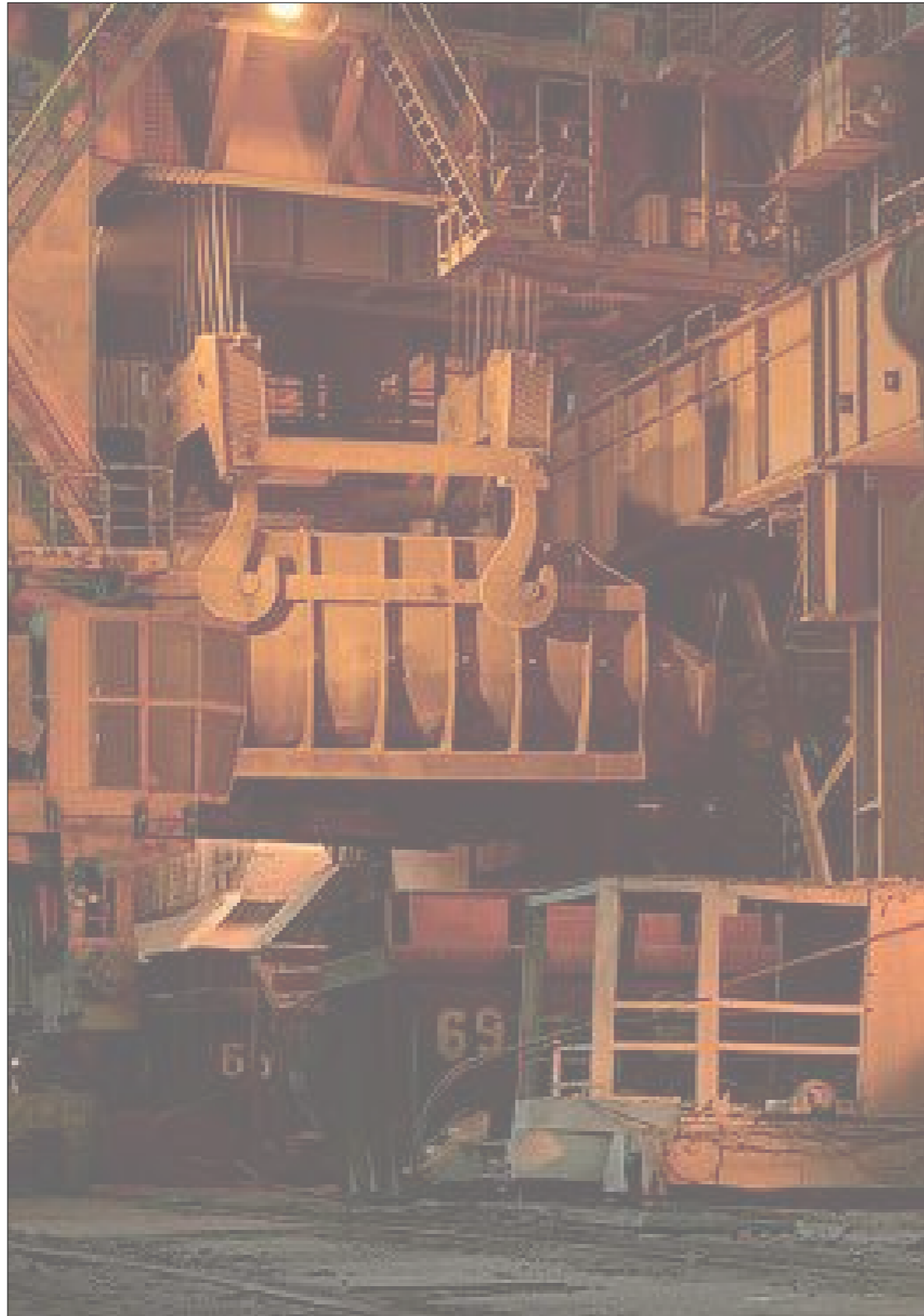


MANGYSTAU

Contact information:
Industrial-innovation department
of Mangystau region
Tel: +7(7292) 314889
E-mail: mangystauinvest@gmail.com
Site: www.mangystauinvest.kz

INVESTMENT PROJECTS OF MANGYSTAU REGION





IRON ORE MINING AT THE BESKEMPIR DEPOSIT AND PRODUCTION OF CAST IRON USING THE ROMELT TECHNOLOGY

Project description

The project is about the construction of an industrial complex for the development of cast iron ore at the Beskempir deposit in Mangystau Region. It is planned to implement the technology "Romelt" together with the Russian company JSC VO Tyazhpromeksport and the Institute of Steel and Alloys and to build a plant for the production of cast iron with a capacity of 250 thousand tons per year. The total reserves within the geological zones of Technogran Aktobe LLP are estimated at 77 million tons of ore.

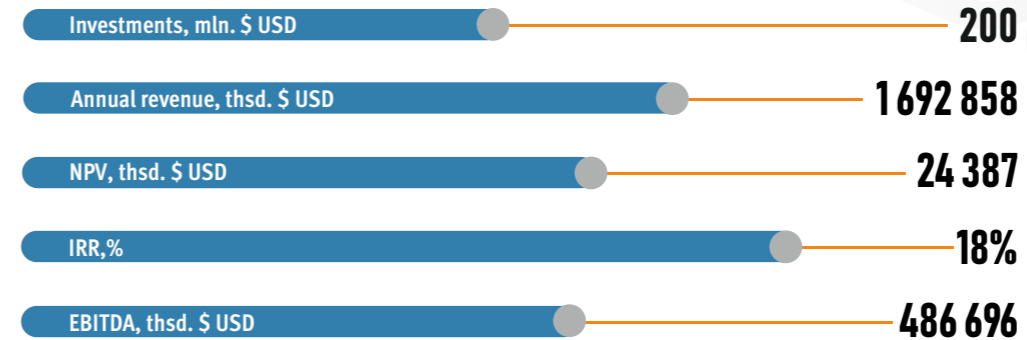
Project initiator

Techogran Aktobe LLP

Project location

Mangystau district, Mangystau region

Project cost | Investment indicators



Payback period, years

6.2

Project analysis

The global demand for metals, including steel products, depends on the growth of the global economy, in particular, on the growth of major economies such as the United States and the People's Republic of China. According to statistics from World Fact Book, the annual growth of the world economy is about 3%. The extraction and export of metals became the largest direction of development of Kazakhstan after the oil industry. And the state is among the world leaders in the development of the metallurgical industry. The natural resources of the republic are rich - it is 6% of the total world reserves, which makes it one of the largest exporting countries.

Exports of ferrous metals - iron and steel account for 16% of the total volume of exported metals. The volume of world trade in finished products of the iron and steel industry is increasing from year to year and today is approximately 150–160 million tons per year.



PRODUCTION OF CATHODE COPPER

Project description

The project is about the construction of an industrial complex for the extraction and enrichment of copper ore at the Zhezdybassai deposit and at the nearby deposits of Mangystau Oblast. The total reserves within the geological zones of Technogran Aktobe LLP are estimated at 90 thousand tons of copper.

Project location

Mangystau district, Mangystau region

Project initiator

Technogran Aktobe LLP

Investments, mln. \$ USD

14,2

NPV, thsd. \$ USD

29,435

7.4

EBITDA, %

39-61%

IRR, %

29.5%

Payback period, years

Project analysis

According to the World Bank's forecast, a moderate increase in copper prices is expected as follows: 2019 - 6,816 US dollars, 2020 - 6,833 US dollars, 2021 - 6,849 US dollars per ton 6% to 2022, which will stimulate energy demand. According to forecasts, the demand for refined copper will grow by 2.99% and 2.15% in 2018 and 2019, respectively. More than 80% of copper produced in Kazakhstan is exported. In 2013-2017, domestic production increased by 21%. The main consumer of refined Kazakhstan copper is China.

Project implementation period

2019 – 2023 years

02



PLANT FOR THE PRODUCTION OF NANO-COMPOSITE MIXTURES

Project description

The project is about the construction of an integrated production of fiber concretes of a new generation based on innovative nanotechnology for improving the properties of concrete stone.

Production outcome includes the production of dry structural, heavy, light and decorative concrete, gunning and cement mixtures for the mining and petroleum industries, various complex additives to concrete, mortars, production of iron-concrete products.

Project location

Aktau city, Mangystau region

Project initiator

ZhauZhurek Kurylys LLP

Project cost Investment indicators

Investments, mln. \$ USD

112

Annual revenue, mln. \$ USD

190

53% Profitability, %

IRR, %

137

5 Payback period, years

Project analysis

According to the Statistics Committee of Kazakhstan, the construction industry in Kazakhstan has been growing over the past few years. The market for construction and production of building materials is also high in the CIS countries and abroad.

Today, there are agreements on supplies to Israel, European countries and to the United Arab Emirates. The export sales market is estimated to be at least 5 billion USD. According to the results of meetings held with the heads of RD "Kazmunaygas", "Corporation Kazakhmys" LLP, "Buzachi Operating Ltd." LLP, Karazhanbasmunai JSC, Samruk-Kazyna Real Estate Fund JSC, the estimated domestic market for nano-concrete only for the mentioned enterprises ranges from 300-500 million USD.

Project implementation period

2019-2023 гг.

03



PRODUCTION OF BARITE CONCENTRATE, BARIUM AND STRONTIUM

Project description

The project is about the construction of an industrial complex for the extraction and enrichment of barite-celestial ores at the North Aurtas deposit in Mangystau region, as well as the production of barite concentrate, Barium (Ba) and Strontium (Sr). The total ore reserves suitable for the production of barite concentrate, barium and strontium are totaled at 3.6 million tons. As a result of the research, it was revealed that from this ore it is possible to obtain a barite concentrate with a density of 4.2-4.7 grams, which corresponds to the international standard IPI (the highest level), strontium content up to 75%, barium 15-20%.

Project location

Mangystau district, Mangystau region

Project initiator

Chemicals Trading LLP

Project cost

62,7 mln. \$ USD

Project implementation period

2019 – 2023 years

Project analysis

The main consumers of barite concentrate are oil and gas companies. The demand for barite concentrate directly depends on oil prices. According to analysts of the American company Fitch, the price of oil will grow, respectively, the demand for barite concentrate is expected to be consistently high. The main consumer of strontium is the radioelectronic industry. This market is also in positive growth.



TUBE ROLING MILL - KASKOR-MASHZAVOD JSC

Project description

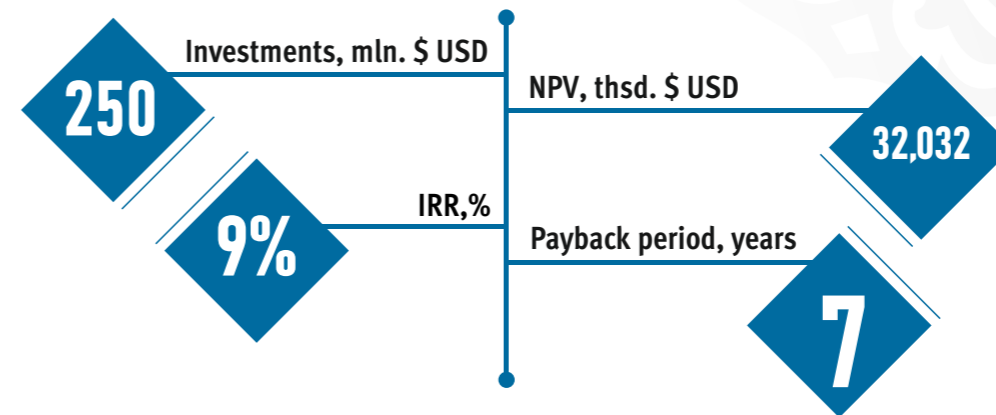
JSC Kaskor-Mashzavod is one of the leading machine-building enterprises in the Republic of Kazakhstan. The plant is equipped with modern equipment, carrying out various technical complex types of work. The project is about the launch of a tube rolling mill for the production of seamless pipes of different diameters / upset and non-upset. This project will be a new full-fledged plant for the production of seamless pipes for the needs of the oil and gas industry with all the necessary infrastructure and equipment on an area of 10 hectares.

Project location

Aktau city, Mangystau region

Project initiator

Kaskor-Mashzavod JSC



Project analysis

25% of Kazakhstan's oil is produced in Mangystau region. In the region, the reliability of pipeline transportation systems is one of the most important factors for stability and growth of economic potential. The pipelines transport 100% of the produced gas, 90% of the produced oil, more than 50% of the refined products produced.

Today, foreign enterprises such as CITIC Group, Total, Buzachi, KEN-SARY - Meerbush LLP and many others are successfully working in the region.

Given the high development of industry in the region, there is an acute shortage of pipe rolling mills.

Project implementation period

2019 – 2022 years

05



CONSTRUCTION OF A MODERN BUS STATION IN AKTAU CITY

Project description

The project is about the construction of a bus station that meets modern requirements, ensuring an appropriate level of development of the capacity of 1,200 passengers at the initial stage with an increase to 3,900 passengers per day.

Providing the population with modern infrastructure for the organization and provision of road passenger transport and comfortable stay of passengers in the bus station building. It is also planned to launch additional bus routes in all directions in the region, as well as interregional routes, including to Atyrau.

Project location

Aktau city, Mangystau region

Project cost

4 mln. \$ USD

Project initiator

Transport department of Mangystau region

Project implementation period

2019 – 2022 years

Project analysis

Currently, due to the lack of a bus station building, people use the former bus station that was sold for private ownership in 1979. The population has to use private entrepreneur's vehicles in spontaneously organized parking lots near residential areas, markets and road trips. The new bus station will ensure the provision of safe passenger service for intraregional and interregional trips. A new bus station is planned to be implemented on a land slot located within the city limits.



CONSTRUCTION AND OPERATION OF A MULTI-PROFILE HOSPITAL FOR 300 BEDS IN AKTAU CITY

Project description

The project is about the creation of a new facility - a 300-bed multi-profile hospital ensuring the availability of high-quality medical care to the general population and the creation of conditions for an effective and safe organization of medical care.

Project location

Aktau city, Mangystau region

Project cost

105 mln. \$ USD

Project initiator

Healthcare department of Mangystau region

Project implementation period

2019 – 2023 years

Project analysis

Today, the annual population growth of Aktau is 4-5% and is 182 thousand people. The regional hospital (which was constructed in 1982) and children's hospital (1978) are overloaded. Conducting operating and capital repairs at current facilities does not efficiently handle incoming patient inflow, the introduction of a triage system, and other modern standard requirements. 9.4% of treated patients in the round-the-clock hospital need rehabilitation.

Each year, about 500 patients in the region receive medical services abroad (estimated money outflow is 2.6 mln USD annually). It can be concluded that there is an acute shortage of modern hospitals in the region.

This project will be one of the first in the region that complies with international standards.

The development of health insurance in the Republic of Kazakhstan will give impulse to the accelerated development of the healthcare sector.



CONSTRUCTION OF A FISH FACTORY

Project description

The project is about the construction of a fish factory on the shore of the Caspian Sea, in line with international norms and standards.

Fish production is a complex event, which includes various activities ranging from forecasting the raw material base of the industry to organizing trade in fish products at home and abroad.

The main types of activities of the fishing industry include directly fishing, fish farming, as well as processing and production of the main types of fish products

Project location

Tupkaragan district, Mangystau region

Project initiator

Agriculture department of Mangystau region

Project cost

52,6 mln. \$ USD

Project implementation period

2019 – 2022 years

Project analysis

Mangystau region is the only region in the country where there is unhindered access to the Caspian Sea. Traditionally, fish from the Caspian Sea are in great demand in the country and beyond. Today there is no single fish reception and processing point in region. In 2017, the local fisheries caught only 1,138 tons, and in 2018, 1,668 tons were caught. This year, the fishermen set a plan of 2,665 tons of fish.

Today, there is no large industrial complex for growing and processing fish products in the region.



MULTISTAGE GREENHOUSES

Project description

The multi-tiered cultivation system is a revolutionary system used for planting and growing (vegetable) plants. The system consists of a climate chamber without natural light, equipped with several vegetative tiers for plants forming a single structure. Growing under LED lighting. The climate in the tiers is controlled using cooling ceilings and air conditioning.

The advantages of multi-tiered greenhouses:

- High yield due to the acceleration of the growing process
- The possibility of year-round production
- Improved and consistent crop quality.
- Efficient use of production space through the use of a multi-tiered system
- Efficient use of energy due to the high isolation level of the chamber
- No air pollution
- Environmentally friendly production through the use of excess heat.

Project location

Tupkaragan district, Mangystau region

Project initiator

Agriculture department of Mangystau region

Project cost

52,6 mln. \$ USD

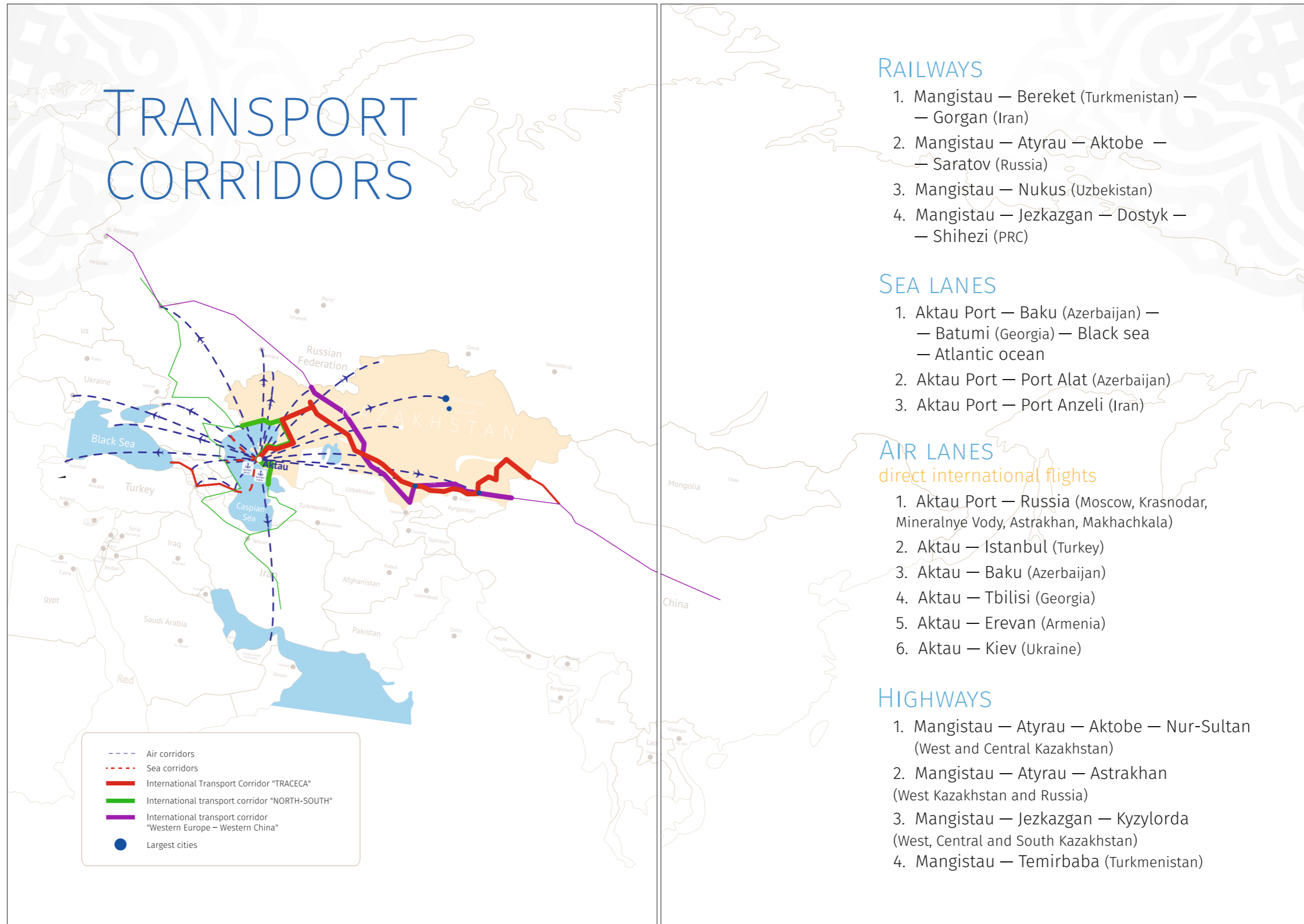
Project implementation period

2019 – 2023 years

Project analysis

Investing in a greenhouse business is becoming more attractive. This is facilitated by modern technologies and equipment that allow you to get a high yield and stable profits. According to various estimates, the profitability of modern greenhouse business exceeds 30%. Producer of greenhouse vegetables can occupy a niche in almost any region of the country. Kazakhstan people are more inclined to trust domestic vegetables, but the vast market of protected vegetable production, which has not been mastered by domestic producers, has low competition. Manufacturers of greenhouse products can benefit from the support of the state. At the same time, Mangystau region is one of the most solvent regions of the country, where 75% of food products from other oblasts and countries are imported.

TRANSPORT CORRIDORS



RAILWAYS

1. Mangistau — Bereket (Turkmenistan) —
— Gorgan (Iran)
2. Mangistau — Atyrau — Aktobe —
— Saratov (Russia)
3. Mangistau — Nukus (Uzbekistan)
4. Mangistau — Jezkazgan — Dostyk —
— Shihezi (PRC)

SEA LANES

1. Aktau Port — Baku (Azerbaijan) —
— Batumi (Georgia) — Black sea
— Atlantic ocean
2. Aktau Port — Port Alat (Azerbaijan)
3. Aktau Port — Port Anzeli (Iran)

AIR LANES

direct international flights

1. Aktau Port — Russia (Moscow, Krasnodar,
Mineralnye Vody, Astrakhan, Makhachkala)
2. Aktau — Istanbul (Turkey)
3. Aktau — Baku (Azerbaijan)
4. Aktau — Tbilisi (Georgia)
5. Aktau — Yerevan (Armenia)
6. Aktau — Kiev (Ukraine)

HIGHWAYS

1. Mangistau — Atyrau — Aktobe — Nur-Sultan
(West and Central Kazakhstan)
2. Mangistau — Atyrau — Astrakhan
(West Kazakhstan and Russia)
3. Mangistau — Jezkazgan — Kyzylorda
(West, Central and South Kazakhstan)
4. Mangistau — Temirbaba (Turkmenistan)



MOST PERSPECTIVE PRODUCTS FOR LOCALISATION IN MANGYSTAU

№	Name	Unit	Average demand for 5 huge companies	Sum
			quantity	mln. US dollars
Annual demand for main product of big subsoil users				
1	Steel pipes	tons	72 604	32,0
2	Drill pipes	tons	378	1,2
3	Pumps	pcs.	300 657	18,0
4	Chemical reagents	tons	117 356	15,0
5	Tanks	pcs.	49	1,8
6	Electric motors	pcs.	428	1,7
7	Special machinery	item	21	1,2
8	Auto tires	pcs.	3 494	1,1
9	Oil and gas production and drilling tools	pcs.	7 666	0,8
10	Measuring instruments	pcs.	3 103	2,8
11	Household and office equipment	pcs.	984	0,5
12	Belts	pcs.	4 000	0,3
13	Reinforcing steel	tons	339	0,2
14	Steel valve with counter flanges ZKL-2-100	package	235	0,1
15	Steel tap	pcs.	3 122	0,1
16	Hydraulic key GKSH-1500 MT with spare parts	pcs.	11	2,0
17	Calcium chloride	tons	2 451	1,0
				79,8

