Expansion of a modern pig farm to a capacity of 500,000 heads Agro-Industrial complex

Project idea:

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

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.

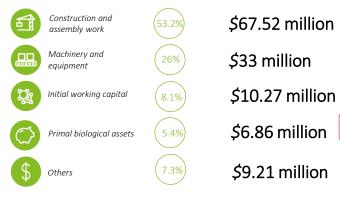
Production process:

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



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





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



Construction of an oil extraction plant

Agro-industrial complex

Project Description:

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

Estimated sales volumes and markets:

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

The plant's products are planned to be sold through its own trading house:

Location of the Project:

Petropavl, North Kazakhstan oblast, Kazakhstan Initiator of the project:

LLP "Petropavlovsk Oil Extraction Plant"

Key investment indicators of the Project

Indicator	Results
Investment amount, US\$ mill.	179.0
Project NPV, US\$ mill.	252.3
IRR, %	25.5%
EBITDA margin, %	20.22%
Payback period, years	6.4
Discounted payback period, years	8.6

Prerequisites for Project implementation

Rich raw material base - The gross harvest of sunflower, rapeseed and soybean seeds in Kazakhstan in 2019 amounted to 918, 241 and 282 thous. tons.

Price differential with neighboring countries. In general, there is a disparity in prices in Kazakhstan in comparison with prices for products in neighboring countries, which justifies the increased export of oilseeds from Kazakhstan in a number of positions.

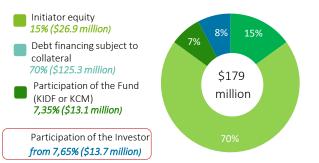
Qualified staff. The company attracts qualified personnel for effective production management, as well as with scientific and practical experience in the selection of oilseed varieties with increased consumer properties.

A reliable partner and modern plant equipment. The Exoil Group has significant experience in processing, trading of oilseeds and grains, port handling and logistics. In 2016, the group put into operation a similar project for the production and deep processing of oilseeds with a capacity of 2,000 tons per day in the Lipetsk oblast, RF.



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.

Investment structure





Full-cycle enterprise for fattening cattle, processing and sale of beef

Agricultural sector

Project summary

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

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

Project Initiator: Sembell LLP

The company owns two feedlots: Sembell LLP, launched in 2016 in Zharma region of East Kazakhstan region with a one-time keeping of 3,000 bull calves and located in Pavlodar region with a onetime 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:

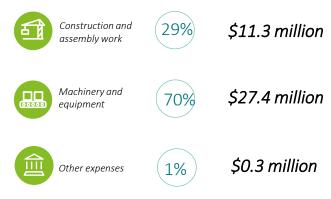
22,251 tons of products and 162,000 units. skins and offal (heads) annually since 2023. Within the Project is planned to produce: chilled beef carcasses; offal.

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



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 crossborder trade with the regions of the PRC and the Russian Federation will reduce transport costs when exporting products.



Financing structure



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Project profitability

Construction of greenhouse complex in North Kazakhstan oblast

Agriculture-industrial complex

Project description:

The investment project provides for the construction of a 3 ha greenhouse complex for growing tomatoes and cucumbers per year with subsequent expansion to 10 ha, as well as the organization of year-round production of tomatoes and cucumbers in its own greenhouse and further sales in Petropavlovsk and neighboring regions of the Russian Federation.

The following tasks will be carried out within the project:

- construction of an industrial greenhouse will meet the needs of the domestic market, replace imports, as well as develop the proper level of export potential of the vegetable industry of the country;
- creation of 54 permanent jobs.

Location:

North Kazakhstan oblast, Petropavlovsk city, Yaroslav Gashek st., 3 Initiator:

Rim-KazAgro LLP is a 100% subsidiary of Raduga LLP. The enterprise belongs to the subjects of small and medium business.

Production volume:

1,200 tons of tomatoes and 1,300 tons of cucumbers per year

Target markets:

Petropavlovsk and border regions of Russia.

Key investment indicators

Indicator	Result
Investment amount, \$US thousands	17,764
Project NPV, \$US thousands	9,738
IRR, %	15.4%
EBITDA margin, %	70%
Payback period, years	9.5
Discounted payback period, years	14.7

Market prerequisites

Dependence of the country on imports

Due to the climatic features of most regions of RK during the offseason there is a shortage of tomatoes and cucumbers. The deficit is covered by imports, which amounted to 38,9 thousand tons of tomatoes and 7.8 thousand tons of cucumbers in 2020.

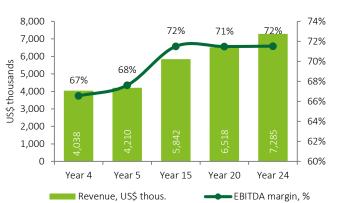
Price differential with Russia

The average price of tomatoes in the border regions of the Russian Federation is 31% higher than prices in the country. Geographic proximity to Russia, a major tomato importer, provides convenient access to a target large and capacious market with a population of 19.4 million people.

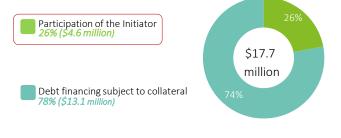
Development of export supplies to foreign countries

Exports of vegetables from RK are growing at a dynamic pace: in 2018 exports of tomatoes amounted to 30.4 thousand tons, of cucumbers -7.4 tons.

Proximity to the Russia, a major importer of tomatoes and cucumbers, provides easy access to the target market. In 2019 Russia imported 558 thousand tons of tomatoes and 100 thousand tons of cucumbers.



Financing structure



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Investment structure



Project profitability

Production of flax oil

Project description

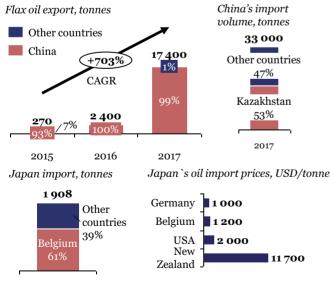
The project plan is to construct an oil plant with a capacity of 20 thousand tonnes of linseed oil per year. It is planned to install 10 acceptance points, to build a railway deadlock. The initiator of project has in his ownership necessary territory for the plant. He also land area of 16 thousand ha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

Project location



Market analysis

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



Target Investor Mandate

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

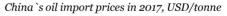
Investment highlights

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

Competitive advantage

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

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





Value proposition

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

Expansion of the duck production farm

Project description

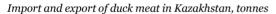
The project plan is to expand production of ducks from 150 tonnes to 6 thousand tonnes of poultry meat per year and 3.3 million heads of poultry per year. The initiator is a large agricultural holding in the North Kazakhstan region, which produces grains, oilseeds, leguminous crops and breeds cattle.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

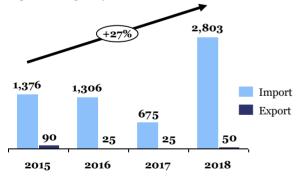
Project location



Market analysis

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





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

Target Investor Mandate

Competency to transfer technologies

Investment highlights

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

Competitive advantage

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

Sale price of duck meat, thd USD/tonne



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

Average price of bird feed, tenge/kg



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

Value proposition

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

Mining and smelting industry

Project overview

construction of the mining and metallurgical facility to process 2 million tons of ore at the Syrymbet deposit. Ore processing capacity will reach 2 million tons of ore per year.

Location: North-Kazakhstan Oblast, Aiyrtau district

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

Production:

Main products:

1) Tin concentrate - an average of 2,400 tons of tin in concentrate per year; 2) Tin sublimates - an average of 5,000 tons of tin in concentrate per year.

By-products:

1) Copper concentrate - an average of 2,600 tons of copper in concentrate per year; 2) Fluorite concentrate - an average of 178,414 tons of fluorite in concentrate per year

Sales market: Kazakhstan, China, Russia

Key investment indicators

Indicator	Result
Project implementation period, years	15
Investment, US\$ thousands	289,314
Project NPV, US\$ thousands	241,401
Project NPV, US\$ thousands (without accounting for tax preferences)	167,854
IRR, %	49.6%
EBITDA return, %	39%
Payback period, years	5.3
Discounted payback period, years	5.8

Market assumptions

Available raw materials base

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

Import substitution and potential export

Tin is not produced in Kazakhstan, and the country is totally dependent on imports. Tin is imported from Indonesia, Russia, Belgium, Poland and China. In 2019, China imported \$67.7 million worth of tin products.

Rise in prices and demand

The world prices for tin and tin concentrate are currently rising due to the increasing demand for this product as a result of stabilization of the world economy. According to Thomson Reuters, global tin consumption will be 362 million tons by 2021.



Investment structure



Financing structure



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Construction of a sanitary paper product production plant

Light industry

Project description:

Construction of a sanitary paper product production plant with creation of 37 new workplaces.

Project location:

North-Kazakhstan Oblast, Petropavlovsk

Project Initiator:

Raduga LLP main activities of which involve the production and distribution of consumer goods.

Product and output:

Toilet paper – 8 thousand tonnes/year;

Paper tissues – 0.5 thousand tonnes/year;

Paper towels – 0.6 thousand tonnes/year;

A4 office paper – 0.6 thousand tonnes/year.

Sales market:

The manufactured products are planned to be sold on the domestic market of the Republic of Kazakhstan through its own distribution network with branches in 10 cities: Petropavlovsk, Kokshetau, Nur-Sultan, Kostanay, etc.

Production process:

- 1. Production of paper base semi-finished product from primary and secondary raw materials.
- 2. Rewinding of paper base, embossing, cutting, printing and packaging of finished products.

Key investment indicators of the Project

Indicator	Results
Investment amount, US\$ thous.	9,422
Project NPV, US\$ thous.	11,881
IRR, %	32.5%
EBITDA margin, %	36%
Payback period, years	5.5
Discounted payback period, years	6.9

Investment structure

	Purchase of transpo and equipment	rt 14%	\$1.4 million
	Machinery and equipment	40%	\$3.7 million
	CAPEX	38%	\$3.6 million
ţ,	Other	8%	\$0.7 million

Prerequisites for Project implementation

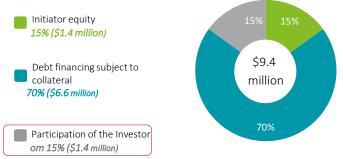
The growth of paper product market. In comparison to other segments of the pulp and paper industry, the sector of a sanitary products is growing steadily. The total production of sanitary paper goods in Kazakhstan increased by 17% in 2019 (CAGR on average 14.2% over 5 years).

Import substitution. The share of imports in the structure of sanitary paper products consumption of the country is 46%. Thus, Kazakhstan had imported 37 thous. tonnes of toilet paper, paper tissues and towels in 2019. Therefore, an expansion of own production will reduce the amount of imported goods.

Export development. The total volume of exports of sanitary paper products in 2019 was 300 tonnes. The indicator had decreased by 32% in comparison to 2015. Considering the stable growth of the industry and the high demand for sanitary paper products, there is a potential for growth of export volumes.



Financing structure



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Deloitte.