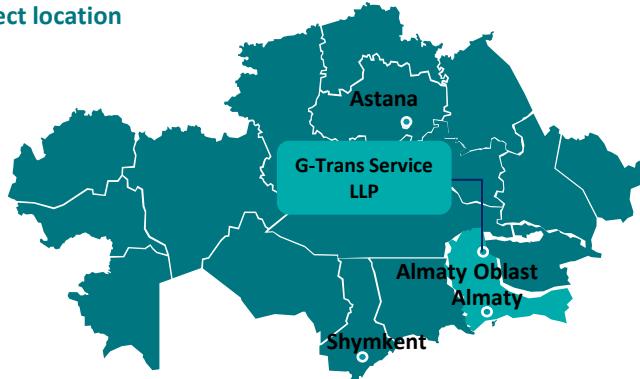
The Project requires investment of 5,917 thousand USD (at the rate of 449.2 tenge), of which:

- 70% (4,142 thousand USD) – debt financing subject to collateral;
- from 30% (1,775 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 location



## Industrial and logistics hub in Almaty Oblast New Qazaqstan Logistics (NQL)

### Product

The Project is scheduled to be commissioned by 2026, with the goal of reaching its design capacity by 2030. When full capacity is reached, annual cargo turnover through the Hub will be 250 thousand TEU per year, and the annual floorspace leased – 31,200 m<sup>2</sup>.

### Project

This investment project (the “Project”) envisages the creation of a 250 thousand TEU/year industrial and logistics hub “New Qazaqstan Logistics” (the “Hub”) in Almaty Oblast. The Project stipulates the construction and operation of: 1) a 195 ha (with the potential for expansion up to 215 ha) logistics park that incorporates warehouses and sites for general and bulk cargo. The logistics centre is also home to a 105 ha multimodal logistics centre incorporating a container terminal and runoff, a customs clearance centre, warehouses and depots; 2) a 220 ha (with the potential for expansion up to 250 ha) industrial centre that incorporates an infrastructure zone, ready-to-use production facilities and land plots with infrastructure; 3) a 85 ha railroad station.

### Initiator

G-Trans Service LLP is a project company established for the Hub creation.

### Market

- Total cargo traffic in Kazakhstan decreased 1.8% in 2022 compared to 2021. In 2022, railway accounted for 51.5% of cargo traffic. Cargo turnover in Kazakhstan reached 308 billion t/km, which is 3.7% higher than in 2021.
- Road haulage cargo turnover in Kazakhstan in 2022 amounted to 146 billion t/km, of which Almaty was responsible for 18.6% in 2022.
- In 2022, the turnover of goods between Kazakhstan and China was valued at 24 billion USD, which is 34% higher than in 2021. CAGR for the turnover of goods between Kazakhstan and China in 2018-2022 was 19.8%.

### Project payback

Investment amount – USD 78,988 thousand

Project NPV – USD 27,489 thousand

IRR – 21.7%

Payback period – 7.76 years

Discounted payback period – 12.42 years

### What is the advantages of the project?

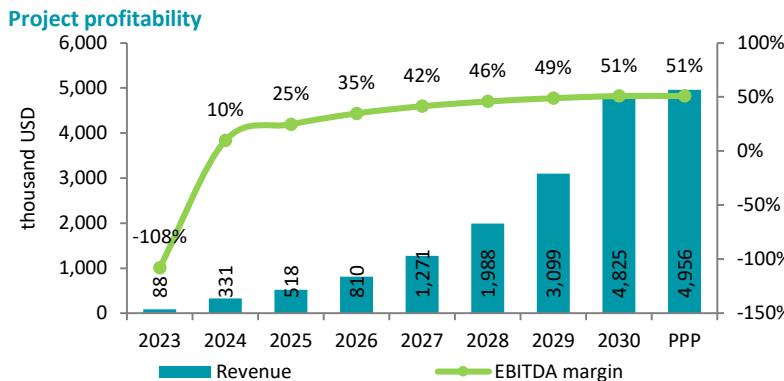
- Advantageous location.** Almaty Oblast is in the south-east of the country, bordering Kyrgyzstan and China, as well as Dzhambul, Zhetsu and Karaganda Oblasts. It is one of the leaders in terms of industrial production in Kazakhstan, generating 1,589.4 billion tenge in 2022. The total length of international and national roads in the region is 2,821 km (11.4% of the total for the country). As at 1 January 2022, the region has the greatest length of regional level roads (6,168 km or 19.4% of the total for the country). It also has 1,401 km of rail track, which is 9% of the total for the country. Almaty Oblast is also home to potential Hub clients –high-tech goods’ importers, such as Lenovo, Xiaomi, Huawei and others.
- Multimodal transportation.** The logistics hub allows different types of transport to be used simultaneously, significantly increasing capacity and traffic.

### Investment and financing structure

The Project requires investment of US\$ 78,988 thousand (exchange rate: KZT 449), of which:

- 70% (55,292 thousand USD) – debt financing subject to collateral;
- 30% (23,696 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.



## Development, production and operation of stations for EVs with software for managing a network of charging stations

### 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.

### 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.

### 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

### 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.

# Transport and Logistic

## Construction of Trade and Transport Logistics center in the West Kazakhstan region

### 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 – 1600 sq. m;
- Service stations (including shops) – 790 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

Indicator	Results
Investment amount, US\$ thous.	15,581
Project NPV, US\$ thous.	5,367
IRR, %	18.1
EBITDA margin, %	37.8%
Payback period, years	7.2
Discounted payback period, years	12.1

### 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%.

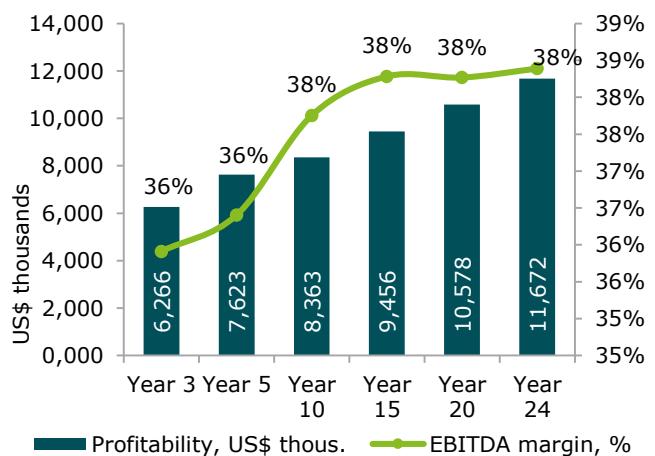
#### Low competition in the field of transport and logistics in the West Kazakhstan region

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 WKR 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.

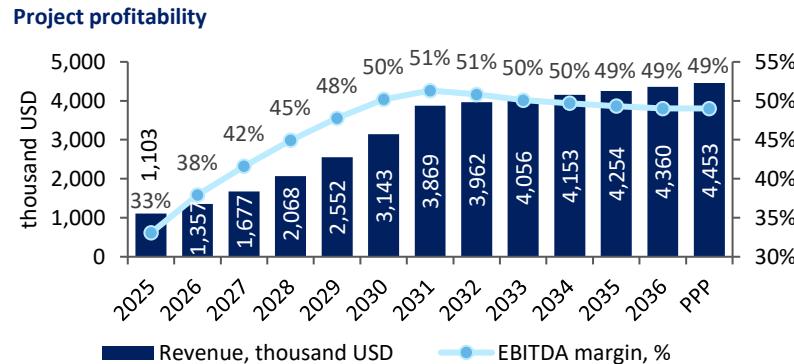
### Project profitability



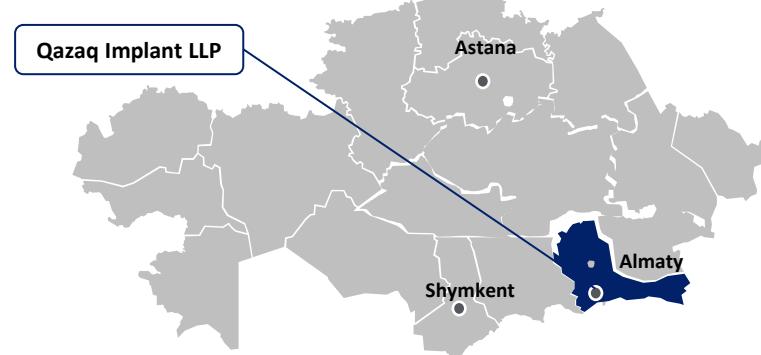


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## ***HEALTHCARE AND PHARMACEUTICALS***



## Project location



## Dental implant and protector production

### Products

Upon reaching full design capacity in 2031, product range will be as follows: implants – 30 thousand; gum shapers – 21 thousand; abutments – 21 thousand; fixing screws – 21 thousand; transfer coping and equivalents – 21 thousand.

The Initiator is planning for 44% of product to be sold domestically in Kazakhstan, with the remainder exported to Central Asian countries such as Uzbekistan, Kyrgyzstan, Tajikistan and Turkmenistan.

### Project

This investment project envisages the construction of a plant to produce dental implants and protectors at the “Innovative Technology Park” Special Economic Zone in Almaty. Plant production capacity is up to 120 thousand items per year.

#### Current Project status:

- The Initiator has identified the supplier of production equipment as the Japanese company TSUGAMI. The following feedstock suppliers have also been identified: Zapp Precision Metals GmbH (Germany) for titanium pins and Himed (USA) for abrasive materials.

### Project Initiator

The Initiator is Qazaq Implant LLP, which was created in 2023 to implement the Project. Its key personnel have many years of experience in selling implants and dental equipment.

### Market overview

- In 2022, the global dental implant market was worth 4.7 billion USD. According to Technavio, this figure will reach 6.5 billion USD by 2027, with CAGR of 6.8% in 2023-2027. In 2022, the global dental market was worth 471 billion USD, and is due to reach 657 billion USD in 2027.
- In 2022, the dental market in Kazakhstan was worth 370 million USD (+82% from 2021), of which Astana and Almaty accounted for 38%.

### Investment attractiveness of the project:

Investment amount – 2,200 thousand USD;

Project NPV – 1,400 thousand USD;

MIRR – 22.4%;

Payback period – 5.1 years;

Discounted payback period – 7.6 years.

### What is the attractiveness of the project?

- Advantageous location.** Having production based in the ITS SEZ will help cover the major consumer markets in the Almaty agglomeration. In addition, access to a well-developed and extensive rail and road network, and the Almaty international airport all benefit the supply of materials, as well as finished products to consumers.
- Import substitution with Kazakhstan products.** The launch of a new plant will help stabilize the supply of Kazakhstan-made dental implants at a competitive price, significantly reducing import dependence. Furthermore, the use of production equipment from Japan, titanium rods from Germany and abrasive materials from the USA will help ensure product quality.

### Investment proposal

The Project requires investment of 2,200 thousand USD (at the rate of 449.2 tenge), of which:

- 70% (1,540 thousand USD) – debt financing subject to collateral;
- 30% (660 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**



**Project location**



## Personalised medicine scientific research institute

### Products

When design capacity is reached in 2026, annual diagnostics, screening and training service levels will be as follows: genetic laboratory – 10,000 tests, cytogenetic laboratory – 1,200 tests, histologic laboratory – 5,000 tests, cytologic laboratory – 2,000 tests, omics laboratory – 1,000 tests, number of training programme students – 310 people. All volume of services is planned to be realized in the domestic market of Kazakhstan.

### Project

This investment project (the “Project”) envisages the creation of a personalised medicine and genomics scientific research institute (the “Institute”) in Astana at the Non-Commercial Joint Stock Company “Astana Medical University” (AMU). The Institute is planning to provide a wide range of specialised diagnostic and screening tests across five laboratories (genetic, cytogenetic, histologic, cytologic and omics). Masters’, residency and vocational training programmes will be organised in conjunction with AMU. The Company has signed contracts for the supply of laboratory testing equipment.

### Project Initiator

The Initiator is Biogen Technopark LLP, a research laboratory that is accredited in the field of scientific activity and licensed in medical activity. The Company’s key personnel are molecular and genetic laboratory specialists from the Astana Genetic Centre (AGC), which a research laboratory that is accredited in the field of scientific activity and licensed in medical activity.

### Market Overview

- In 2019-2021, birth abnormalities averaged 939 cases per 100 thousand persons. In 2022, the figure fell 880 cases per 100 thousand.
- In 2018-2022, Kazakhstan saw an increase in malignant growth morbidity to 199 cases per 100 thousand persons in 2022, which is 14% higher than in 2018.
- Kazakhstan has seen a rise in the number of children born sick or falling sick in very early life. In 2022, this figure grew to 139.6 cases per thousand live births (CAGR for 2018-2022 at 5.2%).

### Investment attractiveness of the project:

Investment amount – 3,778 thousand USD;  
Project NPV – 2,053 thousand USD;  
IRR – 40.0%;  
Payback period – 4.03 years;  
Discounted payback period – 5.92 years.

### What is the attractiveness of the project?

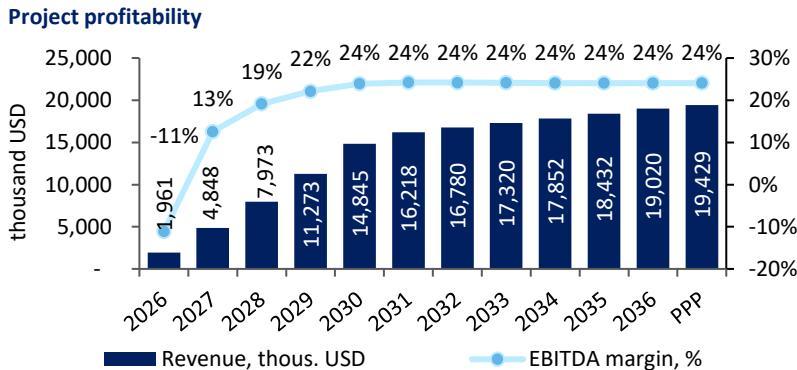
- Advantageous location.** As the Project is located in Astana, it will have access to the significant Akmola agglomeration consumer market, whose population exceeds 2.2 million. The population of the neighbouring North-Kazakhstan, Karaganda, Kostanai and Pavlodar Oblasts is 3.3 million.
- State support.** The Project is recognised as an investment priority and is eligible for state concessions. Participation in a number of state programmes to receive tax concessions, subsidies and reduced-rate borrowing will help reduce capital costs and improve Project returns.
- Project team partners and experience.** The Project is being implemented in partnership with the Astana Medical University, providing access to the university’s material and technical, information, scientific and educational database. The main Project equipment supplier is the Beijing Genomics Institute (BGI), which has significant experience in clinical diagnostics and genetics.

### Investment proposal

The Project requires investment of 3,778 thousand USD (at the rate of 449.2 tenge), of which:

- 70% (2,645 thousand USD) - debt financing subject to collateral;
- 30% (1,133 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 location



## Production and sales of medical test systems

### Product

Production volumes upon reaching full design capacity in 2031 will be as follows:

- Diagnostic test systems – 9,125 thousand doses.

The plan is to sell products on the domestic market through supplies to SK-Pharmacia LLP, as well as supply products to private medical centers, diagnostic laboratories and pharmaceutical companies.

### Project

This investment project provides for the organization of production of medical test systems for laboratory diagnostics of infectious and parasitic human diseases in Almaty Oblast.

The Company plans to produce 31 types of test systems\* to detect parasitic diseases (9 types), viral infections (8 types), bacterial infections (7 types) and sexually transmitted infections (7 types).

Currently, the Initiator has built a workshop building, with all required infrastructure in place.

### Project Initiator

MVA Group Research and Production Center LLP is a research and production entity in the field of biotechnology, biosafety, immunology, and epidemiology. The Company's specialists have developed and registered 5 test systems to diagnose infectious animal diseases.

### Market overview

- According to a Technavio report, the global medical diagnostics market will grow at a steady pace during 2023-2027, at a CAGR of 6.2%. Market growth drivers include an increase in the elderly population, an increase in the incidence of chronic and infectious diseases, increased public awareness and increased government spending on healthcare.
- According to BusinesStat research, in 2021, the total cost of laboratory tests performed in Kazakhstan amounted to USD 786 million, which is 3.1 times more than in 2017. Market growth was due to an increase in population, centralization and automation of laboratory services, development of private services of laboratory diagnostics and expanding the range of tests.

### Investment attractiveness of the project:

- Investment – 1,060 million USD
- Project NPV – 2,964 million USD
- MIRR – 27.7%
- EBITDA return – 19%
- Payback period – 6.1 years
- Discounted payback period – 7.4 years

### What is the attractiveness of the project?

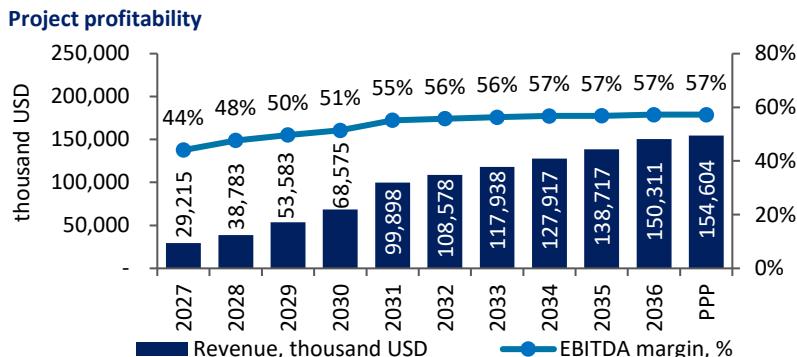
- State support for the development of domestic production.** Local production will ensure a stable and timely supply of medical test systems to the domestic market at competitive prices and allow reducing dependence on imports. As prescribed by the law, authorized government bodies are required to purchase medical drugs and products from local producers first, if any, and conclude long-term contracts with them. According to SK-Pharmacia's forecasts, domestic pharmaceutical manufacturers will reach about 50% in the Single Distributor's purchases in monetary terms by 2025, with the existing contracts taken into account.
- Experience of the Company's employees.** The Initiator's team consists of qualified specialists with sound expertise in the development of manufacturing technologies and pilot industrial production of biological products for humans and animals.

### Investment proposal

The Project requires investment of 1,060 thousand USD (at the rate of 449.2 tenge), of which:

- 70% (742 thousand USD) - debt financing subject to collateral;
- 30% (318 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 location



## Manufacture of pharmaceutical products

### Product

Upon reaching full design capacity from 2031 to 2036, the average production volume will reach the following parameters:

- Solid dosage forms – 8,199 thous. packs;
- Liquid dosage forms – 2,985 thous. packs.

### Project investment attractiveness

Investment – 95 million USD  
Project NPV – 26.5 million USD  
IRR – 25.6%  
EBITDA margin – 53%  
Payback period – 7.68 years  
Discounted payback period – 12.96 years

### Project's attractiveness

- **Governmental support.** The production of medicines is actively supported by the state in the form of soft loans for machinery and equipment. In the presence of domestic production, authorized state bodies are obliged to purchase drugs, first of all, from a Kazakh manufacturer.
- **Project Location.** The location of the plant on the territory of the FEZ of Almaty provides access to local and regional markets for pharmaceutical products, simplifies the organization of logistics and supplies. In addition, the SEZ regime provides for exemption from taxes and customs duties, benefits for utilities and in the field of labor regulation.
- **Project team experience.** The founders of the Company have more than 10 years of experience in managing pharmaceutical plants. Their deep understanding of pharmaceutical manufacturing requirements, standards and processes will enable efficient plant management.

### Investment proposal

The Project requires investment of 95 million USD, of which:

- 80% (76 million USD) – debt financing subject to collateral;
- 20% (19 million 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.

This investment project provides for the construction of a full-cycle pharmaceutical plant for the production of medicines.

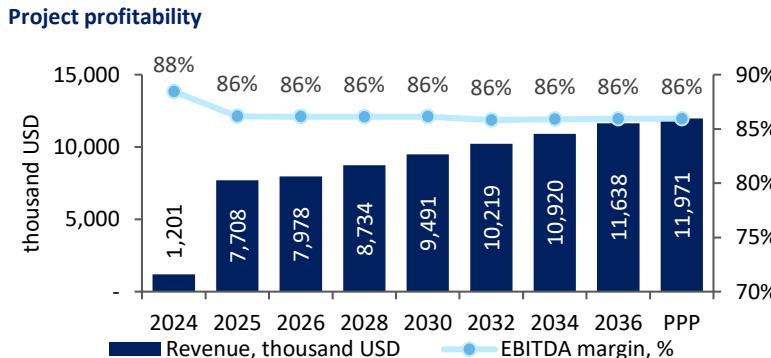
Construction of a plant with a total area of 28,500 sq. m will be carried out on the territory of the SEZ "Park of innovative technologies" in Almaty. Technological operations at the plant will be carried out according to established procedures in accordance with GMP, GLP and GDP rules in accordance with the European MHRA standard. The company plans to produce 87 branded generic drugs covering the following groups of drugs: antibiotics, painkillers, hormonal, cardiological and antianemic drugs, vitamins, antidiabetic, neurological and psychiatric drugs, drugs for the treatment of gastrointestinal diseases and anticancer drugs.

### Company

Novem Pharmaceutical LLP was established in 2022 to implement the Project. The founders of Novem have over 10 years of experience in managing pharmaceutical plants.

### Market

- The value of the Kazakh pharmaceutical market in 2022 increased by 13% compared to 2021 and amounted to 1,698 million USD. Growth of the budgetary segment by 12.3%, retail - by 13.7% is observed.
- According to the data of SK-Pharmacy, the purchase of medicines from domestic producers in the period 2018-2022. increased at a CAGR of 26.5% to 279 million USD in 2022.



#### Project location



## Hi-Tech Medical Simulation Centre in Turkestan region

### Services

The entire range of services will be provided in the domestic market. Once operating at full capacity by 2025, the goal is to offer educational services to over 10,000 individuals annually.

- The volume of academic hours is 916 thousand hours / year;
- The volume of consulting hours is 60 thousand hours / year.

### Project

This investment project envisages the construction and operation of a hi-tech medical simulation centre in Turkestan. The Project encompasses a wide range of training activities designed to enhance skills among various stakeholders, including existing medical personnel, students, law enforcement agencies, the Ministry of Emergency Situations and transportation organisations.

#### Current Project status:

- A 2-hectare land in the administrative and medical centre of Turkestan has been allocated by the Mayor's Office for the Project;
- The design and estimate documentation for the Simulation Centre Construction Project in Turkestan has been completed and has received a positive conclusion from GE No. 19-0030/20 dated 10.11.2020;
- MedIS & Trading LLP and EIDOS LLC have been identified as suppliers of medical simulators and equipment.

### Project Initiator

SITCO Group LLP, the Initiator, has 10 years of experience in collaborating with regional educational and medical institutions.

### Market overview

- According to the WHO, it is estimated that the number of health workers will reach 67.3 million by 2030. However, there is a projected shortage of 15 million health workers, primarily in low-income countries.
- Over the last five years, the shortage of healthcare specialists in Kazakhstan has doubled, resulting in a deficit of 23.1 thousand professionals. On average, each general practitioner tends to more than 1,200 patients.

### Investment attractiveness of the project:

Investment amount – 30,945 thousand USD;

Project NPV – 7,708 thousand USD;

IRR – 23.5%;

Payback period – 6.3 years;

Discounted payback period – 11.1 years.

### What is the attractiveness of the project?

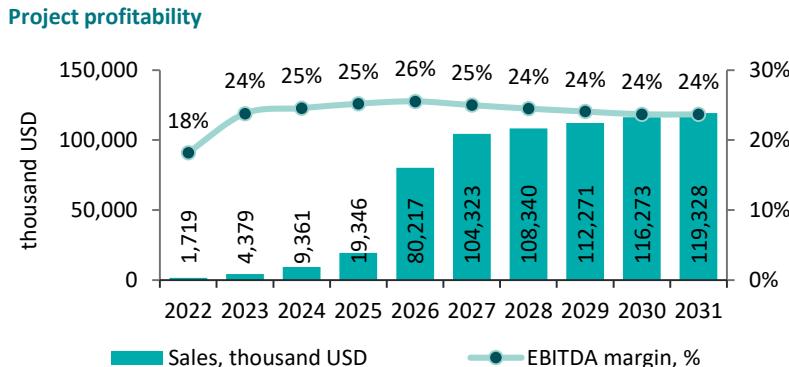
- **Growing demand for competent medical personnel.** The excessive workload adversely affects the quality of healthcare provision. The number of complaints filed against healthcare professionals and organisations has also doubled between 2021 and 2022. Given this surge in demand for highly skilled medical practitioners, the simulation centre anticipates a rise in interest towards its educational programmes.
- **Modern technologies.** To ensure precise replication of medical scenarios, the simulation centre plans to procure and use state-of-the-art equipment and medical simulators in practical training sessions.
- **Well-established network of partners.** The company's partners serve as suppliers of simulation equipment, such as Med Mod, General Doctor, 3B Scientific, Gaumard, Meti, Ensim, and EIDOS.

### Investment proposal

The Project requires investment of 30,945 thousand USD (at the rate of 449.2 tenge), of which:

- 70% (21,661 thousand USD) – debt financing subject to collateral;
- 30% (9,283 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.



## Medical equipment manufacturing

### Products

Design capacity of up to 20 thousand units per year is due to be achieved in 2027. Product will be sold domestically and overseas in Kyrgyzstan and Uzbekistan.

### Project

The Project envisages the construction of a plant to produce electrocardiographs (medical equipment) in the Astana-Technopolis Special Economic Zone in Astana.

The Project will result in:

- effective import substitution through the production of quality electrocardiographs;
- the creation of about 120 additional jobs in the region.

### Project Initiator

Sapa Telemedical Centre LLP has been producing and selling telemetric medical equipment since 2016 and is the sole developer and manufacturer of telemetric electrocardiographs in Kazakhstan.

### Market overview

- The expectation is that demand for ECG apparatus will grow because they provide a user-friendly interface that can be used to exchange information through cardiovascular data systems. According to BIS Research, CAGR for the ECG telemetric apparatus market in 2021-2030 will be 5.6%.
- Potential exists to increase demand for electrocardiographs; and according to the Ministry of Health that figure is growing year-on-year. This is due to the prevalence of blood circulation-related pathology. A record number of electrocardiographs (69 tonnes) were purchased in 2020 due to the exacerbation of chronic heart disease after COVID-19.

### Investment attractiveness of the project:

Investment – 33,296 thousand USD

Project NPV – 36,373 thousand USD

IRR – 41.5%

Payback period – 6.7 years

### What is the attractiveness of the project?

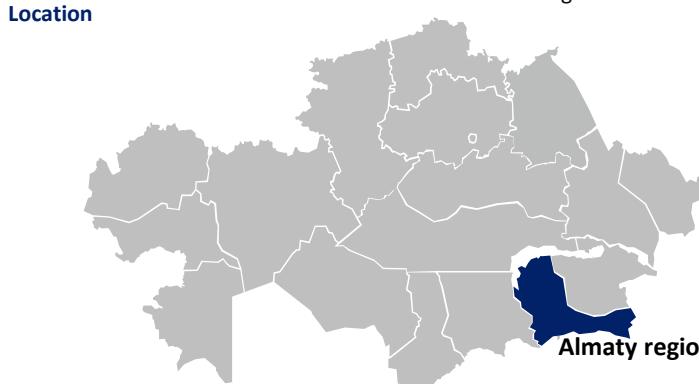
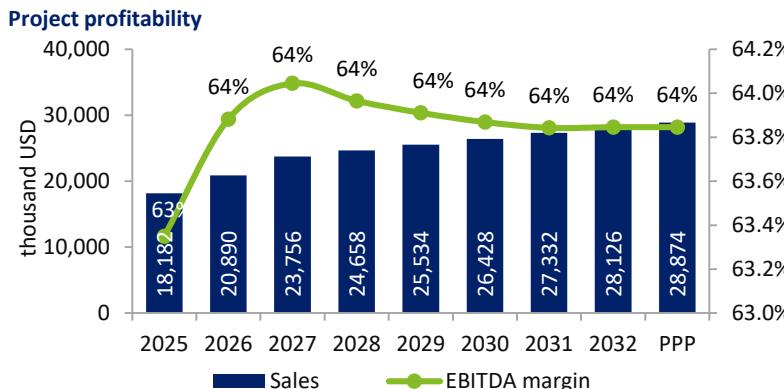
- **Initiator's experience and sales channels.** The Company has many years of experience in producing and selling telemetric medical equipment. It also holds a patent for its own product (Telecardiograph KZM-01) and ISO-13485 management quality certificate to produce medical items. The Telecardiograph KZM-01 is used by private and state medical organisations, primary healthcare facilities and ambulance services in Kazakhstan.
- **State support.** The Project is recognised as a priority sector for state support, which includes a number of concessions, benefits and grants. As a SEZ member, Company have access to land with all utility connections under a long-term lease, as well as tax, customs and utility payment concessions.

### Investment proposal

The Project requires investment of 33,296 thousand USD, of which:

- 70% (23,307 thousand USD) – debt financing subject to collateral;
- 30% (9,989 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.



## 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 m<sup>2</sup> 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?

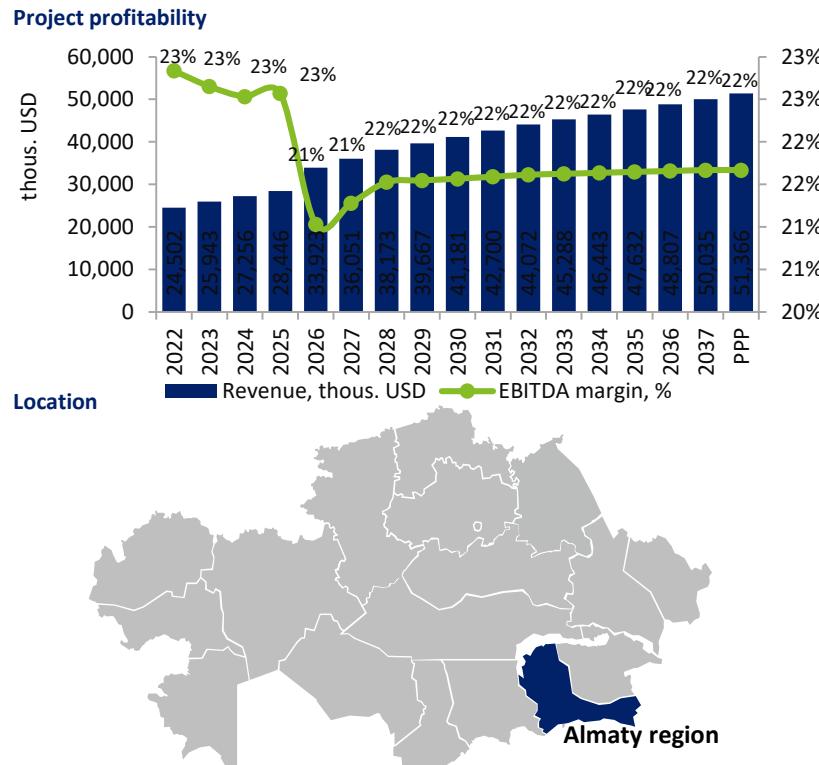
- **Compliance with global standards.** Company product will meet global GMP standards, which will incorporate modern control methods involving World Health Organisation reference strains.
- **Initiator experience.** The Company possesses an extensive intellectual and material base, and employs highly-qualified 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 Omperazol, 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 m<sup>2</sup> (including, a medicine production block and implant production shop covering 2,500 m<sup>2</sup> and 500 m<sup>2</sup>, 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.

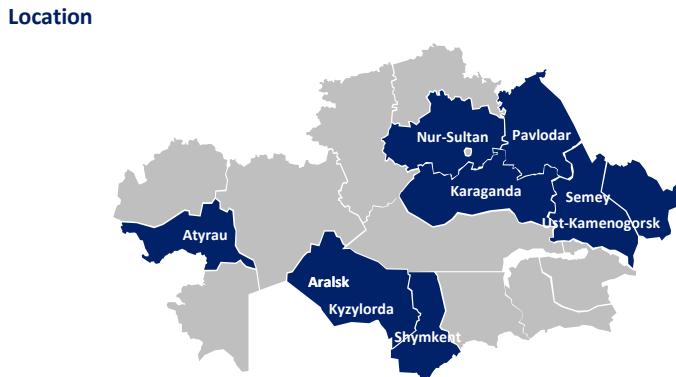
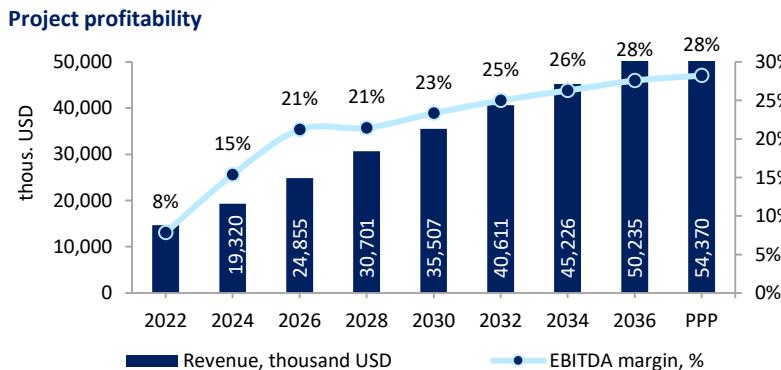
- **Long-term supply agreements and reliable partners.** The Company has entered into a 10-year long-term contract to supply hip joint implants and knee prosthetics with SK-Pharmatsia. The Company’s partners include JSC AZTM, Ghalam LLP, JSC National Prosthetic and Orthopedics Centre and others.

### 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

### Investment attractiveness of the project:

Investment – 5,117 thousand USD  
Project NPV – 34,076 thousand USD  
IRR – 58.6%  
Payback period – 3.6 years

### 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 m<sup>2</sup>), Aralsk (up to 300 m<sup>2</sup>), and the opening of a new nephrocentre branch in Karaganda at the 450 m<sup>2</sup> oblast clinical hospital, Petropavlovsk (up to 450 m<sup>2</sup>).

### Company

B.B.Nura is a Kazakhstan network of nephrocentres that offers a full range of nephrological services. The first out-patient 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.

### What is the attractiveness of the project?

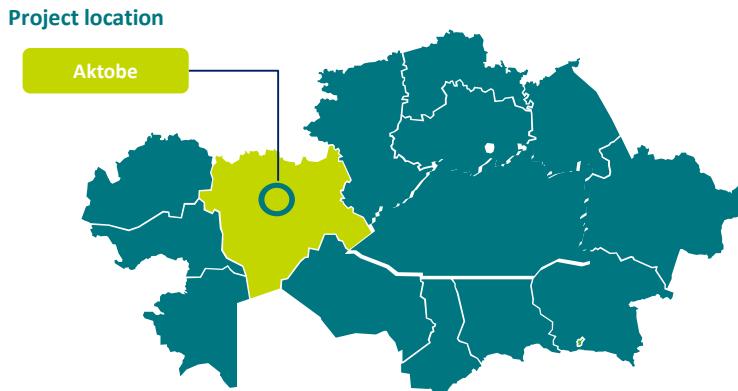
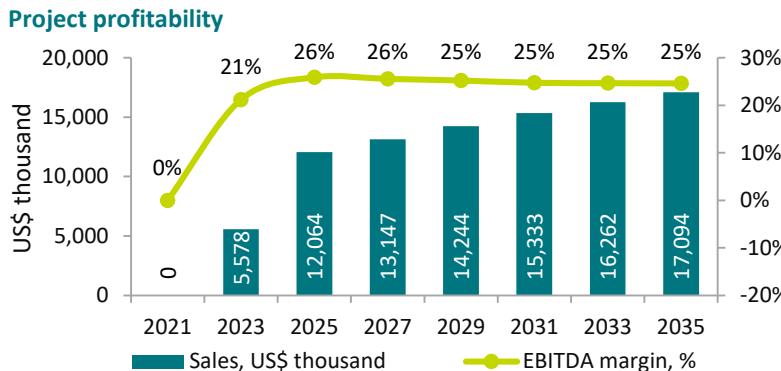
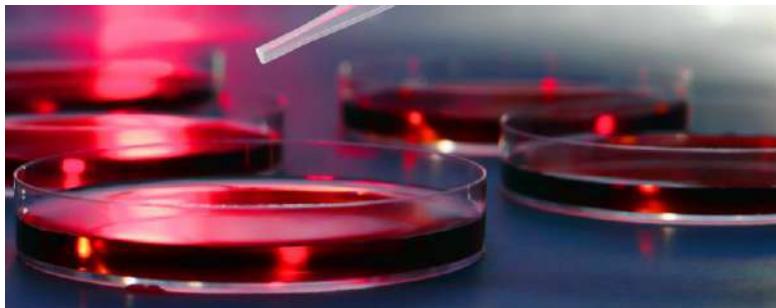
- Developed branch system and an extensive logistics chain.** The Kazakhstan Nephrocentre Network B.B. NURA has been providing a full range of nephrological services since 2011. It currently has 24 nephrological centres operating in 8 cities of Kazakhstan, where over 1,000 patients receive treatment 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 efferent 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 investment attractiveness :

Investment – US\$ 6,138 thousand  
Project NPV – US\$ 9,340 thousand  
IRR – 34.7%  
Payback period – 4.68 years

### 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 m<sup>2</sup>.

### 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.

### What is the project's attractiveness?

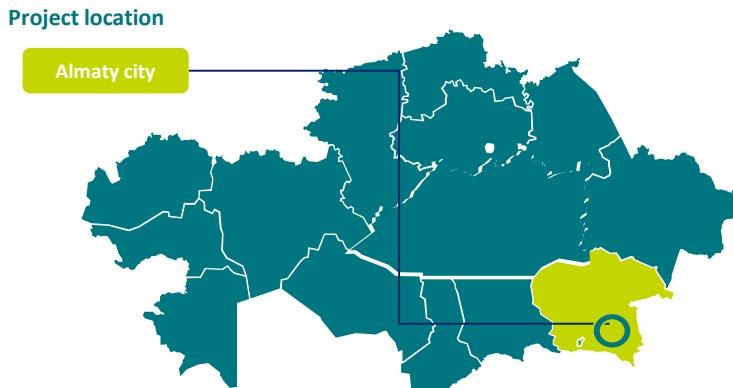
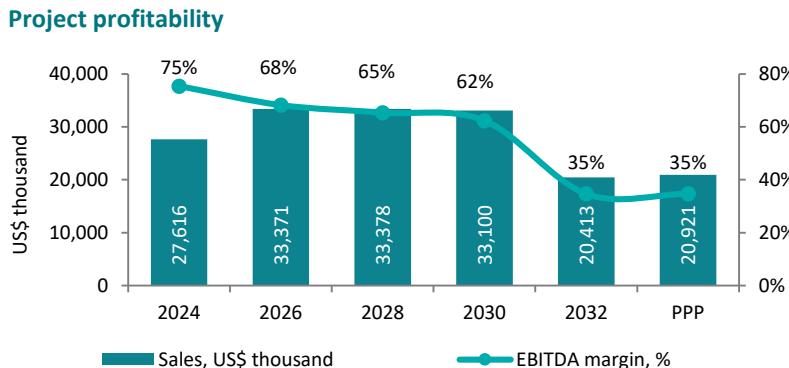
- Low level of competition.** The Project will supply medical institutions with domestic products and reduce import reliance, as dialysis units are currently not produced in Kazakhstan.
- State support.** The Project is recognised as a priority sector for state support, which offers a range of concessions, 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.



## Construction of a 300-bed general hospital in Almaty

### Annual capacity:

Medical care - 43,924 people/year (Almaty).

### Project investment attractiveness :

Investment – US\$ 89,995 thousand

Project NPV – US\$ 13,331 thousand

IRR – 15.1%

Payback period – 7.2 years

### Project

The Project envisages the construction of a 300-bed general hospital in Almaty's Zhas Kanat Microdistrict. Modern medical infrastructure that meets international standards is key for the further development of the country's health system. The hospital will incorporate a day patient facility, a clinical diagnostic centre, a maternity and gynaecological wing, paediatrics wing, treatment centre and surgical centre, which will give Zhas Kanat residents access to a wide range of medical services. The hospital site will cover 5 ha.

### Company

Almaty International Hospital LLP is a project company created on 8 June 2021. Its core operations are various healthcare activities (OCED: 86 900).

### Market

- According to Ministry of Health statistics, regional demand for inpatient services in state institutions in absolute terms correspond to the population for the region. As a consequence, Almaty is the leader in terms of hospitalisations. In 2019, in Almaty hospitalisations reached 356 thous. people, of which 289 thous. were hospitalised in state hospitals and 66 thous. in private hospitals.
- In 2019, the number of registered diseases in the country was 19 278 994, 0.4% higher than in 2018. The 5 most common diseases or illnesses in Kazakhstan are respiratory, circulatory, digestive, urogenital diseases and pregnancy abnormalities.

### What is the project's attractiveness?

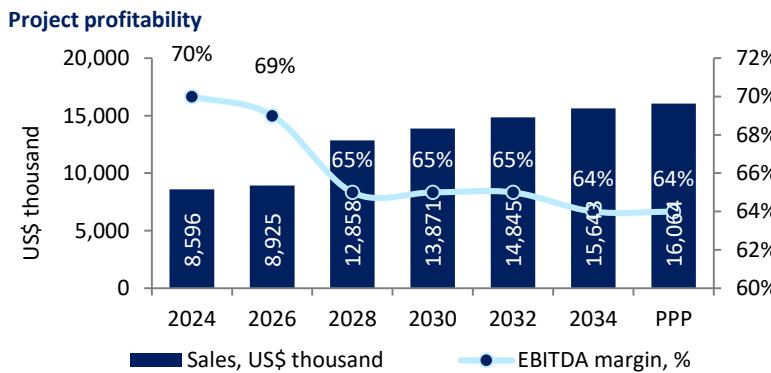
- Project effectiveness and positive economics**, irrespective of hospital occupancy and clinic visits. The operator will also have the opportunity to generate additional sources of income and receive additional guarantees from the State that it will be able to index the compensation of tenge exchange rate change costs, which improves Project performance.
- State support**. Projects to build and operate general hospitals in Kazakhstan are part of the State Programme for Healthcare Development 2020–2025 (Healthcare Programme) and have an important social-economic effect. A modern medical infrastructure that meets international standards has significant importance for the future development of the entire country's healthcare system. The general hospital will be built in the developing Zhas Kanat Microdistrict, providing the entire local population with access to quality medical services.

### Investment proposal

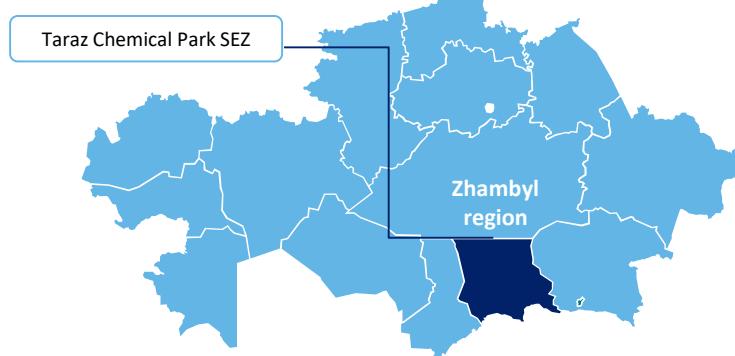
The Project requires investment of US\$ 89,995 thousand, of which:

- 70% (US\$ 62,997 thousand) – debt financing subject to collateral;
- from 30% (US\$ 26,999 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 location



## 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.

### Investment attractiveness of the project:

Investment amount – US\$ 14,246 thousands  
Project NPV – US\$ 26,979 thousands  
IRR – 38.9%  
Payback period – 4.5 years

### 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 m<sup>2</sup>. 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).

### Prerequisites for the Project implementation

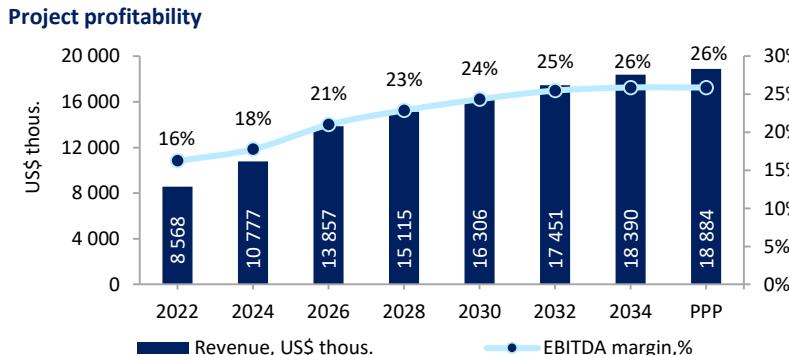
- Innovative nature of the Project.** Due to the current lack of domestic producers and reliance on overseas equivalents, the plan is to produce a CND-based antiepileptic drug.
- Access to raw materials.** The Initiator plans to make initial cannabis seed purchases overseas and then supply the Project 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

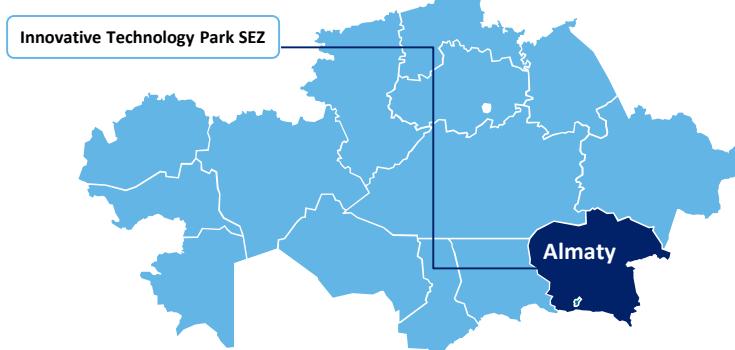
The Project requires investment of US\$ 14,246 thousand, of which:

- 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.



## Location



## Medical glove production in Almaty Oblast

### Commercial products

Annual capacity – 144 million units of medical gloves.

### Investment attractiveness of the project:

Investment – US\$ 4,124 thousand

Project NPV – US\$ 4,458 thousand

IRR – 38.9%

Payback period – 4.4 years

### 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 m<sup>2</sup>.

### Company

Dolce LLP is a Kazakhstan pharmaceutical company founded in 2003, specializing on 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%.

### What is the attractiveness of the project?

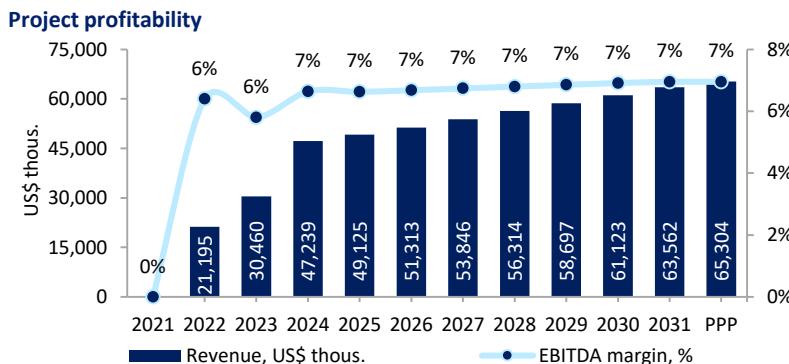
- Export potential.** The launch of industrial production and the receipt of the required international compliance and quality certificates help the Company expand its sales geography significantly, first of all in other CIS countries.
- Developed infrastructure and communications.** To ensure operating 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.



## Location



## Construction of a plant for the production of diapers in Nur-Sultan

### Commercial products

Annual capacity: 2.88 million packs of baby diapers

### Investment attractiveness of the project:

Investment – US\$ 3,569 thousand

Project NPV – US\$ 6,926 thousand

IRR – 34.6%

Payback period – 5.3 years

### 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.

### 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.

# Nonwoven material production in Almaty Oblast

KAZAKH INVEST

Investment proposal

November 2020

## Pharmacy

### 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.

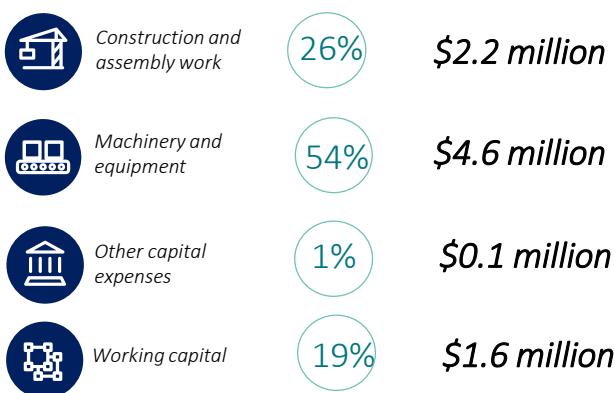
**Sales markets:** Domestic market

**Equipment suppliers:** Chinese company Beijing Liaosha Import Export Trading Co., Ltd.

### Key investment indicators of the Project

Indicator	Results
Investment amount, US\$ thousand	8,522
Project NPV, US\$ thousand	5,475
IRR, %	19.6%
EBITDA margin, %	29%
Payback period, years	6.8
Discounted payback period, years	10.8

### Investment structure



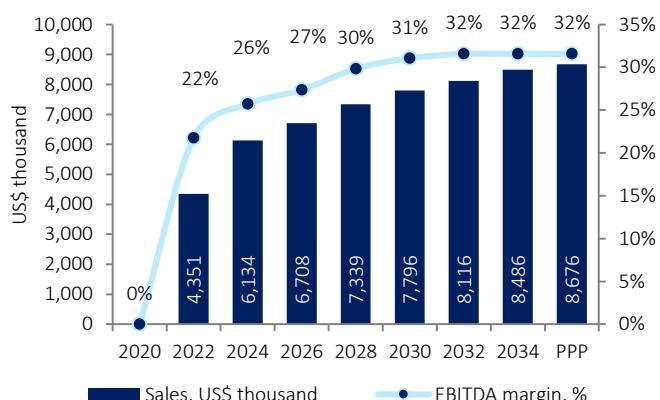
### Prerequisites for Project implementation

#### 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 profitability



■ Initiator equity  
15% (\$1.3 million)

■ Debt financing subject to collateral  
70% (\$5.9 million)

■ Participation of the Investor  
from 15% (\$1.3 million)

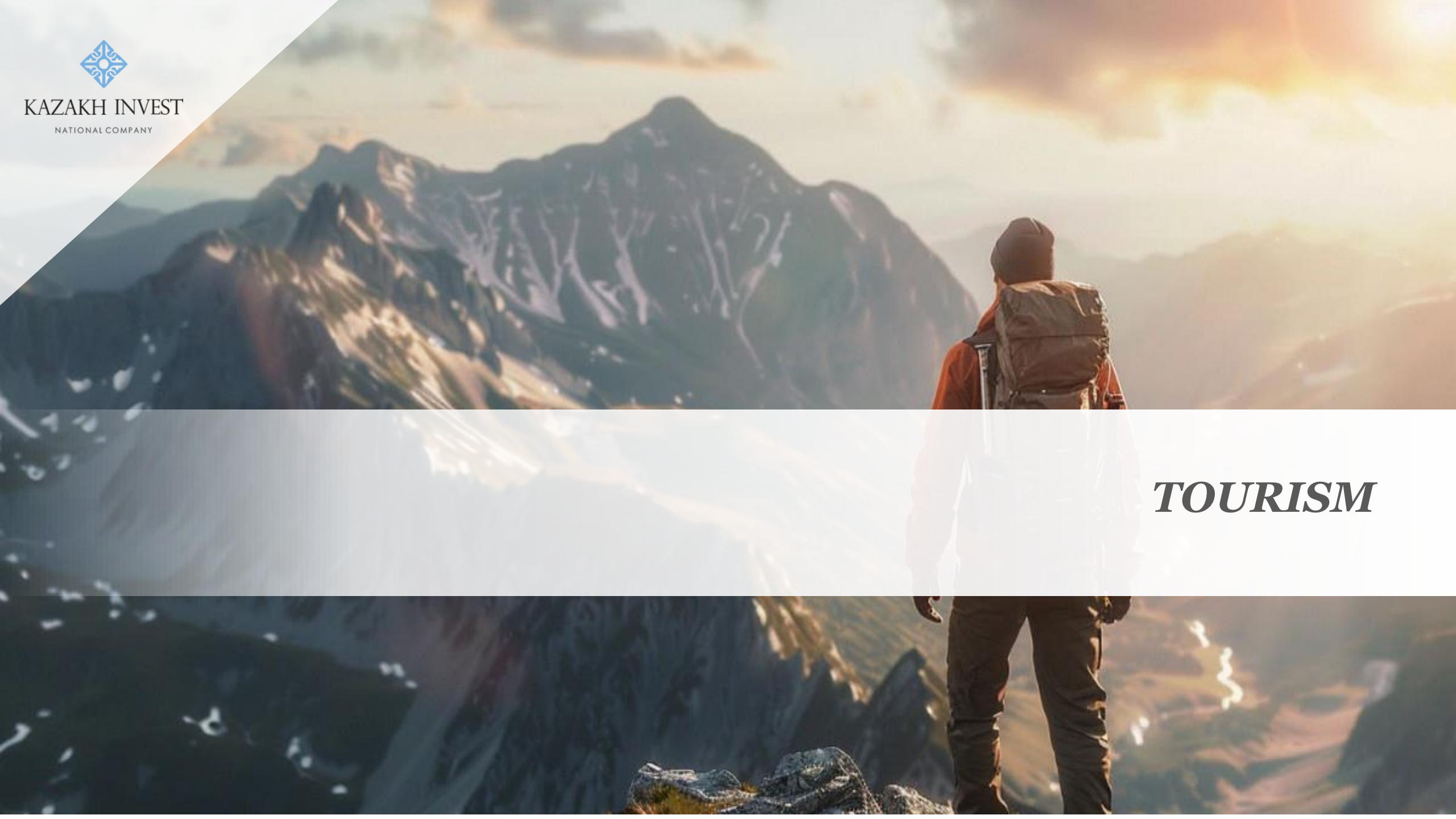


The proposed financing structure is indicative, the final financing and Project participation structures will be determined based on the results of negotiations with the Investor.

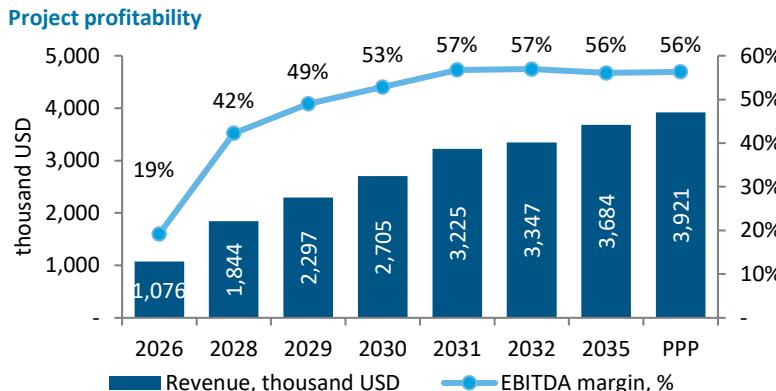
**Deloitte.**



KAZAKH INVEST  
NATIONAL COMPANY



**TOURISM**



## Construction of the Tau Rakhat hotel complex

### Services

The main target audience of the hotel complex are the inhabitants and guests of Almaty and Almaty Oblast, as well as tourists from foreign countries. At full design capacity the room stock of the complex will amount to 45 guest houses. Annually, it is planned to provide about 10 thousand room-nights.

### Project

The Project envisages the construction of the Tau Rakhat hotel complex on a land plot of 5 ha in the Rakhat Rural District, in Almaty Oblast's Yenbekshikazakh District, 3.5 km from the village of Rakhat. The location is attractive for year-round tourist services, including accommodation in guest homes, swimming pool, bathhouse, cafe, restaurant, etc. In case of need for working capital, the Initiator has the possibility to sell a certain number of cottages, which contributes to the financial sustainability of the Project. Current Project status:

- A land plot of 5 ha site has been purchased and discussions are being held with the Almaty Oblast Akimat to obtain an adjacent plot of 2.5 ha as an in-kind grant;
- An agreement has been reached with Bionic Forms LLP, specializing in cottage village construction.

### Company

The Project Initiator is Tau Rakhat Samaly LLP, which was created to implement the Project.

### Market

- In 2022, the volume of tourism industry in Kazakhstan increased by 17.9% and amounted to 11.2 billion USD, with a compounded annual growth rate of 20.6% during 2020-2022. According to Marketline forecasts, by 2027 the volume of the tourism market in Kazakhstan in value terms will be 16.7 billion USD, an increase of 49.1% compared to 2022. Compounded annual growth rate of the industry over the period 2022-2027 is projected to be 8.3%.
- According to Kazakh Tourism, in 2021, Kazakhstan ranked 66th out of 117 countries in the World Travel and Tourism Development Index, ahead of Montenegro (67), Morocco (71), Kyrgyzstan (90).
- Total income generated by tourist accommodation in Almaty Oblast and Almaty was 136 million USD. In 2022, 30% of all tourists in Kazakhstan stayed at tourist accommodation in Almaty and Almaty Oblast, which generated roughly 34% of total accommodation income.

### Investment attractiveness of the project:

Investments – 4,690 thousand USD  
NPV of the Project – 1,639 thousand USD  
IRR – 22.8%  
Payback period – 7.5 years  
Discounted payback period – 11.7 years

### What is the attractiveness of the project?

- **Attractive location.** As a transport and logistics hub linking Europe and China, Almaty Oblast also has immense tourism potential thanks to its unique natural characteristics.
- **Introduction of innovation.** Access to resources, the use of innovative technology in the hotel industry and implementation of new hotel management techniques will help maintain sustained long-term development, increase hotel market competitiveness, and create conditions for expanding the scope of services offered.
- **State support.** The government actively supports tourism in Kazakhstan, compensating costs to purchase equipment and build tourist facilities

### Investment proposal

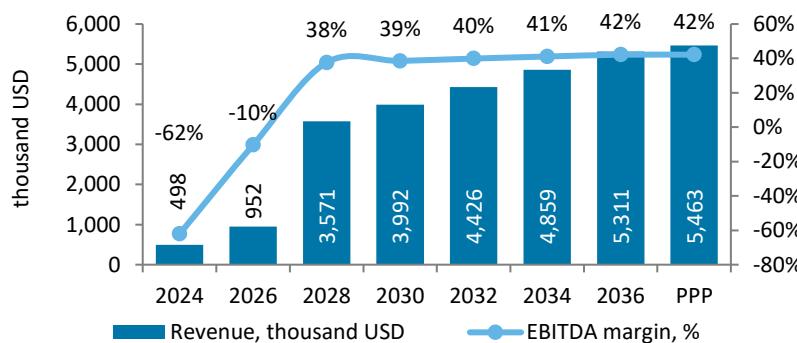
The Project requires investment of 4,690 thousand USD (at the rate of 449.2 tenge), of which:

- 70% (3,283 thousand USD) - debt financing subject to collateral;
- 30% (1,407 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



## Location



## Construction of a hotel complex

### Services

The complex will extend its services to residents and guests of Mangistau region, as well as to tourists from neighbouring countries and even those from distant countries. At full design capacity by 2025, the complex will have a total of 96 rooms, categorised as follows: 2' Apartments,' 11 'Junior Suites,' 82 'Standard' rooms and 1 room designed for individuals with disabilities.

### Project

The project envisages the construction of a 4-star hotel complex, Wyndham Garden Aktau, on a 0.2433 ha land along the Caspian Sea coast in Aktau, Mangistau region. The site is well-connected to engineering and communication networks and is adjacent to a developed road, transport and logistics infrastructure. Current Project status:

- RSE Gosekspertiza has issued a positive state expertise conclusion for the working project in July 2019.
- TechnoDASK-Aktau LLP has developed a construction plan.
- The construction and installation works are 60% complete.

### Company

MK Corporation LLP is a company specializing in the construction and sale of residential and administrative buildings in Mangistau region.

### Market

- In 2022, the volume of tourism industry in Kazakhstan increased by 17.9% and amounted to 11.2 billion USD, with a compounded annual growth rate of 20.6% during 2020-2022. According to Marketline forecasts, by 2027 the volume of the tourism market in Kazakhstan in value terms will be 16.7 billion USD, an increase of 49.1% compared to 2022. Compounded annual growth rate of the industry over the period 2022-2027 is projected to be 8.3%.
- According to Kazakh Tourism, in 2021, Kazakhstan ranked 66th out of 117 countries in the World Travel and Tourism Development Index, ahead of Montenegro (67), Morocco (71), Kyrgyzstan (90).
- The number of visitors is growing year-on-year. The cumulative annual growth rate of visitors for 2017-2022 was 29.5% for the country as a whole and 72% in Mangistau resort zone. The growth is due to the increasing popularity of domestic resorts.

### Investment attractiveness of the project:

Investment amount – 1,968 thousand USD;

Project NPV – 3,214 thousand USD;

IRR – 32.3%;

Payback period – 5.44 years;

Discounted payback period – 7.29 years.

### What is the attractiveness of the project?

- Unique Project location.** The location of the Project on the Caspian Sea coast in Aktau (as of June 1, 2023, the population of Mangistau region – 776 thousand people) is attractive for year-round offer of tourist services, including hotel accommodation, SPA procedures, etc. Caspian Sea seawater contains mineral salts (sodium, potassium, magnesium, calcium) and trace elements (iodine and bromine), which have a favourable effect on the nervous system and human metabolism.
- Trademark Licensing Agreement:** WYNDHAM HOTEL GROUP (UK) EAST Ltd. has granted the Initiator to use trademark until 30 August 2044, as per a license agreement dated 24 November 2021. Wyndham Garden is a brand of hotels within the Wyndham Hotels & Resorts group, focusing on providing travelers with comfortable and high-quality accommodation. The executed license agreement ensures access to the expertise needed for maintaining elevated service standards, implementing effective marketing strategies, and optimizing operational processes.

### Investment proposal

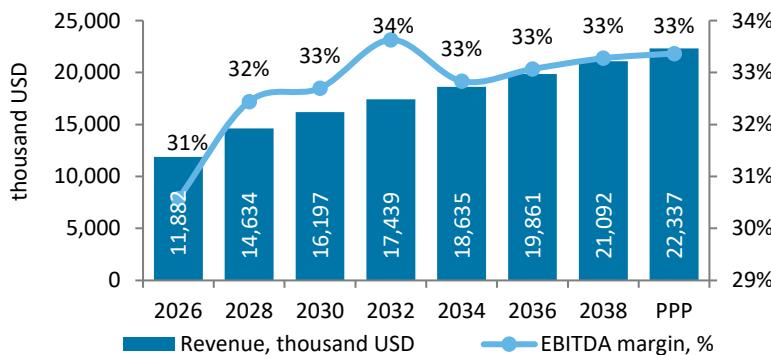
The Project requires investment of 1,968 thousand USD (at the rate of 449.2 tenge), of which:

- 50% (984 thousand USD) – debt financing subject to collateral;
- 50% (984 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



## Location



## Wellness hotel

### Services

The complex offers its services to residents and guests of East Kazakhstan region, as well as tourists from neighbouring countries. Upon reaching full design capacity with a room inventory of 126 rooms of various categories, the annual number of visitors is expected to reach 40 880 people. The complex also provides additional services such as a restaurant, spa treatments and medical procedures, with medical services available on request.

### Project

The project envisages the construction of the Wellness Resort sanatorium and health complex in the Katon-Karagai district of East Kazakhstan region.

The Wellness Resort will comprise a hotel complex, a medical department, a spa centre, a restaurant and administrative premises. Additionally, there are plans to construct tennis courts, a gym, walking alleys and parking facilities for cars.

### Company

The private company TOR'RE ALTAY LTD was established for the implementation of this Project. The head of the Company has experience in the hospitality sector and the implementation of such hotel projects as the apart-hotel YE'S Astana, Wyndham Residences Aqkol, etc.

### Market

- In 2020, the volume of tourism industry in Kazakhstan decreased by 34.2% compared to 2019 and amounted to 7.7 billion USD. The main reason for the fall was the COVID-19 pandemic and the quarantine measures introduced. After the pandemic, the market grew by 23.4% in 2021 and 17.9% in 2022. According to Kazakh Tourism, in 2021, Kazakhstan ranked 66th out of 117 countries in the World Travel and Tourism Development Index, ahead of Montenegro (67), Morocco (71), Kyrgyzstan (90). According to Marketline forecasts, by 2027 the volume of the tourism market in Kazakhstan in value terms will be 16.7 billion USD, an increase of 49% compared to 2022.

- In 2022, accommodation facilities in Katon-Karagay leisure resorts served roughly 5,467 tourists. In 2018-2022, CAGR for accommodation facility income in Kazakhstan was 48%, and 23% in Katon-Karagay leisure resorts in 2019-2022 amounted to 48%, and the CAGR of income in 2019-2022 in the Katon-Karagay resort area was 23%.

### Investment attractiveness of the project:

Investment amount – 17,611 thousand USD;  
Project NPV – 1,899 thousand USD;  
IRR – 21.9%;  
Payback period – 6.72 years;  
Discounted payback period – 14.76 years.

### What is the attractiveness of the project?

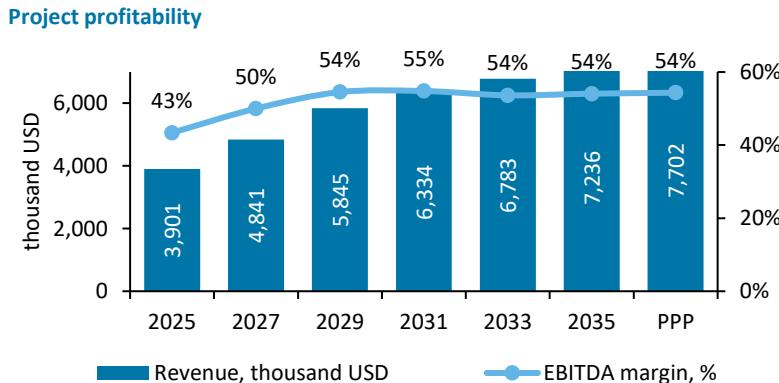
- Tourism development in East Kazakhstan region.** The development of tourism in East Kazakhstan region is supported by its vast potential, featuring a variety of natural and cultural attractions and an attractive geographical location. The region boasts tourist draws such as the Altai Alps, the Bukhtarma Reservoir, the Kiin-Kerish tract, the Markakol Nature Reserve and numerous museums. In 2022, approximately 90 thousand tourists visited the resort areas of East Kazakhstan region.
- State support:** The government actively supports tourism in Kazakhstan, compensating costs to purchase equipment and build tourist facilities.

### Investment proposal

The Project requires investment of 17,611 thousand USD (at the rate 449.2 tenge), of which:

- 80% (14,089 thousand USD) – debt financing subject to collateral;
- 20% (3,522 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.



## Theya Resort Tourist Complex

### Services

The main target audience of the recreation center are the inhabitants and guests of Astana and Akmola Oblast, as well as tourists from foreign countries. Annually, it is planned to provide about 7 thousand hotel room-nights and 5.5 thousand glamping room-nights.

### Project

The Project envisages the construction of the Theya Resort Tourist Complex in Astana. The 4 ha Complex will be fully developed and incorporate a hotel, 3 types of glamping, ethno-aus, restaurants, banquet halls, outdoor swimming pools, a tennis court, barbecue area, saunas and children's area.

The Initiator has sent a request to the local executive body to acquire a 4 ha site for temporary use free of charge.

### Company

The Project Initiator is Qtourism LLP, which was created to implement the Project.

### Market

- In 2022, the volume of tourism industry in Kazakhstan increased by 17.9% and amounted to 11.2 billion USD, with a compounded annual growth rate of 20.6% during 2020-2022. According to Marketline forecasts, by 2027 the volume of the tourism market in Kazakhstan in value terms will be 16.7 billion USD, an increase of 49.1% compared to 2022. Compounded annual growth rate of the industry over the period 2022-2027 is projected to be 8.3%.
- According to Kazakh Tourism, in 2021, Kazakhstan ranked 66th out of 117 countries in the World Travel and Tourism Development Index, ahead of Montenegro (67), Morocco (71), Kyrgyzstan (90).
- Total income generated by tourist accommodation in Akmola Oblast and Astana was 113.7 million USD. In 2022, 22% of all tourists in Kazakhstan stayed at tourist accommodation in Astana and Akmola Oblast, which generated roughly 29% of total accommodation income.

### Investment attractiveness of the project:

Investments – 11,813 thousand USD

NPV of the Project – 3,185 thousand USD

IRR – 21.7%

Payback period – 6.16 years

Discounted payback period – 11.07 years

### What is the attractiveness of the project?

- Unique Project location.** The Complex will be built in Astana, relatively close to the Astana international airport and railway station, and the main centres for overseas and local tourists. The location is also attractive for its year-round tourist activities, such as hotel accommodation, ethno-aus, swimming pool and other health and recreational activities.
- Implementation of a product approach.** Despite the popularity of resorts, only a few Astana and Akmola agglomeration hotels provide accommodation with an ethnographic centre. The Complex differs positively from its competitors thanks to its visitor centre, which offers visitors the opportunity to combine culture and relaxation. The Complex is also ideal for holding ceremonies, national and family festivals, improving brand awareness among potential clients.

### Investment proposal

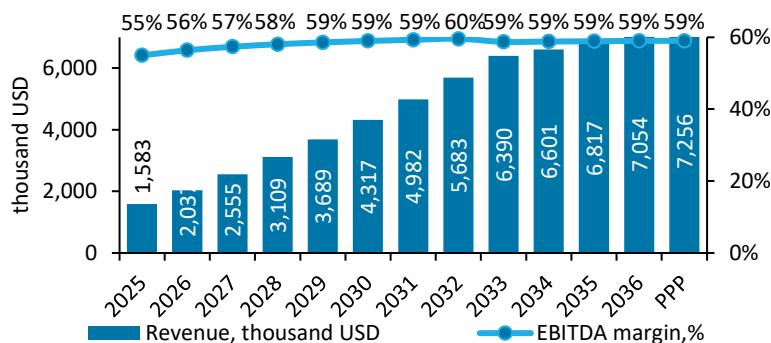
The Project requires investment of 11,813 thousand USD (at the rate of 449.2 tenge), of which:

- 70% (8,269 thousand USD) - debt financing subject to collateral;
- 30% (3,544 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



## Location



## Construction of the Qoiany Demalys Aimagy Recreation Centre

### Products and services

The main target audience of the recreation center are the inhabitants and guests of Akmola region, as well as tourists from foreign countries. Upon reaching full design capacity, the hotel will have 16 rooms, a VIP house, six cottages and ten yurt houses, it is planned to host up around 8 thousand guests annually.

### Project

The project envisages the construction of a multifunctional recreation centre on the pristine coastline of the Koyandy reservoir in Akmola region. The Recreation Centre will feature a four-star hotel, cottages and mini-houses designed in the national style. It will also include restaurant complexes, swimming pools, a bath and recreation complex, as well as sports and beach facilities. The total area of the project will be 7 hectares, of which a plot of 3 hectares is owned by the Initiator, and a plot of 4 hectares will be obtained for a long-term lease for 45 years. The initiator had already equipped the plot with engineering networks and connected it to the transport infrastructure.

### Company

The initiator of the project is Baltogai LLP, the main activity of which is the organisation of recreation, entertainment and provision of accommodation for weekends and other periods of short-term stays.

### Market

- In 2020, the volume of tourism industry in Kazakhstan decreased by 34.2% compared to 2019 and amounted to 7.7 billion USD. The main reason for the fall was the COVID-19 pandemic and the quarantine measures introduced. After the pandemic, the market grew by 23.4% in 2021 and 17.9% in 2022.
- According to Kazakh Tourism, in 2021, Kazakhstan ranked 66th out of 117 countries in the World Travel and Tourism Development Index, ahead of Montenegro (67), Morocco (71), Kyrgyzstan (90). According to Marketline forecasts, by 2027 the volume of the tourism market in Kazakhstan in value terms will be 16.7 billion USD, an increase of 49% compared to 2022.
- Schuchinsk-Borovoye resort zone (SBRZ) is one the most popular leisure resorts in Kazakhstan, with visitor CAGR for 2018-2022 at 16%. The growth was caused by an increase in the popularity of local resorts. According to the State Programme for the Development of the Kazakhstan Tourism Sector for 2019-2025, the SBRZ has the potential to receive over 2 million tourists per year.

### Investment attractiveness of the project:

Investments – US\$ 6,875 thousand

NPV of the Project – US\$ 4,939 thousand

IRR – 26.2%

Payback period – 6.83 years

Discounted payback period – 10.01 years

### What is the attractiveness of the project?

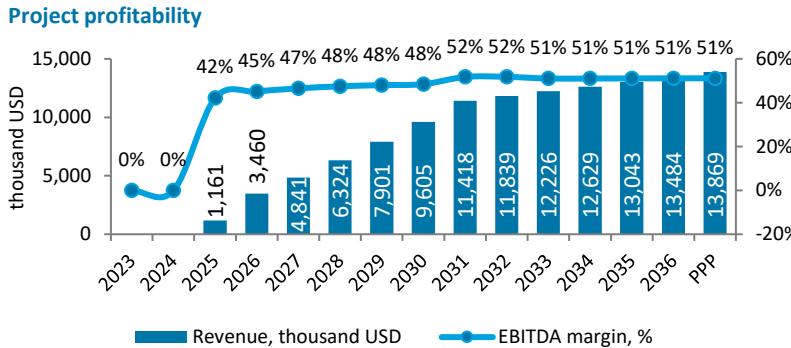
- Unique Project location :** The recreation centre is located on the shore of the picturesque Lake Koyandy in relative proximity to the international airport of Astana (40 minutes by car) - the main collection point for foreign and domestic tourists. The distance of the base from the city is 15 km along the 4-lane highway "Astana-Pavlodar". The location is also attractive for a year-round offer of tourist services, including hotel accommodation, horse riding, fishing and other recreational activities.
- Implementation of the product approach:** At present, the recreation centre compares favourably with competitors in the variety and quality of services provided to visitors. The recreation centre is convenient for music, national and family festivals, which will expand opportunities to increase brand awareness among potential customers. The initiator also plans to introduce loyalty programmes, conclude contracts with tour operators and travel agents.
- State support:** The tourism industry in the country is actively supported by the state. State support measures also include reimbursement of part of the cost of purchasing equipment and building tourist facilities.

### Investment proposal

The Project requires investment of US\$ 6,875 thousand (at the rate of KZT/USD 449.2 tenge), of which:

- 70% (US\$ 4,812 thousand) - debt financing subject to collateral;
- 30% (US\$ 2,063 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.



## Location



## Construction of the multifunctional Ak Kol SPA-resort

### Products and services

The resort will offer its services to residents and guests of Akmola oblast, Astana and foreign tourists. Upon reaching full design capacity, the hotel will have 126 double rooms and 15 chalets of three categories. The Resort plans to provide customers with accommodation services, a restaurant complex, as well as wellness treatments.

### Project

The project envisages the construction of a multifunctional SPA resort in the village of Malyy barap, Aqmola oblast. The project is focused on family and business holidays, provides for the construction of a four-star hotel to provide a wide range of tourist services year-round for domestic and international tourists. The project is located 110 km from the capital Astana, 100 km from Shchuchinsko-Borovsky resort area. At the moment the Project has been allocated a 13 hectare site with utility networks connected, planning and preparation for construction of facilities are in progress.

### Company

The initiator of the project is AstanaCom.kz LLP, the main activity of which is the field of information technology and information systems. At the same time, the Project team has extensive experience in managing the hotel business.

### Market

- In 2020, the volume of tourism industry in Kazakhstan decreased by 34.2% compared to 2019 and amounted to 7.7 billion USD. The main reason for the fall was the COVID-19 pandemic and the quarantine measures introduced. After the pandemic, the market grew by 23.4% in 2021 and 17.9% in 2022.
- According to Kazakh Tourism, in 2021, Kazakhstan ranked 66th out of 117 countries in the World Travel and Tourism Development Index, ahead of Montenegro (67), Morocco (71), Kyrgyzstan (90).
- According to Marketline forecasts, by 2027 the volume of the tourism market in Kazakhstan in value terms will be 16.7 billion USD, an increase of 49% compared to 2022. The average annual growth rate of the industry for the period 2022-2027. forecasted at 8.3%.

### Investment attractiveness of the project:

Investments – US\$ 8,120 thousand  
NPV of the Project – US\$ 11,458 thousand  
IRR – 34.48%  
Payback period – 6.24 years  
Discounted payback period – 7.94 years

### What is the attractiveness of the project?

- The unique location of the Project.** The resort will be located in relative proximity to the international airport of Astana (40 minutes by car) - the main collection point for foreign and domestic tourists.
- Governmental support.** The tourism industry in the country is actively supported by the state. State support measures also include reimbursement of part of the costs for the purchase of equipment and the construction of tourist facilities.
- Low level of competition.** Despite the popularity of the resort area, only a few hotels provide accommodation services that meet international standards. At the moment, the resort compares favorably with competitors in terms of the variety and quality of services provided to visitors.

### Investment proposal

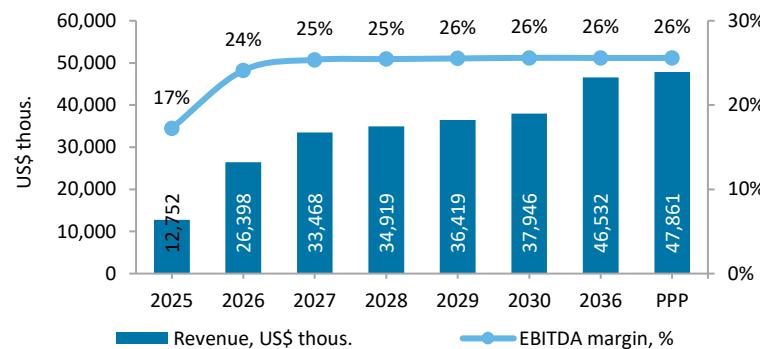
The Project requires investment of US\$ 8,120 thousand (at the rate of KZT/USD 449.2 tenge), of which:

- 70% (US\$ 5,684 thousand) - debt financing subject to collateral;
- 30% (US\$ 2,436 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



## Location



## Construction of the sanatorium and recreational complex Nur

### Products and services

Upon reaching full design capacity in 2027, the number of rooms will be 156 standard rooms, 4 deluxe rooms with annual service of up to 42,340 visitors. The complex also provides swimming pool, sauna, spa procedures, restaurant, reception, diagnostic studies, healing procedures and medical services on request. The complex will offer its services to residents and guests of the Mangystau region, as well as tourists from border (Russia, Uzbekistan, Azerbaijan) and distant countries.

### Project

The Project provides for the construction of the Nur sanatorium and recreation complex with rehabilitation departments in Aktau, Mangistau region, on a 5.4 ha land plot 50 m from the Caspian Sea shoreline.

The 240-bed health resort complex consists of dormitories, administrative and domestic premises, a treatment department, a dining and event hall, a swimming pool and a spa center. There are also plans to build basketball and mini-football courts, gyms, walking alleys and parking lots.

The Initiator carried out laboratory researches of useful properties of Aksha Kudyk natural spring with mineral water. Nesibek-Nur Project has developed a construction plan for the Complex. The local executive body allocated a land plot of 5.4 ha for 49 years.

### Company

The Initiator of the project company is SCR-Snab LLP. The CEO has experience in running tourism business in the region since 2016, in addition, she is a member of the Tourism Council of Mangistau Region, Nomad Tourism Association of Mangistau Region, National Association of Heads of Sanatoriums and Resorts of Kazakhstan.

### Market

- In 2022, the volume of the tourism market in Kazakhstan amounted to US\$ 11.2 billion, with an average annual growth rate of the industry for the period 2017-2022 of 1.9%. As of 2022, Kazakhstan citizens spent US\$ 1.4 billion on domestic and outbound tourism, of which domestic tourism accounts for 65%.
- In 2022, accommodation facilities of Mangistau resort zone served about 282 thousand tourists. For 2017-2022, the cumulative average annual revenue growth rate of accommodation facilities amounted to 72%.

### Investment attractiveness of the project:

Investment – US\$ 20,300 thousand  
Project NPV – US\$ 12,142 thousand  
IRR – 31.5 %  
Payback period – 4.95 years  
Discounted payback period – 7.37 years

### What is the attractiveness of the project?

- Unique Project location.** The Project location on the Caspian Sea coast 37 km from Aktau is attractive for year-round tourist services, including hotel accommodation and therapeutic and recreational recreation procedures. The sea water of the Caspian Sea contains salts of mineral substances (sodium, potassium, magnesium, calcium) and trace elements (iodine and bromine), which have a beneficial effect on the nervous system and human metabolism. There is also a natural spring Aksha Kudyk with mineral water for treatment of gastrointestinal and cardiovascular diseases on the territory of the Complex.
- Tourism development in Mangistau region.** Mangistau region has a huge tourism potential due to its sacred historical and cultural monuments and attractive geographical location. There are about 362 holy places and 13 thousand historical monuments under state protection in the region. In 2022 the resort area of Mangistau region was visited by about 282 thousand tourists.
- Investment proposal**

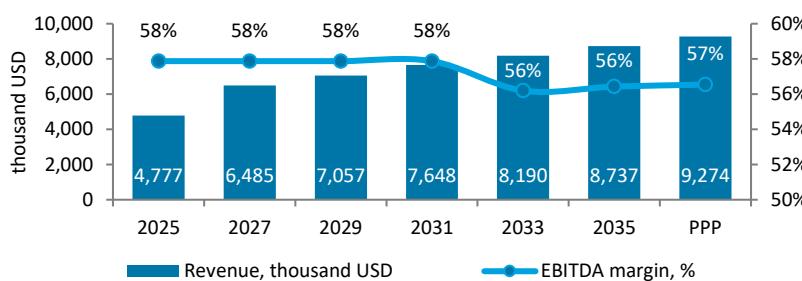
The Project requires investment of US\$ 20,300 thousand (at the rate of 449.2 tenge), of which:

- 75% (US\$ 15,225 thousand) – investor participation and/or debt financing subject to collateral;
- 25% (US\$ 5,075 thousand) – initiator's 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.



## Project profitability



## Location



## Construction of a 400-bed tourism and recreation centre on the Lake Alakol coast

### Products and services

The centre will offer its services to residents and guests of Almaty region, Almaty city, Zhetisu region, and foreign tourists. Upon reaching its full design capacity, with a 400-bed hotel, the centre aims to serve more than 70,000 visitors annually. The Centre plans to provide clients with accommodation services (hotels and log houses), a restaurant complex, wellness treatments, rental of ATVs and snowmobiles, as well as a ski complex serving up to 12,000 visitors per year.

### Project

This investment project envisages the construction of a recreation centre on the Lake Alakol coast in Koktuma village, Zhetisu region.

The centre provides a wide range of tourist services for family and active leisure, leisure for adults, as well as health, corporate and sports activities. Lands measuring 4 hectares and 20 hectares have been allocated for the construction of hotels and guest houses, as well as a ski resort, respectively. These lands are situated 70 km (approximately 50 minutes by car) from Usharal. Additionally, the Centre will feature a restaurant, an indoor water park equipped with three swimming pools, as well as a spa, gym and tennis court.

### Company

The project initiator is Shokai Best LLP. The Company founder has 17 years of experience in the tourism sector, including managing the Asuan recreation area in Zhetisu region.

### Market

- In 2020, the volume of tourism industry in Kazakhstan decreased by 34.2% compared to 2019 and amounted to 7.7 billion USD. The main reason for the fall was the COVID-19 pandemic and the quarantine measures introduced. After the pandemic, the market grew by 23.4% in 2021 and 17.9% in 2022.
- According to Kazakh Tourism, in 2021, Kazakhstan ranked 66th out of 117 countries in the World Travel and Tourism Development Index, ahead of Montenegro (67), Morocco (71), Kyrgyzstan (90). According to Marketline forecasts, by 2027 the volume of the tourism market in Kazakhstan in value terms will be 16.7 billion USD, an increase of 49% compared to 2022.
- Alakol resort area (Zhetisu) is one of the popular leisure resorts in Kazakhstan, visitor CAGR during 2017-2022 was 18%.

### Investment attractiveness of the project:

Investment – US\$ 12,930 thousand

Project NPV – US\$ 5,148 thousand

IRR – 22.7%

Payback period – 6.11 years

Discounted payback period – 10.55 years

### What is the attractiveness of the project?

- Attractive location and year-round offer:** The Centre enjoys an attractive location and offers year-round activities that cater to a wide range of interests. It provides various amenities, including hotel accommodation, a ski resort, an indoor water park and other recreational activities. The Centre is situated within a three-hour drive from Taldykorgan and is located approximately 641 km from Almaty, the country's largest city. In the region, the existing resorts primarily focus on the spring and summer seasons, lacking high-altitude ski facilities. This presents an opportunity for niche tourism development in Zhetisu region, owing to its unique natural characteristics. Lake Alakol is renowned for its mud treatments, known for their effectiveness in treating skin diseases and preventing colds due to the presence of beneficial minerals, hydrogen sulfide and sodium chloride salts. The lake's black pebble sand, known as shungite, possesses distinctive healing properties.

- State support:** The tourism industry in the country is actively supported by the state. State support measures include reimbursement of part of the cost of purchasing equipment and building tourist facilities.

### Investment proposal

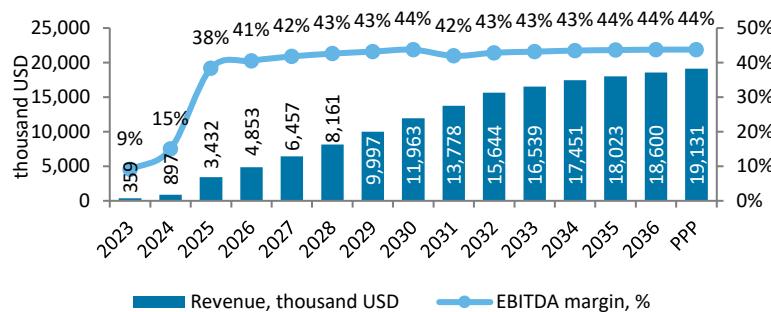
The Project requires investment of US\$ 12,930 thousand (at the rate of KZT/USD 449.2 tenge), of which:

- 100% (US\$ 12,930 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



## Location



## Hotel complex in Konaev

### Products and services

The complex will offer its services to residents and guests of Almaty and Almaty region, as well as foreign tourists. When reaching its full design capacity, the complex will feature a total of 108 rooms and 29 bungalows, it is planned to serve more than 30 thousand visitors annually.

### Project

The project aims to upgrade and expand the multifunctional hotel complex Nomad Village located on the northern coast of the Kapshagai reservoir in Konaev.

The Complex offers a comprehensive range of tourist services catering to families and outdoor enthusiasts, providing opportunities for relaxation, recreation, corporate events and sports activities. The project will be implemented on a land of 10.7 hectares (56 km away from Almaty) which is already connected to essential engineering networks and features the necessary transport infrastructure.

Currently, it consists of two fully equipped buildings, 29 functional bungalows, a restaurant and both children's and adult pools.

### Company

The Project initiator is Center Project LLP, which specialises in the management of Bank CenterCredit JSC distressed assets.

### Market

- In 2020, the volume of tourism industry in Kazakhstan decreased by 34.2% compared to 2019 and amounted to 7.7 billion USD. The main reason for the fall was the COVID-19 pandemic and the quarantine measures introduced. After the pandemic, the market grew by 23.4% in 2021 and 17.9% in 2022. According to Kazakh Tourism, in 2021, Kazakhstan ranked 66th out of 117 countries in the World Travel and Tourism Development Index, ahead of Montenegro (67), Morocco (71), Kyrgyzstan (90). According to Marketline forecasts, by 2027 the volume of the tourism market in Kazakhstan in value terms will be 16.7 billion USD, an increase of 49% compared to 2022.
- Almaty resort zones are one the most popular leisure resorts in Kazakhstan, with visitor CAGR for 2018-2022 at 42%. The growth was caused by an increase in the popularity of local resorts and an influx of tourists from neighbouring countries

### Investment attractiveness of the project:

Investments – 8,000 thousand USD

NPV of the Project – 8,871 thousand USD

IRR – 30.9%

Payback period – 5.84 years

Discounted payback period – 7.93

### What is the attractiveness of the project?

- Year-round accommodation and existing infrastructure.** The location of the Complex on the shore of the Kapshagai reservoir enables the provision of a wide range of tourist services throughout the year. Visitors can indulge in various spa treatments, including herbal baths and an ice room, while the Complex also caters to the business community by offering conference facilities. The hotel provides high-quality accommodation, and guests can enjoy activities such as horseback riding, fishing and other recreational pursuits. Operating from 2010 to 2016, the Complex has a foundation as a five-star hotel, providing exceptional services. The Complex occupies a 10-hectare land, providing space for expansion and the construction of additional leisure facilities to enhance guest experiences.

- Attractive location.** As a transport and logistics hub connecting Europe and China, Konaev holds immense tourism potential due to its unique natural features and well-developing infrastructure.

- State support:** The tourism industry in the country is actively supported by the state. State support measures include reimbursement of part of the cost of purchasing equipment and building tourist facilities.

### Investment proposal

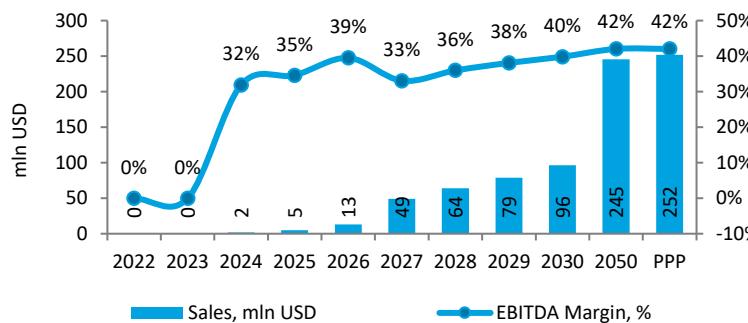
The Project requires investment of US\$ 8,000 thousand (at the rate of KZT/USD 449.2 tenge), of which:

- 70% (US\$ 5,600 thousand) – debt financing subject to collateral;
- 30% (US\$ 2,400 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**



**Project location**



## Development of the Aqbura Resort Complex at Lakes Bolshoye Chebachye and Tekekol

### Services

At full Project capacity, the Complex will offer 716 beds, 280 cottages and 72 villas. One-off tourist visits to the Complex will reach 3.3 million per year by 2040.

### Investment attractiveness of the project:

- Investment – 279,235 thousand USD
- Project NPV – 51,236 thousand USD
- IRR – 15.2%
- Payback period – 10.91 years

### What is the attractiveness of the project?

- **Low levels of competition.** Despite the resort's general popularity, only a few hotels such as the Rixos Borovoye and the Okzhetpes sanatorium provide accommodation that meets international standards. The complex currently has no direct competitors in terms of service variation and quality.
- **Unique Project location.** The site is located in a unique park-like, undeveloped region of the Burabay National Park, in relative close proximity to the Nur-Sultan international airport (3 hours by road), which is the main collecting point for overseas and local tourists. The mountain terrain makes the location attractive all year round, including hotel accommodation, ecotourism and other forms of leisure (snowmobile tours, horse riding and SPA treatments).

### Investment proposal

The Project requires investment of 279,235 thousand USD, of which:

- 100% (279,235 thousand USD) – investor participation.

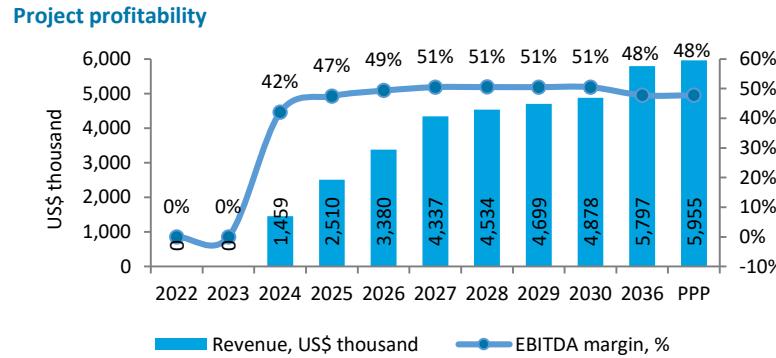
The proposed financing structure and state support measures are indicative. The final financing structure and Project interests will be determined based on the results of negotiations with the investor.

### Project Initiator

AQBURA Development LLP's main activity is to develop the AQBURA RESORT, which involves building resort zone facilities, creating an entertainment centre and attracting foreign investment.

### Market overview

- SBRZ is one the most popular leisure resorts in Kazakhstan, with visitor CAGR for 2017-2021 at 5%. The growth was caused by an increase in the popularity of local resorts.
- According to the State Programme for the Development of the Kazakhstan Tourism Sector for 2019-2025, the SBRZ has the potential to receive over 2 million tourists per year, and is in the top-10 of potential areas for the development of tourism.



## Location



## Development of the Akylbay Sports and Recreation Complex

### Products

At full Project capacity, the Complex will offer 70 double rooms, 50 quadruple family rooms and 4 suits. The number of visitors staying at the hotel is planned to reach approximately 36.1 thousand tourists per year.

### Project

The project envisages the construction of a multifunctional sports and recreation complex (the "Complex") including a training base and a hotel in the State National Nature Park (the "SNNP") "Burabay". The Complex is planned to be located in Akylbay village of Akmola Oblast, on the shore of salt Maloe Chebache Lake.

The project is focused on attracting professional and amateur athletes (including those with special needs) from Kazakhstan and neighboring countries. The project plans to cooperate with sports organizations and national teams, which will host training camps on the territory of the Complex. Meanwhile, the Complex visit will be available for tourists coming to the touristic and resort area as well.

### Company

The project Initiator is Bura-Bura park LLP, whose core activity is the development of the Askar Tau Resort.

### Market

- Schuchinsk-Borovoye is one of the most popular leisure resorts in Kazakhstan, CAGR of its incoming visitors reached 5% during 2017-2021. The growth was caused by an increase in the popularity of local resorts.
- According to the State Programme for the Development of the Kazakhstan Tourism Sector for 2019-2025, Schuchinsk-Borovoye has the potential to receive over 2 million tourists per year, and is in the top-10 potential areas for the development of tourism.

### Investment attractiveness of the project:

- Investment – US\$ 6,850 thousand
- Project NPV – US\$ 3,592 thousand
- IRR – 25.2%
- Payback period – 6.56 years

### What is the attractiveness of the project?

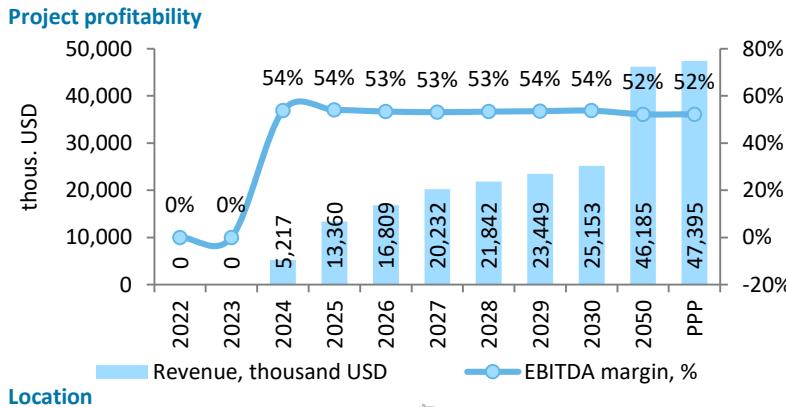
- Unique location.** The mountain terrain makes the location attractive all year round, including hotel accommodation, ecotourism, athletic training and other forms of leisure.
- Well-developed transport infrastructure.** The presence of developed transport infrastructure will allow tourists to quickly get to entertainment and tourist spots in Burabay, while athletes will be able to quickly go to the sports facilities located in the area.
- State support.** The government actively supports country's tourism sector. Moreover, state support measures include partial reimbursement of costs for the purchase of ski equipment and construction of tourist structures.
- Low levels of competition.** The complex currently has no direct competitors in terms of variety and quality of services for professional athletes.

### Investment proposal

The Project requires investment of US\$ 6,850 thousand, of which:

- 30% -50% (US\$ 2,055-3,425 thousand) – participation of the Investor, by providing temporary financial assistance with subsequent return within 7-8 years
- 50%-70% (US\$ 3,425-4,795 thousand) – debt financing with a repayment period of 7-8 years

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 the Kaskasu Tourist and Recreation Centre in the Kaskasu gorge

### Commercial products

When reaching full design capacity it is planned to serve annually:

- Winter season: skiers – 198 thous. people, hikers – 161 thous. people, additional services – 145 thous. people.
- Summer season: hikers – 321 thous. people, additional services – 185 thous. people.
- Total: 680 thous. people per year with the potential for growth

### Investment attractiveness of the project:

Investment – US\$ 74,413 thousand  
Project NPV – US\$ 4,851 thousand  
IRR – 15.0%  
Payback period – 9.77 years

### What is the attractiveness of the project?

- Year-round availability and attractive location.** Turkestan Oblast has the potential to develop niche tourism thanks to its unique natural characteristics. Winters tend to be relatively snowy and good for skiing, while summers are relatively warm.
- Tourism growth.** Kazakhstan is close to countries where international tourism is popular, which helps increase inbound tourism from these countries. Tourist numbers should increase to 2.5 million by 2025 within the framework of tourism development plans.
- Growing demand.** According to the National Statistics Agency, the Tolebi District has shown the greatest tourism growth in Turkestan Oblast in the last five years. Visitor numbers increased five-fold, which led to the construction of a large number of resorts and recreation sites.

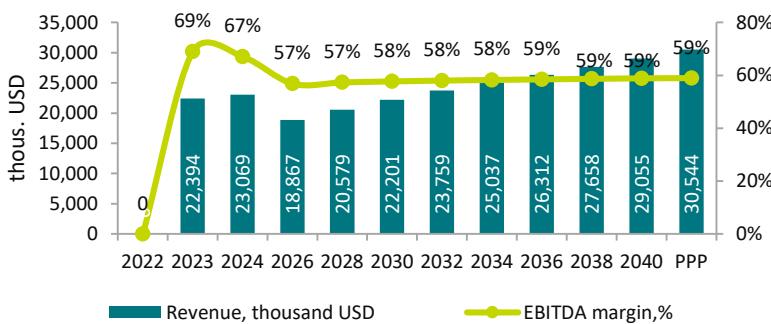
### Investment proposal

The Project requires investment of US\$ 74,413 thousand with the following conditions:

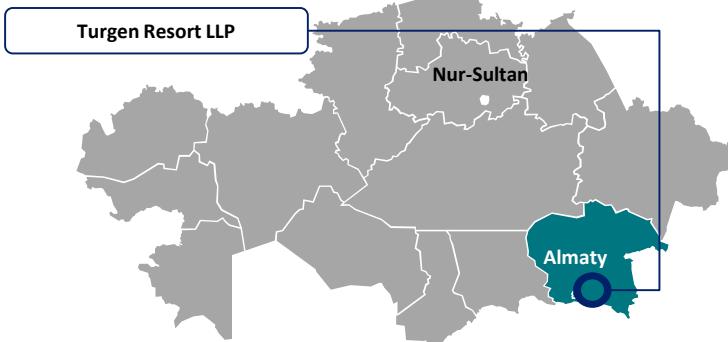
- Providing a foreign investor with a 66% participation share in the Project;
- Organization by the investor of 100% financing of the Project at the rate of 0%.



## Project profitability



## Location of the project



## 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.

### Investment attractiveness of the Project:

Investment – US\$ 98,133 thousand

NPV – US\$ 19,869 thousand

IRR – 13.6%

Payback period – 8.8 years

### 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 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.

### 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).

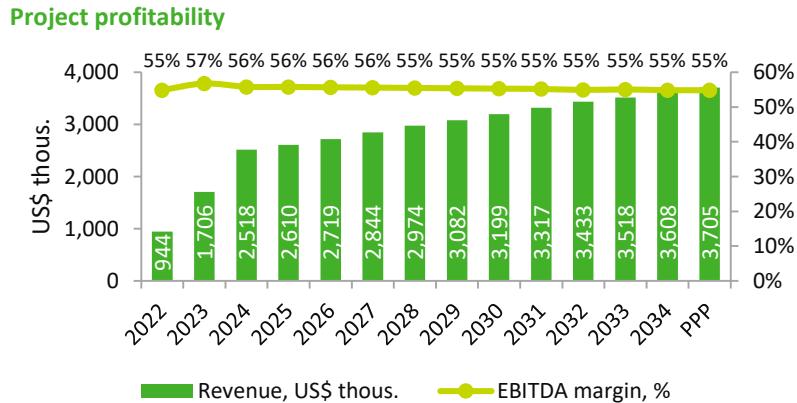
**• Unique country location.** Kazakhstan is in close geographic proximity to countries with higher international tourism levels, which opens the possibility of increasing incoming tourism. The location is a 1-2-hour car journey from major Kazakhstan city - Almaty. After commissioning, the Initiator will become the only supplier of tourist services in the middle price segment in the unique mountainous area of the Turgen gorge.

### Investment proposal

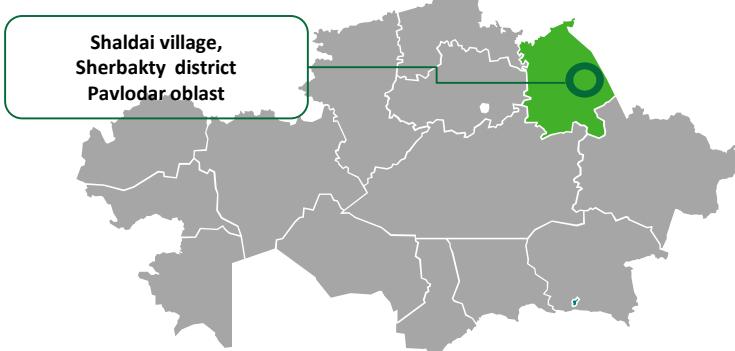
The Project requires investment of US\$ 98,133 thousand, of which:

- 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.



#### Location of the Project



## Construction of a hotel and water park in Pavlodar Oblast

### Product

The number of rooms of the hotel - 70 rooms; namely, standard rooms - 50; luxury rooms - 20.

### Investment attractiveness of the project:

Investment – US\$ 7,147 thousand

NPV – US\$ 2,951 thousand

IRR – 20.1 %

EBITDA return – 55.4 %

Payback period – 6.9 years

Discounted payback period – 11.44 years

### Project

The Project envisages 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 on domestic and overseas tourism. Approximately 291 billion tenge (73%) of that amount was spent in Kazakhstan.

### What is the 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.

**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

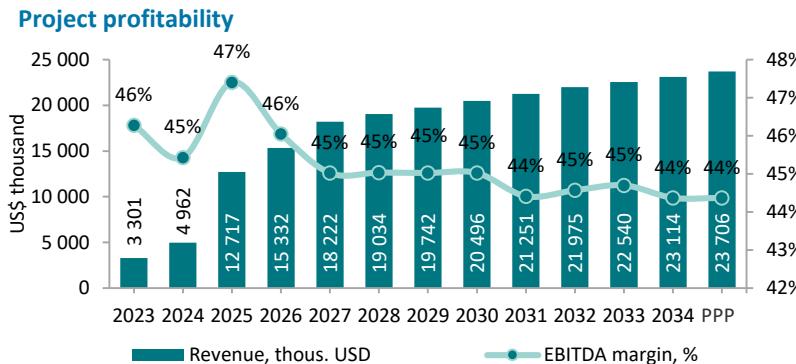
The Project requires investment of US\$ 7,147 thousand, of which:

- 70% (5,003 thousand USD) – debt financing subject to collateral;
- from 30 % (2,144 thousand USD) – investor participation.

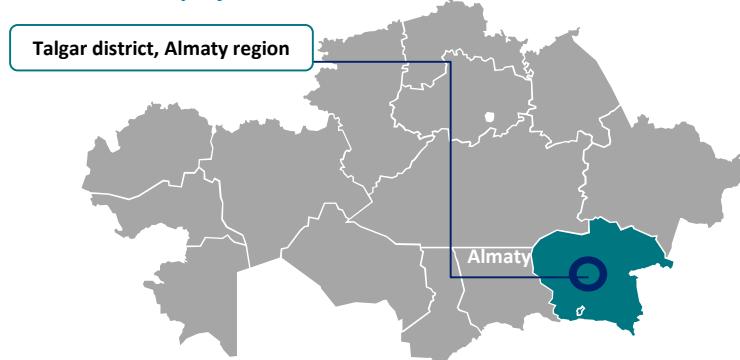
The proposed financing structure and state support measures are indicative. The final financing structure and Project interests will be determined based on the results of negotiations with the investor.

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.



## Location of the project



## 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. m; 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.

# Health-improving and tourist complex Verkh-Katun in East Kazakhstan oblast

KAZAKH INVEST  
Investment proposal  
August 2020

## Tourism

15089km NEW YORK  
10761km BEIJING  
18946km LONDON  
124km AKSHARBAK

### Project description:

Construction of a health-improving and tourist complex Verkh-Katun in the Katon-Karagai region of the East Kazakhstan oblast. Project will create 16 additional workplaces.

### Location:

East Kazakhstan oblast, Katon-Karagai region, Aksharbak village

### Initiator:

Verkh-Katun LLP - has its own farm for breeding marals, based on a small hotel complex provides pantotherapy services.

### Provided services and potential clients:

The room fund includes 50 standard rooms; 4 junior suites and 4 suites. The target market of the resort is lovers of recreational tourism and nature living in the country and abroad.

### Advantages:

- An ecologically favorable area with unique nature, high mountain climate and clean air;
- A wide range of entertainment to cover the interests of all segments of visitors;
- The presence of a large land plot will allow expanding the area of the LOK and the range of services.

### Types of services provided on the territory of the complex

- Hotel complex for 58 rooms
- Medical block. Providing pantotherapy services
- Other services. Services for the organization of hunting and fishing.

### Investment attractiveness of the Project

Indicator	Results
Investment amount, US\$ thous.	5,478
Project NPV, US\$ thous.	3,121
IRR, %	19.3%
EBITDA yield, %	61%
Payback period, years	6.96
Discounted payback period, years	11.85

### Investment structure



Construction and assembly work

50%

\$2.7 mln



Machinery and equipment

50%

\$2.7 mln

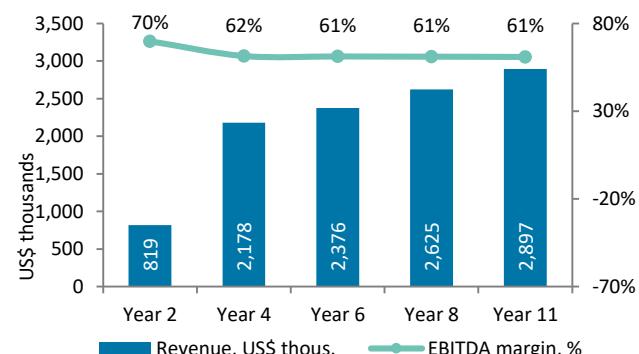
### Prerequisites for implementation of the Project

**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.

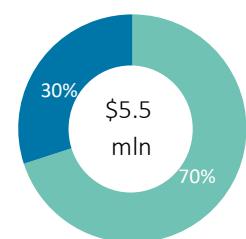
### Project Profitability



### Financing structure

Debt financing subject to collateral  
70% (\$3.8 mln)

Participation of the Investor  
from 30% (\$1.6 mln)



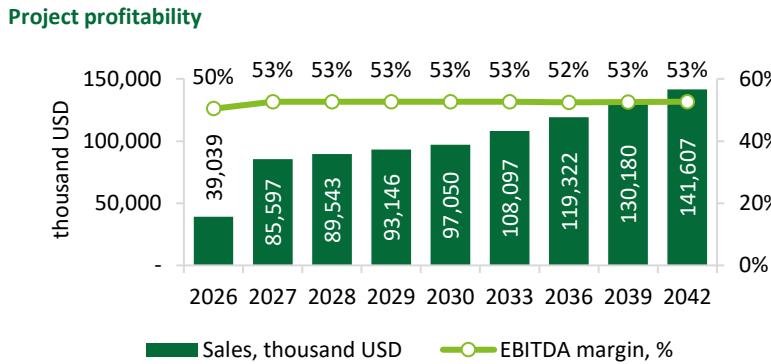
*The proposed financing structure is indicative, the final financing and Project participation structures will be determined based on the results of negotiations with the Investor.*



KAZAKH INVEST  
NATIONAL COMPANY



## ***OTHER PROMISING SECTORS***



#### Project location



## Construction of the GTES Gas Turbine Power Plant 280 mW

### Products

All electricity sales are due to be made in Kazakhstan. The annual production and sales of electricity will exceed 2,000 million kWh when it reaches its projected capacity.

### Investment attractiveness of the project:

Investment amount – 224,000 thousand USD;  
Project NPV – 75,595 thousand USD;  
IRR – 18.5%;  
Payback period – 7.5 years;  
Discounted payback period – 12.7 years.

### Project

The project envisages the construction of a 280 mW gas turbine power plant (GTPP) in the Zhetygen Rural District, Ili District, Almaty Oblast.

#### Current Project status:

- A Project concept has been developed and work is being done to draft a feasibility study;
- License No. 1902476 was received from the Ministry of the National Economy to purchase electricity for supply purposes from 7 June 2019;
- A technical specification is available to plan and receive a gas pipeline and land plot for a 50 thousand m<sup>3</sup> /hour AGDP to supply gas to the GTPP from the Baiserke-Kapshagai main gas pipeline.

#### Project Initiator

Kaz Energo Trade LLP has been involved in implementing power-related projects since 2017, including electricity production and distribution. Company personnel has experience in design, construction and commissioning of the main gas pipeline Almaty-Kapshagai, power transmission line 10/110/220 kV over 400 km long, 38 substations 110 and 220 kW, a gas liquefaction plant in Kapshagai, Zhanazhol GTPP and others.

#### Market overview

- Electricity is produced in Kazakhstan by 207 power plants of various types of ownership. As at 1 January 2023, power plant capacity in Kazakhstan totalled 24,523.7 mW, and available capacity – 20,761.7 mW.
- In 2023-2029, the average electricity deficit should be 1.22 billion kWh. By 2029, over 80% of electricity (115 billion kWh) will be generated by existing capacity, while roughly 26 billion kWh will be generated through the introduction of new power plants.

### What is the attractiveness of the project?

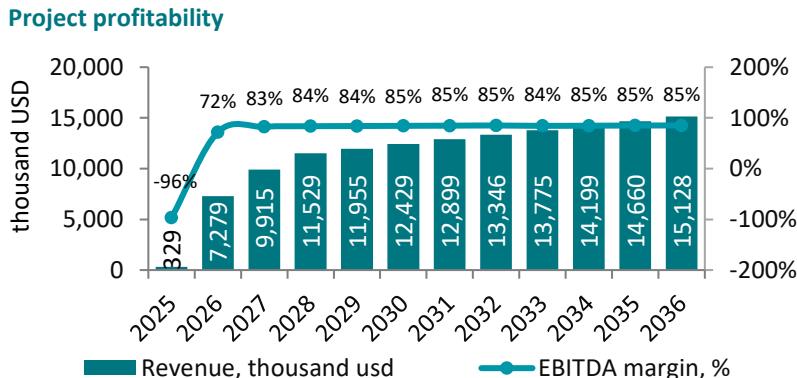
- **High demand.** Almaty Oblast is an energy deficient region, where electricity consumption nearly doubles production. In 2022, the deficit was roughly 4 billion kWh. Furthermore, due to active development in the oblast, the expectation is that the burden on the Almaty-Konayev-Oskemen hub will increase and the shortage of electrical capacity of about 650-700 MW. In addition, energy production is complicated by the fact that, to date, about 56% of power generation equipment has been in operation for more than 30 years, and physical wear is as high as 60%, more than halving the efficiency (efficiency) of power plants.
- **Eco-friendliness.** The use of coal as the main fuel in electricity production across the country creates irreparable damage to the environment and climate. For this reason, the country is introducing a policy of transitioning coal power plants to those operating on gas and renewable power sources
- **Capacity increase and new sales markets.** Access to resources and the use of innovative technology will help increase production capacity and diversify the customer base, and also help develop thermal energy production.

#### Investment proposal

The Project requires investment of 224,000 thousand USD (at the rate of 449.2 tenge), which:

- 70% (156,800 thousand USD) - debt financing subject to collateral;
- 30% (67,200 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 location



## Construction of a data processing center

### Product

When full capacity is reached in 2028, the Company plans to lease 240 IT-desks annually to Kazakhstan consumers.

### Project investment attractiveness:

Investment amount – 26,769 thousand USD;

Project NPV – 4,076 thousand USD;

IRR – 25.5%;

Payback period – 5.71 years;

Discounted payback period – 11.63 years.

### Project's attractiveness

- **High quality of provided services.** The Tier III data center has multiple power and cooling options, as well as systems for hot upgrades and maintenance. Tier III has an expected uptime of 99.982% (1.6 hours of downtime per year), Tier II is 99.741% (22 hours of downtime per year).

- **Advantageous Project location.** The Project site is 5 km from Almaty, which simplifies IT-specialist access to technical maintenance. Almaty is home to the greatest number of companies (5,641) using cloud services, such as banks and financial institutions, trade and healthcare enterprises.

### Project

This investment project (the “Project”) envisages the construction of a 2 mW cloud data centre for 240 IT-desks (“DPC”), which meets TIER III Uptime Institute standards. The Project stipulates the creation of a server centre with full engineering and technical infrastructure to provide co-location services (a service that allows clients to hold their servers and other equipment at centre desks and facilities).

### Company

Bastau Project LLP is an engineering company whose main activity is DPC construction in Kazakhstan, and which has experience of building 7 DPC for JSC Transtelecom, as well as performing state reviews and certifying Tier III Uptime Institute standards. The Initiator also holds a category 1 construction, assembly and planning license as well as CT PK ISO 9001-2016, 14001-2016, 45001-2019 certificates.

### Market

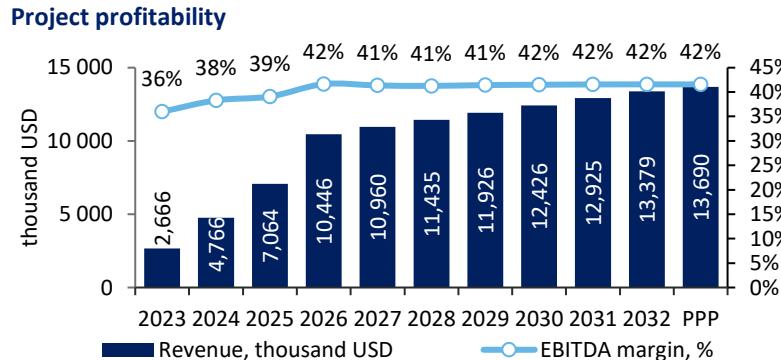
- According to Gartner, the global data centre market is predicted to grow from 280 billion USD to 565 billion USD in 2023-2032, with CAGR at 7.3%.
- The Kazakhstan commercial data centre market is in the active growth stage. According to iKS-Consulting, the number of desk spaces in commercial DPC doubled in 2019-2022 to 2.45 thousand. There was also a significant increase in commercial DPC revenue from 24 million to 39 million USD in the same period. According to iKS-Consulting, the market will be worth 57 million USD by 2025.

### Investment proposal

The Project will require funding of 26,769 thousand USD (at the rate of 449 tenge), of which :

- 75% (20,077 thousand USD) - debt financing subject to collateral;
- 25% (6,692 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 location



## Medical SOS alarm

### Products and services

All the volume of products and services is planned to be sold in the domestic market. Planned capacity, which is planned for 2026, envisages the installation of 8,000 "medical SOS alarm" systems across Kazakhstan.

### Project

The project envisages the installation and servicing of a "medical SOS alarm" system (the "System") in medical facilities to provide emergency medical care to patients. The system provides remote communication between patients and medical personnel using a special bracelet and devices installed in the medical facility with an "SOS" button. The system helps patients call medical personnel in an emergency by pressing the button.

### Project Initiator

Human Safety Institute LLP holds utility model patent No. 7759 from 20 January 2023 in the State Register and copyright No. 1686 from 25 August 2015 and No. 0001 from 3 January 2018 to produce, install and service "medical SOS alarm" patient safety risk management systems.

### Market Overview

- According to Marketline, the medical service supplier market is expected to grow mainly due to backlog demand for deferred treatment and healthcare budget increases in Kazakhstan. The market is predicted to grow from 6.1 billion USD in 2022 to 7.5 billion USD in 2027, with CAGR at 4.2%.
- In 2021, there were 3,942 medical facilities registered in Kazakhstan, of which 80% were out-patient clinics and 20% - hospitals.
- In 2021, the number of illnesses/diseases registered in the country totalled 101 thousand cases per 100 thousand persons. The five most common illnesses/diseases, which account for 63% of all cases in Kazakhstan, are respiratory, circulatory, urinary tract, digestive system and endocrine system disease.

### Investment attractiveness of the project:

Investment amount – 9,000 thousand USD;  
Project NPV – 8,208 thousand USD;  
IRR – 37.9%;  
Payback period – 4.3 years;  
Discounted payback period – 5.9 years.

### What is the attractiveness of the project?

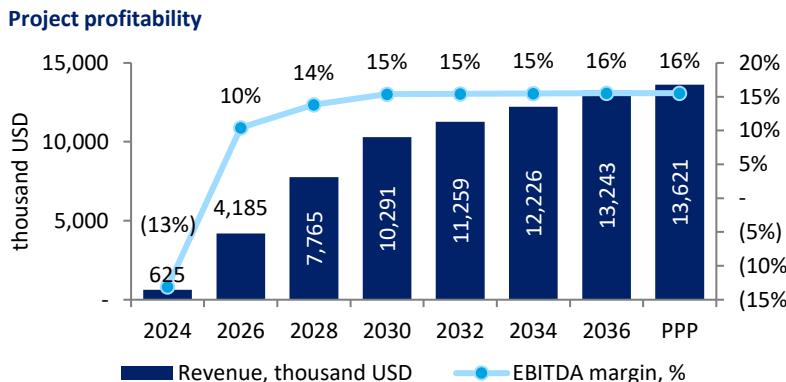
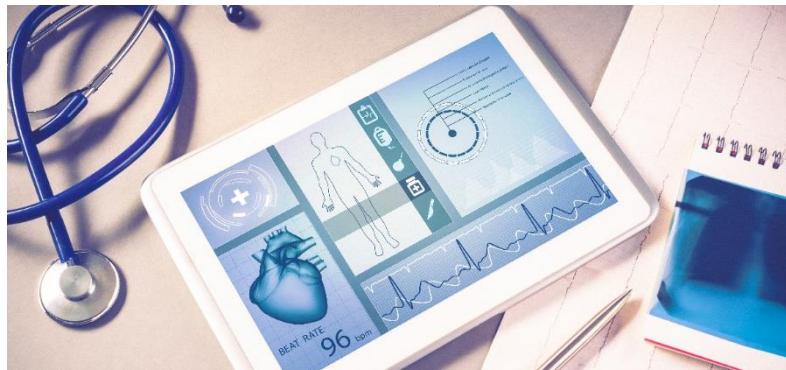
- Initiator experience.** The Initiator has 10 years of experience in developing and applying information and communication technology in the healthcare sector. The Company has already installed the "medical SOS alarm" system in over 160 medical facilities. In 2022, the Company installed the System in 29 medical facilities and offered maintenance services in 123 organisations.
- Advantageous production location.** The Akmola agglomeration is home to 52 hospitals (state-owned and private), all of which are treated as potential System customers. It also has well-developed transport infrastructure, which creates ideal conditions for serving medical facilities in various regions of the country, meeting safety needs and improving the quality of medical care.
- State support.** The Project is recognised as a priority for state support, which takes the form of concessions, preferences and land grants. The Company is a member of the "Astana Hub" digital techno park, where tax concessions and support measures are provided for start-up projects.

### Investment proposal

The Project requires investment of 9,000 thousand USD (at the rate of 449.2 tenge), of which:

- 70% (6,300 thousand USD) - debt financing subject to collateral;
- 30% (2,700 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.



## Full medical programme with cardiovascular disease patients using Data Science technology

### Products and services

In the period 2025-2036, an average of around 575,000 online consultations per year are projected for clients from RK.

### Project

The project envisages updates and integration with state information system databases to provide artificial intellect-based online consulting to cardiovascular disease patients. Current Project status:

- a website has been developed ([remedii.me](http://remedii.me)) while a IOS and Android mobile apps are available on App Store and Google Play, respectively;
- server equipment has been purchased;
- medication reminder and a sudden death risk calculator have been added;
- it has been integrated with the "Smart ECG" platform to provide access to ECG results through the Remedii service;
- the mobile app has been integrated with smart watches to transfer health and physical activity data;
- agreements have been signed with doctors and the organizations of Dariya-Med LLP and Dokazatelnaya Cardiologiya.

### Project Initiator

Remedii LLP develops cardiology-based online consulting systems. The founder holds copyright No. 32359 from 6 February 2023 to the Remedii information system.

### Market Overview

- Circulatory disease (or cardiovascular disease) is the second most common illness/disease in Kazakhstan. Cases grew at an annual rate of 5.3% in 2017-2020.
- Implementation of the healthcare digitalization development concept was supported in the "Densaulyk" programme for 2016-2019 and continued in the healthcare development programme for 2020-2025. Regulatory acts regulating remote medical services are currently being developed.

### Investment attractiveness of the project:

Investment amount – 401 thousand USD;

Project NPV – 1,161 thousand USD;

MIRR – 28.3%;

Payback period – 5.5 years;

Discounted payback period – 7.1 years.

### What is the attractiveness of the project?

- **Project team experience.** Project team specialists have over 10 years of experience in cardiology, and also in developing and using information and communication technology in healthcare. As at the end of 2023 Q1, the mobile app had been loaded 111 times and over 50 online consultations carried out, 8 doctors and 4 medical organizations registered.
- **Service flexibility.** The Remedii information system for online doctor consultation is easy to use and provides access to medical services at any time and in any location. Users have access to consultations from leading Kazakhstan specialists without the need to visit a clinic.
- **Capacity increases and product line expansions.** The availability of resources and use of innovative technology help increase production capacity and expand CIS sales markets. The Company plans to expand its product range by developing online consulting for other areas of medicine.

### Investment proposal

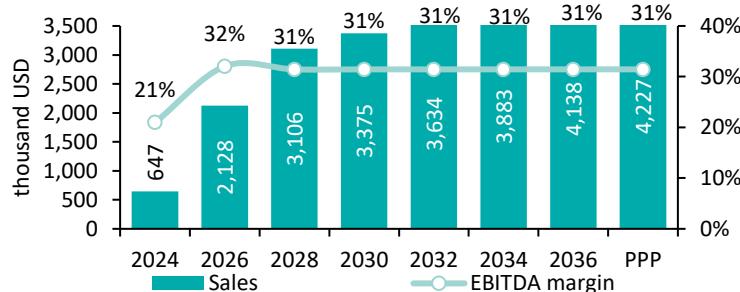
The Project requires investment of 156 thousand USD (at the rate of 449.2 tenge), of which:

- 70% (109 thousand USD) - debt financing subject to collateral;
- 30% (47 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**



**Project location**



## Start-up of the production of industrial 3D printers

### Products and services

At full design capacity in 2027 annual production will be 280 printers and 50 3D printing orders. The main sales market is the domestic market of the Republic of Kazakhstan.

### Investment attractiveness of the project:

Investment amount - 524 thousand USD;  
Project NPV – 2,393 thousand USD;  
MIRR – 46.5%;  
Payback period – 1.95 years;  
Discounted payback period – 2.06 years.

### What is the attractiveness of the project?

- Staff qualifications and flexible approach to clients.** The Company's specialists have knowledge and expertise in 3D printing allowing for the prompt and efficient execution of customer orders. The company uses an innovative technology and so can vary the size and cost of the final product depending on the scale of printing. The Company's clients have the opportunity to choose the best options that meet their needs and effectively use the allocated resources.
- State support.** The plan is to receive investment preferences within the framework of the Project such as subsidies, exemption from taxes and customs duties.

### Investment proposal

The Project requires investment of US\$ 524 thousand (at the rate of KZT/USD 446 tenge), of which:

- 70% (US\$ 367 thousand) – debt financing subject to collateral;
- 30% (US\$ 113 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 envisages the production of modular industrial 3D printers and provision of 3D printing services in the city of Astana. Project implementation will allow the organization of linear production of 3D printers for printing strong plastic and reduce the dependence of Kazakhstan-based manufacturers on imports of parts necessary for production.

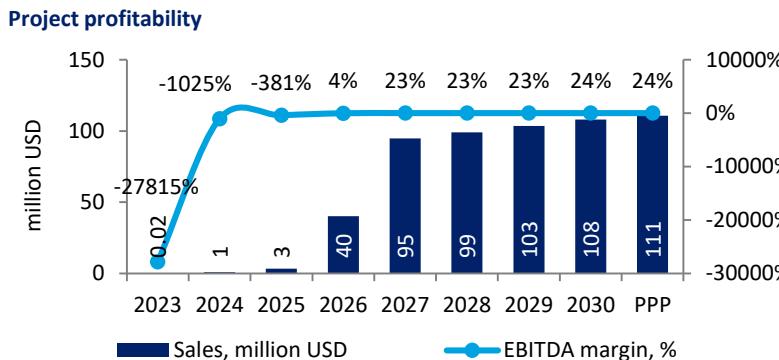
Currently large industrial printers have been installed: SL-1000 printer at Nazarbayev University and SL-500 printer at American Corner of the Eurasian National University named after L.N. Gumilyov.

### Project Initiator

Spacelab LLP was founded in 2021 in Astana to produce modular industrial 3D printers and provide 3D printing services. The Company's staff includes professionals with 15 years of prior experience in the aerospace industry and satellite technology (design and components).

### Market overview

- The global market for additive manufacturing, also known as industrial 3D printing, is expected to reach \$58.46 billion in 2029 at a compound annual growth rate of 19%.
- In 2022, sales of 3D printing equipment accounted for 65% of the total volume of the global additive manufacturing.



## YouInWay software development: the combined ride

### Products

At full Project full capacity in 2027 it will reach the sales volume of 5 3 million air tickets, 11.4 million rail tickets and 11.7 million bus tickets.

### Project

The Project envisages the development and implementation of YouInWay, an online travel plan search platform for any distance (airplane, train, bus, car and ferry routes). The software will be configured to search for optimal itineraries based on customer price requests, thereby replacing the services of travel agencies. The Company's revenues will include commissions from ticket sales through the direct channel (website, mobile app), B2B channel (in partnership with banks and other services) and franchising.

### Company

Private company YouInWay Ltd. (a member of the AIFC and AstanaHub) enters the market on the basis of IT Technologies LLC (all assets will be transferred to the balance of PC YouInWay Ltd., which will become the legal successor and copyright holder of the developments of IT Technologies LLC). The Company has more than 10 years of experience in automation of travel services, hotels, transportation, creation of ticketing terminals, air and railway ticket distribution and B2B sales.

### Market

- In 2020, the market volume of the global travel and tourism industry decreased by 43.5% compared to 2019 and amounted to \$ 4,468 billion. United States. The main reason for the recession is the pandemic COVID-19. CAGR for the period 2016-2020 amounted to -10.5%. By 2025, the global travel and tourism industry is projected to reach \$8,452 billion in value terms. Us dollars, an increase of 89.1% compared to 2020, the compound annual growth rate of the market for the period 2020-2025 is projected at 13.6%. Catering is the largest segment of the global travel and tourism industry market, accounting for 49.5% of total value. The share of the segment of tourist intermediaries accounts for 24.6% of the market.
- By 2026, the global tourism and pre-order services market is projected to reach \$556 billion. Us dollars, an increase of 108.9% compared to 2021, the compound annual growth rate of the market for the period 2021-2026 is projected at 15.9%.

### Investment attractiveness of the project:

- NPV – 16,835 thousand USD
- IRR – 30.1%
- Payback period – 6.6 years
- Discounted payback period – 8.6 years

### What is the attractiveness of the project?

- Experience.** The company has more than 10 years of experience in automation of travel services, hotels, transportation, creation of ticketing terminals, distribution of air and railway tickets and B2B sales, including successful integration of the ticketing project with PrivatBank in Ukraine. The Initiator experience will allow to implement high quality service, starting from ticket sales for different modes of transport and ending with car rent and hotel booking services.
- Approbation of the service in test mode.** In September 2021 the Initiator developed and tested the alpha-version of the product (combination of air and rail offers) in Ukraine and part of Europe. Moreover, a website and a progressive web-application (PWA) were developed.
- Low levels of competition.** This Project will introduce a unique travel search tool that meets just such requirements.

### Investment proposal

The Project requires investment of 28,476 thousand USD from 2023 to 2026, consisting of investor's contribution (100%). Shares of participation in the Project will be determined by the results of joint negotiations with the investor.

# The development of software and technological equipment in the field of logistics

## 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.

## Key investment indicators

Indicator	Results
Investment amount, US\$ thous.	10,975
Project NPV, US\$ thous.	78,233
IRR, %	28.7%
EBITDA margin, %	63%
Payback period, years	6.5
Discounted payback period, years	7.4

## Project location: Nur-Sultan, st. Mambetova 24



## Market prerequisites

### Growth of the mail and logistics market.

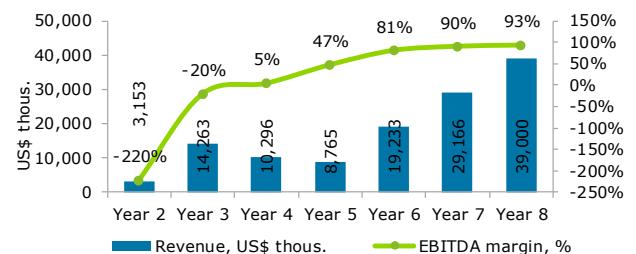
Globally as well as in Kazakhstan, the general trend of growth in the volume of postal and courier services could be admitted. In particular, the volume of postal and courier services rendered within the market of Kazakhstan is estimated at KZT 33,688 mln in 2018, which is 16% higher than the same indicator 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%.

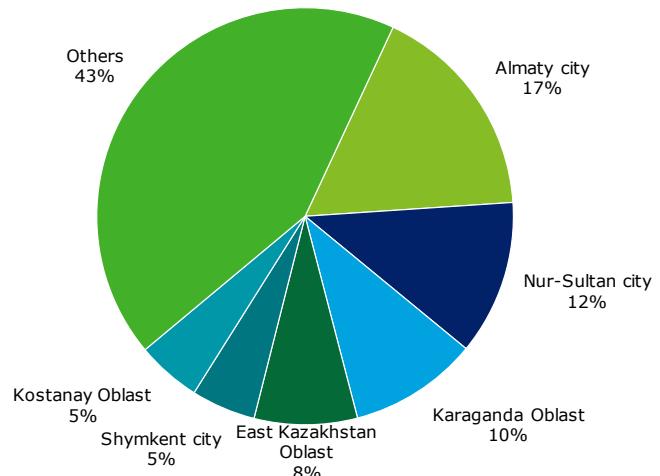
### Growth in demand for postamat services.

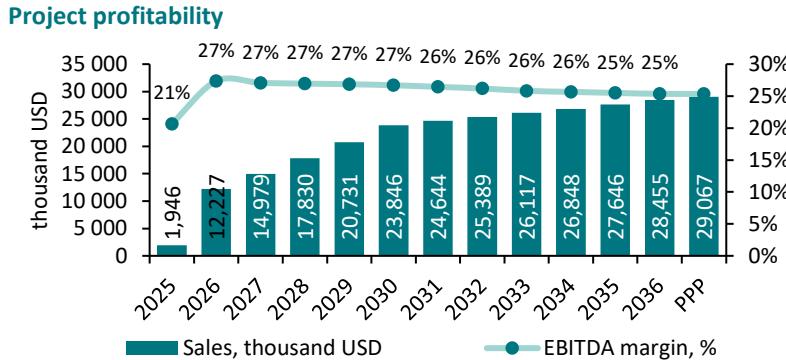
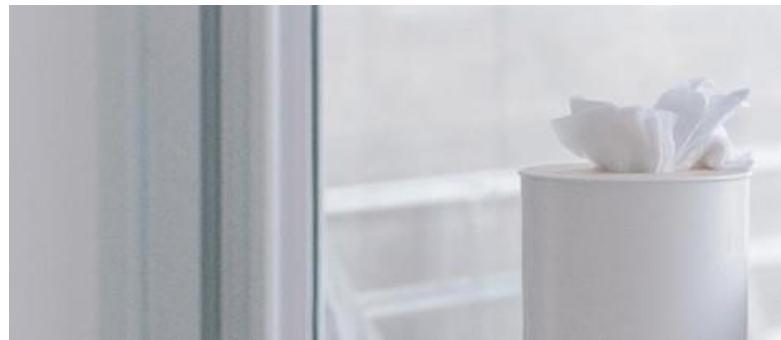
Accordingly to a described reasons, operators launched an active adaptation of postamats into the market of Kazakhstan. Currently, there are over than 400 parcel lockers installed across the Kazakhstan. Moreover, it is expected to install additional 1,500 postamats by 2020.

## Project profitability



## The number of postamats by regions of RoK, 2018





## Project location



## Production of sanitary paper products

### Products

The plant is due to be commissioned in 2025 and full capacity reached in 2030. Annual sales volumes will amount to 48,960 thousand units of toilet paper rolls per year, 4,680 thousand units of jumbo rolls per year, 2,376 thousand units of paper towels per year. The Company plans to sell 80% of its product in Kazakhstan and export the remainder to other CIS countries.

### Project

The project envisages the construction of a factory to produce paper products in Aktobe Industrial Zone in Aktobe region.

At the moment, a 1.7 ha has been leased in the Aktobe region. Discussions are being held with equipment suppliers from China.

### Project Initiator

Lucrum Star LLP was created in 2018 and owns the Mereke, Romashka, Sakura and Jumbo sanitary paper product brands. Current company production unit capacity is 3,335 tonnes of base paper per year, which is the equivalent of 23 million rolls of toilet paper.

### Market Overview

- The global paper product market was worth 563.53 billion USD in 2022. The Business Research Company is predicting that it will be worth 760.31 billion USD by 2027. The sanitary paper product market accounted for 10% (55.9 billion USD) of the total paper product market in 2022.
- In 2022, sanitary paper product production in Kazakhstan was worth 68.5 million tonnes, which is 16% lower than in 2021. CAGR for production in 2018-2022 was -0.29%.
- Exports of sanitary paper products increased from US\$ 9.9 billion in 2018 up to US\$ 11.8 billion in 2022 at a CAGR of 4%.
- Imports of sanitary paper products increased from US\$ 10.5 billion in 2018 to US\$ 12.1 billion in 2022 with CAGR of 4%.

### Investment attractiveness of the project:

Investment amount – US\$ 6,823 thousand USD;

Project NPV – US\$ 4,502 thousand USD;

IRR – 36.8 %;

Payback period – 5.05 years

Discounted payback period – 7.14 years

### What is the attractiveness of the project?

- Advantageous location.** Basing production in Aktobe Oblast secures access to a well-developed and extensive rail and road system that enables the delivery of both raw materials as well as finished products to neighbouring regions and CIS countries. The Project location also provides access to a large sales market. Aktobe Oblast is home to over 535 thousand persons, while the population of Aktobe, the region's administrative centre is 222 thousand. The population of the neighbouring Mangistau, Atyrau and West-Kazakhstan Oblasts is roughly 2.1 million.
- Production expansion.** The Company owns the Mereke, Romashka, Sakura and Jumbo sanitary paper product brands. The factory will help supply the domestic market with quality product and reduce sanitary paper product imports into Kazakhstan, which accounted for 39% of total consumption (16,823 tonnes) in 2022.

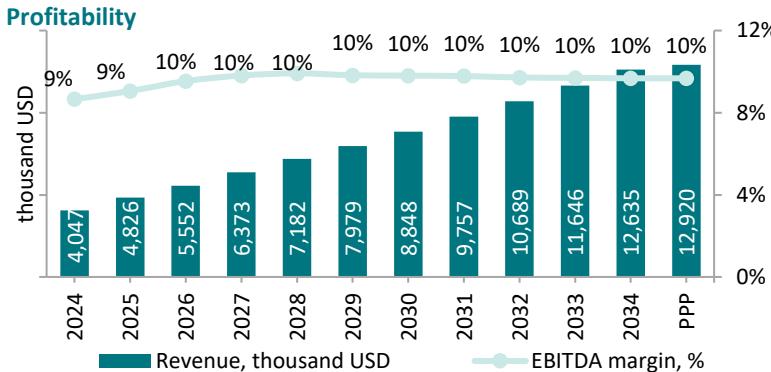
### Investment proposal

The Project requires investment of US\$ 6,823 thousand, of which:

- 70% (US\$ 4,776 thousand) – investor participation;
- 30% (US\$ 2,047 thousand) – initiator's 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. The investment allocation is as follows:

- 42% (US\$ 2,895 thousand) – machinery and equipment;
- 41% (US\$ 2,818 thousand) – buildings and structures;
- 10% (US\$ 704 thousand) – others;
- 6% (US\$ 406 thousand) – working capital.



## Project location



## Development of the Abai clothing factory

### Product

Sales volumes upon reaching full design capacity in 2034 will be as follows:

- workwear (summer) – 38.4 thous. pieces;
- workwear (winter) – 36 thous. pieces;
- mass-market (clothes and bedding, summer) – 40 thous. pieces;
- mass-market (clothes and bedding, winter) – 36 thous. pieces.

The plan is to sell the entire output on the domestic market.

### Project

The Project provides for the expansion of the production capacity of an existing business, the Abay clothing factory located in the city of Abay, Karaganda Oblast. The territory of the industrial facility is fenced, the access roads are paved, the factory is connected to the central power supply and heat supply.

### Initiator

The initiator of the Project is Stezhok LLP which operates a production facility such as a clothing factory in the city of Abay, Karaganda Oblast. The factory specializes in the production of workwear and clothing for the mass market. The annual production volume is beyond USD 650 thousand. The sales geography of the Company's products covers all regions of Kazakhstan. The main clients of the factory are Saryarka NAN LLP, Ulytau NAN LLP, Kazpacco LLP, Kazakh dorstroy LLP and Avtodor NS LLP (BI Group Holding). To sell clothing in the mass market segment, the Company has opened an online store aiming to expand its audience and include young people and city residents.

### Market

- In 2021, the global clothing market was valued at 610 billion USD. According to The Business Research Company, the market is projected to reach 831 billion by 2027. The market is expected to grow at a CAGR of 4.4% between 2023 and 2027.
- The global workwear market is expected to reach 51.11 billion USD by 2027 at CAGR (2021-2027) - 6.19%.
- The share of imports in the markets of tracksuits and outerwear in Kazakhstan is 89% and 99.6%, respectively. The average annual growth rate of production of tracksuits in Kazakhstan in 2018-2022 amounted to 4%. The average annual rate of decline in the production of outerwear in the country for the period 2018-2022 amounted to 23.8%.

### Project payback

Investment amount – 1,439 thousand USD

Project NPV – 1,510 thousand USD

IRR – 38.2%

EBITDA return – 10%

Payback period – 5.10 years

Discounted payback period – 6.80 years

### What is the advantages of the project?

- **Advantageous location.** Production located in the city of Abay will make it possible to cover the consumer market of Karaganda Oblast with a population of over 1.1 million people. Access to a developed and extensive network of railways and highways will facilitate the delivery of goods to neighboring regions (Ulytau, Abay, Zhetisu, Akmola, Pavlodar and Almaty oblasts), where over 4.6 million people reside.
- **Well-establishes sales channels.** Current annual output of the factory is over 650 thousand USD. Product sales cover all regions of the country. The main clients of the factory are Saryarka NAN LLP, Ulytau NAN LLP, Kazpacco LLP, Kazakh dorstroy LLP and Avtodor NS LLP (BI Group Holding). To sell clothing in the mass market segment, the Company has opened an online store aiming to expand its audience and include young people and city residents.
- **State support.** The project is included in the list of priority industries for the provision of government support, which framework allows receiving a number of benefits, preferences and in-kind grants.

### Investment and financing structure

The Project requires investment of 1,439 thousand USD (exchange rate: KZT 449), of which:

- 70% (1,008 thousand USD) – debt financing subject to collateral;
- 30% (432 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



## Project location



## Production equipment upgrade and launch of a five-ply cardboard production line

### Products

Upon reaching full design capacity by 2025, the projected sales volume of five-ply corrugated cardboard is 6,000 tonnes /year.

### Investment attractiveness of the project:

Investment amount – 4,000 thousand USD;  
Project NPV – 2,397 thousand USD;  
IRR – 35.9%;  
Payback period – 4.16 years.  
Discounted payback period – 5.95 years

### Project

The project envisages upgrading production equipment and launching a five-ply cardboard production line with capacity of 0.4 million square m per year at an already operational plant producing corrugated cardboard in Pavlodar.

Initiator has an established base of suppliers of paper and cardboard. A supplier of equipment from China has been determined.

### Project Initiator

Zavod Gofrotara LLP has been a leading corrugated cardboard producer in Kazakhstan since 2006, producing three-ply corrugated cardboard, knobbed egg trays and corrugated packaging with coloured stamps. Production capacity is 1 million paper bags per month. The Company has a constant client base consisting of food and pharmaceutical industry companies, including KEMMI Group LLP, Krendel LLP, Sultan-EMMK LLP and Gormolzavod LLP.

### Market Overview

- As of 2022, the volume of production of corrugated paper and cardboard in Kazakhstan amounted to 102 thousand tonnes, which is 70% more than in 2021.
- In 2022, the volume of production of corrugated boxes, boxes and bags in Kazakhstan amounted to 128 thousand tons with an average annual growth rate of 7.1% for the period 2018-2022.
- Imports of corrugated boxes and boxes from Kazakhstan increased from 17,174 thousand dollars. USA in 2018 to 21,536 thousand dollars. USA in 2022 with an average annual growth rate of 5.8%.

### What is the attractiveness of the project?

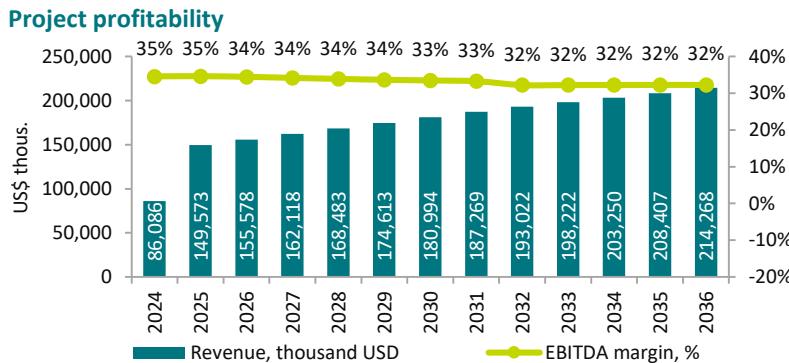
- Advantageous location.** The region has well-developed and extensive road and logistics infrastructure linking it to other regions and neighbouring countries. Pavlodar Oblast borders Russia, which ensures the efficiency of raw material supplies (paper and cardboard) for production purposes. The Project location also ensures access to the major Pavlodar Oblast sales market, which is home to over 755 thousand people. The population of the neighbouring North-Kazakhstan, Akmola, Karaganda and Abai Oblasts, as well as the city of Astana is roughly 4.4 million.
- Import substitution.** Project implementation will help reduce dependence on imported corrugated paper and cardboard in Kazakhstan, which accounted for 93.6% of the product in 2022, and ensure a supply of quality domestic product.

### Investment proposal

The Project requires investment of 4,000 thousand USD (at the rate of 449 tenge), of which:

- 70% (2,800 thousand USD) – debt financing subject to collateral;
- 30% (1,200 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.



## Location



# Production of straw pulp and paper goods

## Products

- 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. Main activities: wood pulp and cellulose production (CCEA: 17110) 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?

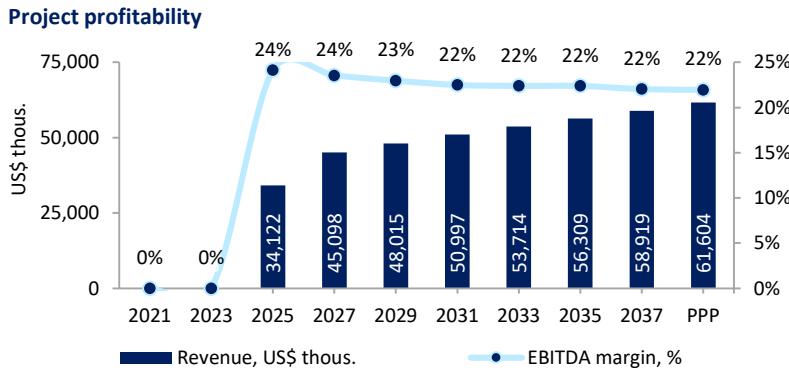
- Favourable location.** Akmola oblast is located in the central part of Eurasia, in the northwestern part of the Republic of Kazakhstan. This oblast has an extensive road and logistics infrastructure: highways of republican and regional significance pass through the region. Around 4% of Kazakhstan's 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

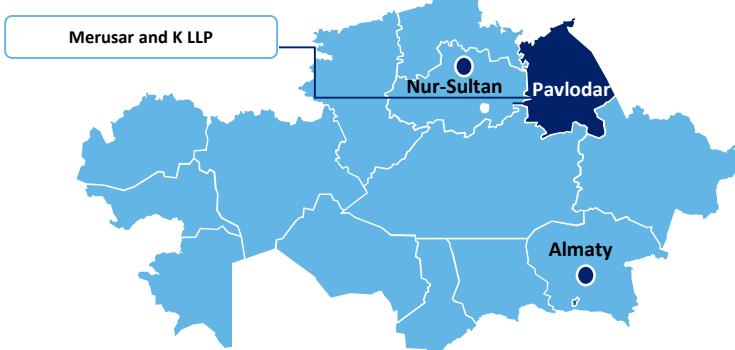
The Project requires investment of US\$ 148,332 thousand, of which:

- 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.



## Location



## Nonwoven manufacturing

### Commercial products

Annual capacity: Nonwoven fabric S – 198 tonnes; Non-woven fabric SS – 1,584 tonnes; Non-woven fabric SMS – 5,271 tonnes; Nonwoven fabric SMMS – 1,448 tonnes.

### 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?

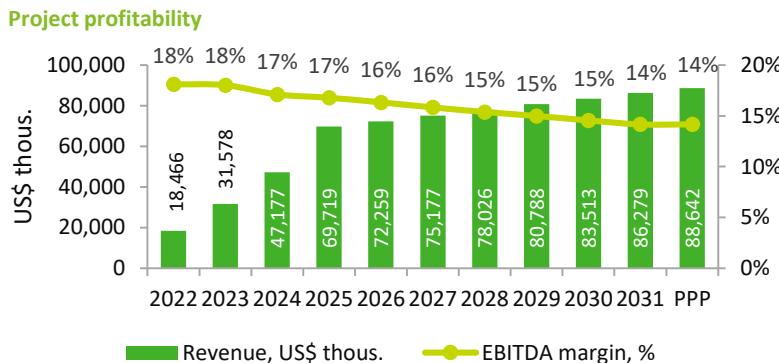
- Local content.** Local production will allow occupying a significant niche in the market of disposable medical devices, reducing import dependence.
- Initiator's experience.** The company has an extensive experience in the sale of medical devices (sterile and non-sterile kits for medicine and cosmetology) 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

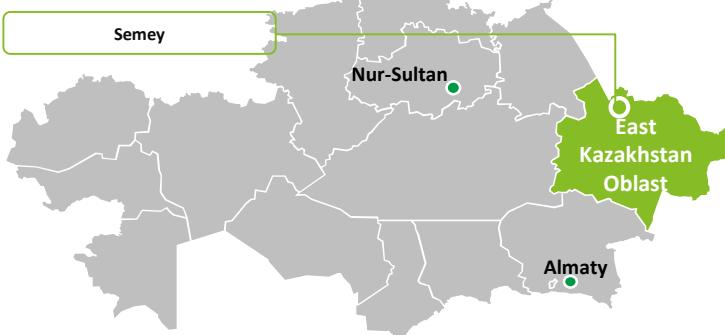
The Project requires investment of US\$ 43,591 thousand, of which:

- 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.



#### Location of the Project



## 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

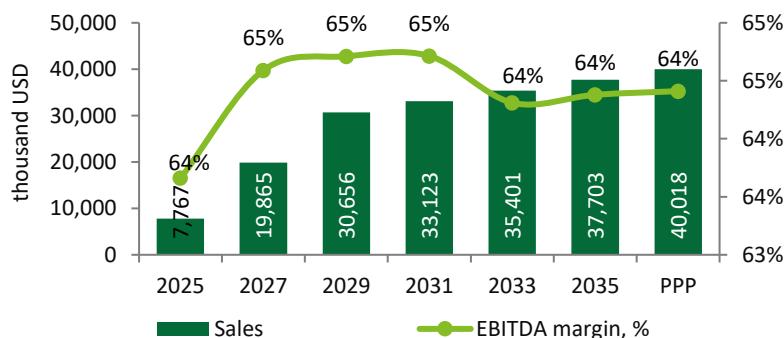
The Project requires investment of US\$ 20,000 thousand, of which:

- 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 profitability



## Location



## Creation of a techno-eco park and waste transfer stations in Kazakhstan

### Products

When design capacity is achieved in 2029, plant production levels will be as follows: ferrous metal scrap – 2,700 tonnes, non-ferrous metal scrap – 675 tonnes, wastepaper – 6,075 tonnes, glass fragments – 5,400 tonnes, PET bottles – 2,025 tonnes, PE granules – 8,750 tonnes, strapping tape – 2,000 tonnes, compost – 100,000 tonnes, RDF-fuel – 108,000 tonnes.

All product is due to be sold domestically.

### Project

This investment project envisages the creation of a techno-eco park with capacity to process up to 500 thousand tonnes of solid domestic waste per year in Almaty Oblast's Ili District. The techno-eco park will incorporate a waste processing with sorting lines, waste processing zones, and production lines to create alternative fuel, as well as 3 stations between the nearest villages in the Ili District for transferring waste.

The Spanish company IMABE IBERICA S.L., German companies HERBOLD, NAUE and STARLINGER, Italian company SOREMA & PREVIERO, as well as Austrian company EREMA have been chosen to supply equipment for the techno-eco park and waste transfer stations. A search is being carried out together with the Almaty Oblast Akimat to find a site for the plant.

### Company

Recycle Management Company LLP was founded in 2020 to realise the Project to create a techno-eco park. Under the leadership of the Chairman of the Supervisory Board, 3 waste processing plants were built in Kazakhstan.

### Market

- At the end of 2022, Almaty and Almaty Oblast generated 452 thousand tonnes and 429 thousand tonnes of solid domestic waste, respectively. Solid domestic waste processing and reuse were at 18% in Almaty and 17% in Almaty Oblast. The Almaty development programme for 2025 and average prospects for 2030 plan to increase the share of solid domestic waste processed to 32% in 2025 and 80% in 2030, and reduce waste generation at source by 2030 to 10%.

### Investment attractiveness of the project:

Investment – 69,737 thousand USD;  
Project NPV – 19,364 thousand USD;  
IRR – 21.4%;  
Payback period – 6.7 years;  
Discounted payback period – 11.6 years.

### What is the attractiveness of the project?

- Advantageous location.** Having the techno-eco park based in Almaty Oblast will help cover Almaty agglomeration consumer markets, where over 10 large and 38 medium-sized companies produce paper products, glassware, plastic items, and non-ferrous metal building structures. Project location will also ensure access to feedstock. The Almaty agglomeration generated over 800 thousand tonnes of solid domestic waste in 2022, ensuring sufficient reserves to feed a waste processing plant at full capacity.
- Ecological aspects.** Only 25.4% of solid domestic waste in Kazakhstan is currently processed, with the majority of it, roughly 74%, sent to landfill sites. In 2022, Kazakhstan recycled and buried a total of 2.6 million tonnes of waste, of which Almaty Oblast was responsible for 408 thousand tonnes. An effective solid domestic waste processing programme will help prevent mixed waste entering landfill sites and unsanctioned dumps, reduce the size and area of solid domestic waste burial sites, at the same time reducing ecological risks.

### Investment proposal

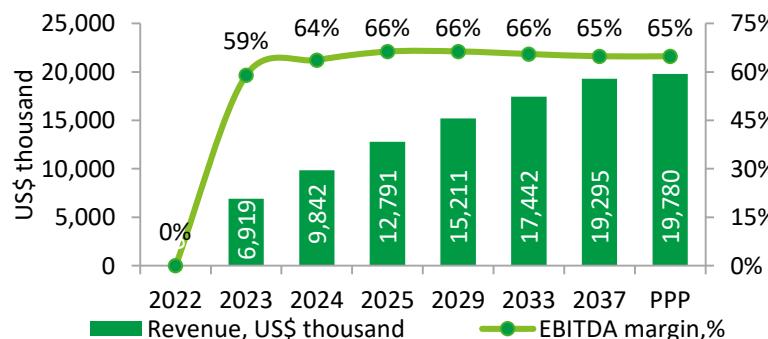
The Project requires an investment of 69,737 thousand USD (at the rate of 449.2 tenge), of which:

- 80% (55,790 thousand USD) - debt financing from JSC Zhasyl Damu;
- 20% (13,947 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



#### Project location



## 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 investment attractiveness:

Investment – 18,756 million USD  
Project NPV – 37,266 thousand USD  
IRR – 21.7%  
Payback period – 5.9 years

#### 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.

#### What is the project's attractiveness?

- 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..



## 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

Indicator	Results
Investment amount, US\$ thous.	16,713
Project NPV, US\$ thous.	28,418
IRR, %	25.7%
EBITDA margin, %	61%
Payback period, years	6.1
Discounted payback period, years	7.6

### 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.

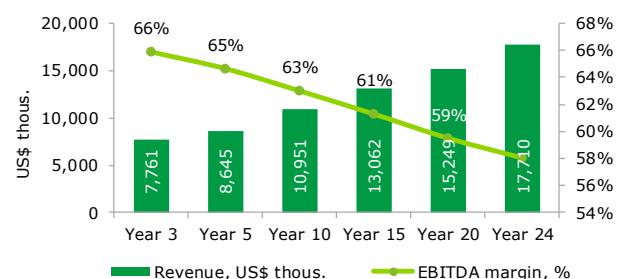
### Lack of competition in the region.

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



### 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.

## Modernization of the MSW management system in Pavlodar Oblast

### 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 Ekipastuz.

### Key consumers:

Household solid waste companies engaged in the recycling of secondary raw materials.

### Key investment indicators

Indicator	Results
Investment, US\$ thousands	6,427
Project NPV, US\$ thousands	9,631
IRR, %	13.8%
EBITDA returns, %	35%
Payback period, number of years	2.8
Discounted payback period, number of years	3.1

### Location of the Project: Pavlodar, Aksu and Ekipastuz



### Market assumptions

#### High level of MSW accumulation.

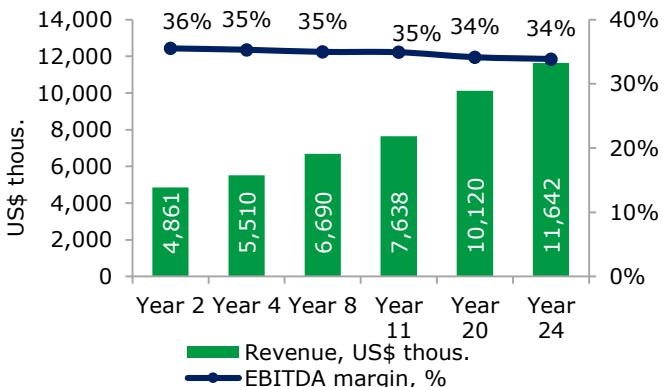
According to the Committee on Statistics of the Republic of Kazakhstan, there is a high level of generation of solid household waste, which is not regenerated, at the level of 3 million tonnes annually. Between 2021 and 2030, an increase in waste generation is expected to reach 8.3 million of solid waste 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



### Morphological composition of the MSW in Pavlodar

