

# Establishment of the Company which main core business is transportation of Ukrainian grain by rail in specialized containers

# **Final Capstone Project**

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# **Executive summary**

The agricultural sector is a vital part of the Ukrainian economy, with grain production being one of its key drivers. However, the transportation of grain from the fields to the Ukrainian ports and Western European countries ports for export remains a major challenge due to limited infrastructure on western borders and war in Ukraine. As a result, there is a need for innovative and efficient transportation solutions that can ensure timely and cost-effective delivery of grain to its destination.

The aim of the project is to establish a company that will offer grain transportation by railway in specialized containers. The proposed transportation solution is expected to address some of the current challenges in the industry by providing a reliable, efficient, and eco-friendly way to transport grain from the fields to the ports. The specialized containers are designed to protect the grain from damage, ensure that it arrives at its destination in optimal condition and simplify borders crossings.

**Project idea:** The Company will be established with the main core business of transporting Ukrainian grain by rail in specialized containers.

**Project vision:** Create an opportunity to export grain from Ukraine under any conditions, regardless of the state of war and blocked ports.

**Project goal:** Put into operation the Company by year 2024. Create a sustainable and profitable business model that can contribute to the development of the agricultural sector and the Ukrainian economy.

# Criteria of successfully achieved goal of the project:



- investment in railway specialized containers paid off till the end Y4 of the Company activity.
  - the Company internal rate of return (IRR) is 20% by the Y5.
- the Company has concluded at least five agreements on cooperation with the largest grain traders in Ukraine by the end of Y3.

Required investment: USD 1,140,000.



### 1.1. Introduction

### 1.1.1. Problem statement

Ukraine, one of the world's largest grain exporters, normally supplies around 45 million tons of grain to the global market every year. However, following Russia's invasion of the country in late February 2022, mountains of grains built up in silos. Ships were unable to secure safe passage to and from Ukrainian ports, and land routes were unable to compensate. Basic transport sea corridors that were used for export of goods, especially grain, were damaged due to the war. Black Sea ports normally account for over 90% of Ukrainian overseas grain shipments, but weekly port calls have dropped from 60 to almost zero in Ukraine due to the conflict<sup>1</sup>.

The Black Sea Grain Initiative allows the export of grain from Ukraine through a safe maritime humanitarian corridor, only from three Ukrainian ports: Chornomorsk, Odesa, and Pivdennyi. The agreement has a fixed term, and there are constant uncertainties regarding its extension. Exporters are currently forced to use alternative logistical ways to deliver grain to the EU and further global markets. Currently, the border crossings in the west of Ukraine are mostly used. However, Ukraine is not on the same railway gauge as the rest of Western Europe and therefore requires a change of wheelsets on each car. This leads to an increase in waiting time for cars at borders and as a result, increased logistics costs.

Therefore, it is necessary to simplify the logistics mainly by using specialized containers for the transportation of bulk cargo, which will lead to an increase in the amount of grain exported through the western border crossings by rail. The use of containers simplifies and speeds up loading, unloading, and transport. For these reasons, railway container transportation draws a lot of attention as a shipping option. This way of transportation organizes timely delivery regardless of shipment destination.

To solve this problem, it is proposed to establish a company and make an investment in the purchase of specialized containers for the transportation of Ukrainian grain to the eastern countries of Western Europe by rail. After unlocking the seaports of Ukraine, the company can continue to use these containers for the export of grain to Ukrainian ports as well.

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<sup>&</sup>lt;sup>1</sup> The Black Sea Grain Initiative: What it is, and why it's important for the world, by United Nations news, 16 September 2022, page 1, source: <a href="https://news.un.org/en/story/2022/09/1126811">https://news.un.org/en/story/2022/09/1126811</a>



Ukraine production and export of grain &oilseeds, kt



## Table 1

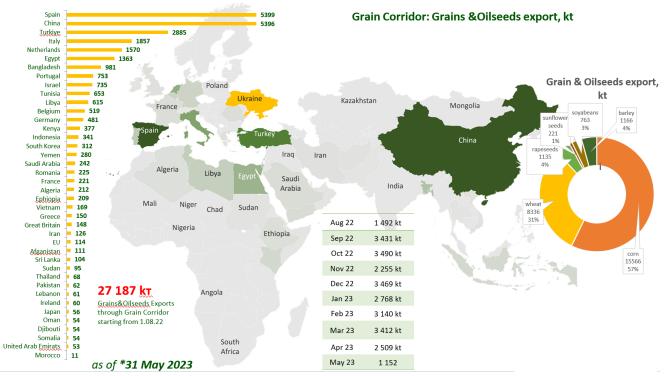


Table 2



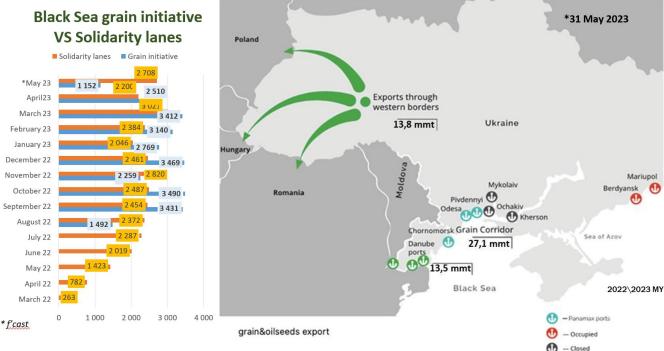


Table 3

# 1.1.2. Mission, vision, goals

**Mission**: Create an opportunity to export grain from Ukraine under any conditions, regardless of the state of war and blocked ports. This can be achieved by transporting grain by rail in containers.

Container transportation has the following advantages:

- Guarantee of the safety and integrity of cargo the cargo shall be delivered to the consignee in an isolated container without transshipment and repacking
- High speed and ease of delivery to any country, including landlocked countries
- Possibility to load in bulk, without packaging or tare
- A standard 40-foot shipping container holds 25 tons or about 1,000 bushels of grain.

**Vision:** Create an opportunity to export grain from Ukraine under any conditions, regardless of the state of war and blocked ports. The Company should become a reliant partner that value safety, collaboration, and creativity. The Company should be transparent and flexible, offering transportation options to fit customers unique needs. A safe, efficient, and creative transport solution is just a quote away.



The Company should be a broad-based logistics service provider who is specialized in the transportation of cargo in containers by rail. The company should be also proficient in the transportation of all kinds of goods, but mainly grain, as well as all other activities that accompany goods transportation from A to B.

The key feature of the Company is that railway container transportation of grain allows to save \$ 3-6 per ton compared to transportation of grain in a car-hoop<sup>2</sup>. This difference is achieved by reducing the operations of transactions, as well as lower tariffs for container railway transportation.

The key consumers are importers & exporters, traders, distributors, suppliers of grain, trade associations and agrarian industry authorities.

### Goals:

- Investment in railway specialized containers paid off till the end Y4 of the Company activity.
- The Company internal rate of return (IRR) is 20% by the Y5.
- The Company has concluded at least five agreements on cooperation with the largest grain traders in Ukraine by the end of Y3.

**Project management approach:** Stage-gate approach. It will make easier manage a project team, cover the risks of going over budget, and allow to control all stages of the project. It also recommended to use the WBS method to visualize milestones of the project.

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<sup>&</sup>lt;sup>2</sup> International container transportation of grain: advantages and disadvantages, source: KIY AVIA CARGO Ltd website, https://www.cargo-ukraine.com/



# 2. Business model description

# 1.2.1. Analysis of Business model based on Canvas Business Model

**Customer Segments:** the primary customer segment for the business is agricultural companies and grain traders who need to transport large quantities of grain over long distances by railway from Ukraine to Europe (European ports).

**Value Proposition:** transportation service offers a reliable, cost-effective, and efficient way to transport grain by railway in containers. Provide a one-stop solution for customers' transportation needs, including loading and unloading of containers, rail transportation, and tracking of shipments.

Value proposition includes the following key benefits:

- Increased efficiency and speed of transportation.
- Reduced costs and improved profitability.
- Reduced risk of damage of the grain during transportation.
- Enhanced traceability and visibility of shipments.

**Channels:** transportation services are delivered through the following channels:

- Direct sales to customers.
- Online platform for customers to book and track shipments.
- Partnership with logistics providers and shipping agents.

**Customer Relationships:** customer relationships are built on trust, reliability, and excellent customer service. The aim is to provide customers with a seamless transportation experience from start to finish, with timely updates on shipment status and a responsive customer service team.

**Revenue Streams:** revenue streams are derived from the following sources:

- Freight charges for transporting grain by railway in containers.
- Fees for additional value-added services, such as loading and unloading of containers, and tracking of shipments.
- Potential revenue from arrangements about leasing of containers to logistics providers and shipping agents.

# **Key Resources:**

- Container and rail car fleets (fitting platforms for containers will be taken from JSC «Ukrzaliznytsia»).
- Logistics and tracking software system.



- Trained personnel for loading and unloading of containers and related rail transportation works.
- Relationships with JSC «Ukrzaliznytsia».
- Administrative and executive staff: CEO, CFO, operational manager, customs brokers, logistics managers.

# **Key Partnerships:**

- Logistics providers and shipping agents to facilitate transportation and logistics.
- JSC «Ukrzaliznytsia» and PKP Cargo.
- Maintenance and repair services for containers.
- Suppliers of tracking and logistics software.

# **Cost Structure:** cost structure includes the following costs:

- Administrative costs.
- Acquisition and maintenance of container and rail car fleets.
- Labor costs.
- Logistics and tracking software costs.
- Maintenance and repair costs for containers and rail cars.
- Sales costs.

# Key Activities: key activities include:

- Providing containers for grain transportation.
- Rail transportation of containers.
- Management of logistics and tracking of shipments.
- Maintenance and upkeep of containers.



# 2.1.2 Analysis of operating model based on POLISM.

Below is described the summary of how the Company will function on operating level.

### •Product:

- •- the product being transported is grain in containers by rail.
- •- the product is perishable and requires special care during transportation to prevent spoilage and loss of quality.

### Organization:

- the transportation of grain in containers by rail requires coordination between multiple stakeholders, including the grain producer, container provider (the company), rail operator (JSC "UZ"), and freight forwarders (the company)
- the company needs to have the necessary expertise and resources to handle the logistics of container transport, such as arranging for loading and unloading of containers, tracking shipment progress, and managing customs procedures.

### Location:

- the location of the grain producer, container depots, rail terminals, and delivery points all need to be considered in the operating model.
- •- the distance between these locations and the availability of rail infrastructure will impact the efficiency and cost-effectiveness of the transportation model.

### Information:

- real-time information on container availability, train schedules, and shipment progress is critical for effective management of the transportation model.
  - data analytics and modeling can be used to optimize routing, scheduling, and resource allocation.

### Value delivery chain:

There are several factors that can impact the value delivered to the customer, such as the quality of the grain, the reliability of container and rail transport, and the efficiency of customs clearance procedures.

Effective management of the value delivery chain is critical to ensure that the grain is delivered on time and in good condition, which can help to increase customer satisfaction and loyalty.

### Suppliers:

- Ukrzaliznytsia is one of the most important stakeholders in this process. It depends on: timely delivery of platforms, transportation schedules, information about queues at the border, timely dispatch of a train with loaded grain.
- grain owners are also an important stakeholder, they depend on the timely delivery of cargo loaded with grain and then their unloading at the receiving point (ports).

### Table 4

The key value proposition – is providing of high-quality transportation service of grain for customers. Since that quality of service that Company provides is key to success – will be performed regular screening of transportation process and quality control procedures on every stage of transportation.

The team is also very important for the company— the Company will have CEO, who will be responsible for general strategy and for decision making as to development of new services.

- The CEO is responsible for overall strategic planning, direction, and leadership of the company. CEO has the authority to make major decisions related to investments, partnerships, and acquisitions. CEO is also responsible for building and maintaining relationships with customers, negotiating contracts.
- Operations Manager: the operations manager oversees the day-to-day operations of the company, including logistics, scheduling, and maintenance of containers. OM is responsible for ensuring that shipments are delivered on time and in good condition.
- Finance Manager: the finance manager is responsible for managing the financial operations of the company, including budgeting, forecasting, and accounting.



- Human Resources Manager: HR outsourcing company is responsible for recruiting, training, and managing employees, as well as overseeing compliance with labor laws and regulations.
- Marketing Manager and Public Affairs Manager: is responsible for developing and implementing marketing strategies to promote the company's services and attract new customers.
- Logistics managers: planning and managing logistics, transportation, and customer services, directing, optimizing, and coordinating full order cycle, liaising, and negotiating with suppliers, manufacturers, retailers, and consumers.

In addition to these key roles, the company may also have additional departments or teams focused on areas such as quality control, safety, and customer service.

# 2.1.3. Map of the process.

The value delivery chain for grain transportation in containers by rail refers to the sequence of activities that are involved in delivering value to the customer. The following is an overview of the key steps in the value delivery chain for this transportation model:

- Grain production and storage: the value delivery chain begins with the production of grain by farmers and its storage in silos or warehouses. The quality and quantity of the grain harvested will impact the value delivered to the customer.
- Container management: once the grain is harvested and stored, containers must be made available and managed for transportation. This includes sourcing containers, scheduling container deliveries, and tracking container movements.
- Loading and unloading: the containers must be loaded with the grain and properly secured to ensure that it is transported safely. Once the train reaches its destination, the containers must be unloaded, and the grain must be inspected to ensure its quality has not been compromised.
- Rail transportation: the containers are loaded onto trains and transported to the destination. Rail transportation is a critical component of the value delivery chain, as it must be reliable and efficient to ensure that the grain is delivered on time and in good condition.
- Customs clearance: the grain may need to go through customs clearance procedures at various points along the route, which can impact the delivery time and cost.



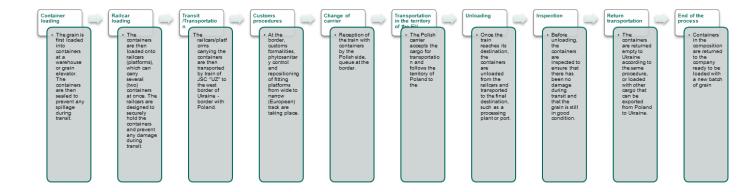


Table 5

### 2.4. Conclusions

Rail freight is a cost-effective and efficient mode of transportation for large volumes of grain over long distances. However, the Company should continually evaluate the pricing and services offered by competing modes of transportation, such faster delivery and safety.

The company should monitor changes in the grain market, including fluctuations in supply and demand, weather patterns, war conditions in Ukraine and trade policies, and adjust its operations accordingly. The Company should also establish strong relationships with suppliers and customers to ensure a reliable supply chain.

The Company should invest in modern technology to improve its efficiency and reduce costs. For example, the Company could implement real-time tracking systems, automated loading and unloading equipment, and predictive maintenance programs to minimize downtime and increase capacity.

# 3. Market analysis

### 1.3.1. Macroeconomic factors

Herein we analyze of external factors which are going to influence the business by applying PESTEL model.

**Political factor.** It is the most important global factor that influences business environment of the Company. This factor depends on the ongoing war in Ukraine and its ways of continuation or completion. It is necessary to consider the situation regarding the



territorial integrity of Ukraine. The territory of Ukraine must remain under the control of the Ukrainian authorities for successful operation of the Company. Also, the Ukraine's accession to the New Silk Road (from China to EU) and its further development will lead to a positive impact of increasing the cargo base of the Company.

While Ukrainian ports remain blocked due to the war, the main grain transportation route runs through the western border crossings in the direction of European ports. Therefore, it is important to observe the political situation in Ukraine and the neighbouring states of the European Union, as their political decisions will affect the company's activities.

However, some other political factors related to the outcomes of the war can have negative detrimental effect on the business. As it was mentioned earlier, Ukraine, being one of the world's major producers of grains and oilseeds, traditionally exported most of such goods by sea. Following the full-scale invasion in 2022, export by sea was fully suspended. Export was only possible by the inland routes through the western borders to and through such countries as Poland, Hungary, Slovakia, Romania and Moldova, and some goods were also exported through the Danube River. The cost of such logistics was far too expensive for the Ukrainian farmers, who already suffered from the war, but they had no other choice as to pay such price to utilize the loses and have the goods sold at any price offered.

Further maritime export was only partially renewed through the Black Sea Grain Initiative, which allowed to export some volumes of agricultural goods through the maritime routs, but the volumes are quite low in comparison to the times of normal operation of the maritime export.

It also needs to be noted, that the stability of such initiative is quite fragile and dependent on the Ukraine's enemy and invader – russian federation and their willingness to cooperate further as well as on political will of Turkey being one of the major facilitators of this initiative and leaders of Black Sea region. Therefore, Ukraine has little influence of viability of Black Sea Grain Initiative but is very much dependant on it.

To support Ukraine, it its hard times, in June 2022<sup>3</sup> European Union announced one-year suspension on import tariffs for Ukraine and providing certain trade benefits to Ukraine, on June 05, 2023, such suspension was prolonged for another year <sup>4</sup>. So called Autonomous Trade Measures (ATMs) are benefits, combining suspension of certain import duties, quotas, and trade measures on Ukrainian export. As it was reported on its

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<sup>&</sup>lt;sup>3</sup> Reuters, Explained: Why have some EU countries nabbed Ukraine grain imports? by Nigel Hunt, 17 April 2023, <a href="https://www.reuters.com/markets/commodities/why-have-some-eu-countries-banned-ukraine-grain-imports-2023-04-17/">https://www.reuters.com/markets/commodities/why-have-some-eu-countries-banned-ukraine-grain-imports-2023-04-17/</a>

<sup>&</sup>lt;sup>4</sup> European Commission web-page, Press release, 05 June 2023, EU extends trade benefits for Ukraine, https://ec.europa.eu/commission/presscorner/detail/en/IP\_23\_3059



official webpage, European Commission also facilitated establishment of so-called Solidarity Lines – the corridors purported to ensure export of Ukrainian grain and agricultural products and facilitated participation of EU Countries and Moldova in such Solidarity Lines<sup>5</sup>. It was also noted, that since the start of the war and as of May 2023around 32 million of tons of Ukrainian agricultural goods were exported through such Solidarity Lines<sup>6</sup>.

However, in April 2023 governments of European countries neighbouring with Ukraine, specifically Hungary, Slovakia, and Poland, applied protectionism measures, restricting import of agricultural goods from Ukraine to their countries.

Such action of individual members of European Union were contradiction the general policy of EU Union.

As it was reported in media, the main goal of such actions was to protect interests of local farmers, who complained that due to the inflow of Ukrainian goods to their countries, prices dropped, and local farmers were not able to sell their goods at the prices they expected.

The main initiating body driving these measures in Poland is conservative agrarian political movement AGROunia<sup>7</sup>.

Later only transit cargoes were allowed to Poland with further restrictions and control over its movements within the transit territory.

Poland's decision to ban import of Ukrainian agricultural and consumer products had a negative impact on Ukrainian transporters and grain owners who transported it to Poland. The situation remains unstable; therefore, the company should currently focus on the export of grain in transit through Poland, with the point of shipment to European ports for further transportation of grain to African and Asian countries or for the buyers in Western European countries.

Hungary traditionally takes hostile position toward Ukraine, both politically and economically. This country prohibited import of more than 25 items of Ukrainian agricultural goods.

It needs to be noted, that within the last year some transhipment terminals were put in operation both at Polish- Ukrainian and Hungary-Ukrainian borders.

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<sup>&</sup>lt;sup>5</sup> European Commission official web-page, Keeping Ukrainian Goods Moving: https://transport.ec.europa.eu/ukraine/keeping-ukrainian-goods-moving\_en

<sup>&</sup>lt;sup>6</sup> EU Solidarity with Ukraine factsheet, May 2023, https://ec.europa.eu/commission/presscorner/detail/en/FS\_22\_3862

<sup>&</sup>lt;sup>7</sup> Wikipedia Article on AGROunia, <a href="https://en.wikipedia.org/wiki/AGROunia">https://en.wikipedia.org/wiki/AGROunia</a>



Import ban will result in damages both for the investors, who invested in development of relevant infrastructure, as well as to the other players of the market (logistics companies, farmers, traders etc.).

Such unilateral actions of the relevant governments can be view as such that violate rules of World trade organization and Association Agreement between Ukraine and European Union, to which all involved countries are parties to.

Recently farmers in Moldova also joined the "club" of protesters objecting import of Ukrainian agricultural goods to their country<sup>8</sup> and demanding to ban import as fast as possible, claiming that otherwise they will go bankrupt in few month. Luckily for Ukrainian farmers, the government of Moldova does not ban import so far.

EU Union bodies had to react to the bans, that individual country-members introduced either forcing them to cancel such actions, or by legalising them on the level of EU bodies.

No better solution was found by European Commission as to adapt temporary preventive measures in favour of Bulgaria, Hungary, Poland, Romania and Slovakia, banning import of certain Ukrainian goods (specifically: wheat, maize, rapeseed and sunflower seed) to these countries. So far such measures are valid till 15 September 2023<sup>9</sup>, but there is a probability that they can be prolonged.

Provided such unfriendly actions will persist business of the Company may suffer irreparable damage. The Company will have to look for alternative ways to use its fleet of containers – either transport some other kinds of cargoes or use containers for the internal transportations.

**Economical factor.** As it is reported by Mykhailo Kukhar, main economist of Ukrainian economic outlook, gross domestic product of Ukraine in 2022 decreased by 30 %, from USD 200 to USD 150 billion<sup>10</sup>.

State Statistics Service data confirms the decreased of GDP by 30% <sup>11</sup>, considering devaluation of UAH/USD exchange rate.

<sup>9</sup> European Commission web-page, Press release, 05 June 2023, EU extends trade benefits for Ukraine,

<sup>10</sup> LB.ua, Ukrainian economy will grow: macroeconomist Mykhailo Kukhar, 09 March 2023, https://lb.ua/blog/mim\_school/548379\_ukrainska\_ekonomika\_zrostatime.html

<sup>&</sup>lt;sup>8</sup> Latifundist.com, Agrarians in Moldova announced protests: they ask to ban grain import from Ukraine, May 26 2023, https://latifundist.com/novosti/61704-u-moldovi-agrariyi-anonsuvali-protesti-prosyat-obmezhiti-import-zerna-z-ukrayini

 $https://ec.europa.eu/commission/presscorner/detail/en/IP\_23\_3059$ 

<sup>&</sup>lt;sup>11</sup> Ukrstat, Economical and financial data, National accounts (GDP) <a href="https://ukrstat.gov.ua/imf/arhiv/nr/nr\_pdpb2017\_2020\_u.htm">https://ukrstat.gov.ua/imf/arhiv/nr/nr\_pdpb2017\_2020\_u.htm</a>



Specifically, UAH/USD the official exchange rate of national Bank of Ukraine as of 01 December 2021 was UAH 27,27 for 1 USD, and as of 01 December 2022 it was already UAH 36,57 for 1 USD<sup>12</sup>.

Economy of Ukraine in the times of war is very dependent on inflows of financial aid from our western partners. Many Ukrainian companies stopped paying under their loans, both financed by Ukrainian and international financial institutions.

According to Clause 14 of the Resolution No. 18 «On the Operation of the Banking System Under Martial Law» dated 24 February 2022 (as amended), approved by the Board of the National Bank of Ukraine, authorized institutions are prohibited from carrying out cross-border transfers of currency values from Ukraine/transfer of funds to correspondent accounts of non-resident banks in hryvnias/foreign currency opened in resident banks, including transfers carried out on behalf of clients, except in the following cases:

... 2-2) transfer of funds to fulfil the obligations of a resident to a non-resident under a contract of sale of goods concluded between them, provided that such transfer is made at the expense of funds received under a loan from the IFI (international financial institution) or under a sub-loan from the state, for financing of which the state attracted a loan from the IFI.

...3) currency operations of IFIs, including representative offices of IFIs, as well as currency operations of residents and non-residents for the transfer of funds in foreign/national currency for the purpose of settlements with the IFI or its representative office.

So, basically, under some loans towards to the foreign lenders Ukrainian borrowers are not able to pay due to the force-majeure event, which is prohibition of National Bank of Ukraine for cross-border transactions.

In cases, where prohibition of National Bank of Ukraine does not apply, and technically borrowers are able to pay, they apply for the restructuring of the debt to obtain prolongation of the payment schedules due to the lack of money to pay out the debt.

All the above makes financing very challenging, not many investors are queuing to invest into new business in Ukraine.

There are discussions now, where NBU should cancel the prohibition to pay out the loans to foreign creditors.

<sup>&</sup>lt;sup>12</sup> National Bank of Ukraine, data on exchange rates as of 01 December 2022, https://bank.gov.ua/ua/markets/exchangerates?date=01.12.2022&period=daily



On the one side, if such prohibition is cancelled it may facilitate the inflow of foreign loans into Ukraine, but on the other side, those borrowers who will not be able to repay the loans given that the force-majeure event (NBU prohibition) is terminated, may be forced to apply for bankruptcy.

It also needs to be noted that major Protection and Indemnity (P&I) clubs (maritime insurers association) cancelled insurance of war risks for Black Sea region, this also resulted in increase of costs of trade and transportation in Ukraine.

At the same time, the government of Ukraine has some programs aimed to support Ukrainian business, and specifically agricultural producers in these challenging times.

Some of such initiatives are E-Work, guarantee fund for partial guarantees of loans in agriculture and creation of state Joint Stock Company "Export Credit Agency), the latter two were created before the beginning of war, but their activity became more active.

The Company by itself will not be eligible to benefit directly from such programs, but the availability of such options for the farmers can have positive effect on the business by allowing to produce more goods.

For example, E-Work is a governmental program of non-refundable grants for creation and development of own business, some small agricultural producers and farmers already benefited from it.

**Social factor.** Social environment can be viewed in several dimension in our case. There is a shortage of personnel, required both for production of transported cargoes and for servicing required procedures (transportation, handling, clearance etc.).

Shortage of personnel resulted from both from emigration to other countries and from outflow of people for the military service.

Many people left their homes to look for the better and safer live abroad, and in the same time many men were either drafted for military services, or went to fight against the enemy by their free will, driven by ideological reasons or by financial reasons, expecting to earn more, that they did at their civil jobs in agriculture, logistics or other services.

The other social factor which should be considered in our case if also the social environment in our neighbouring countries. It needs to be noted, that political economic, social, and legal factors are closely linked in our case.

AGROunia to some extent can be viewed as representing social moods of substantial part of Polish population, who are not supporting measures of their government in support of Ukraine, especially in cases where to their view such support can result in some negative economic effects for Poland or certain groups of its business.



Obviously, not everyone supports Ukraine in the out fight in the war against russia and many of those who support us are not prepared to bear any negative effects of this financial wellbeing.

Theses moods in combination with other factors may have negative effect on the Company's business by resulting in unfavourable conditions for the business operations.

**Technological factor.** Technological factors can have rather positive impact on the business. The development of technical instrument for loading and unloading of containers, construction of new modern transhipment terminal at the western borders and modernization of equipment at existing terminals will allow to handle containers faster and allow to reduce their turnaround.

**Legal environment.** The simplification of legislation for the transportation of goods can have a significant impact on the economic activity of any company involved in cross-border trade. In the case of our Company that will transport grain by rail in specialized containers from Ukraine to Eastern European countries, any measures that can simplify customs and veterinary requirements would be particularly important.

The abolition of veterinary certificates for grain products, for example, could help to reduce bureaucracy and simplify the export process, which could lead to faster and more efficient transportation of goods. Similarly, the simplification of customs legislation, such as reducing the number of required documents and procedures, could reduce the time and cost of transporting goods across borders.

These simplification measures could lead to increased trade and economic activity between Ukraine and its Eastern European neighbors, as well as further afield. They could also benefit the Company by making its operations more efficient and cost-effective. Therefore, it would be important for the Company to stay informed about any changes to the relevant legislation and to adjust its operations accordingly to take advantage of these changes.

**Environmental factor.** In the case of the grain transportation industry, the use of rail transport can have significant environmental benefits compared to road transport. Rail transport is recognized by the European Union as a more environmentally friendly mode of transport than road transport, due to its lower carbon emissions and reduced air pollution. By using rail transport in the transportation of grain, the Company can contribute to the reduction of carbon dioxide emissions and help to protect the environment.

Furthermore, companies that prioritize environmental protection and sustainability are often viewed more favorably by consumers and investors. By making changes to its operations to be more ecologically friendly, the Company can enhance its reputation and



attract new customers who prioritize environmental responsibility. In addition, such a move can help to retain existing customers who may be more likely to continue doing business with a company that is committed to protecting the environment.

By recognizing the trend towards environmental awareness and making changes accordingly, the Company can position itself as a responsible and sustainable business in Ukraine and beyond.

Other environmental issues that might interfere with Company's business are not directly related to the work of the Company's as such, but are relevant for agricultural industry in general, they are the following.

The first issue addressed grain quality issues related to the allegations that Ukrainian grain contains residues of pesticides prohibited in EU, mycotoxins, genetically modified organisms (GMO).

It was reported that in certain European media reported allegations that Ukraine allows to use pesticides, prohibited in Europe, and that imported grains and oilseeds contain mycotoxins, mold, and GMO<sup>13</sup>.

At the same time, reports in the media contain few proofs of actual violations, but rather just mere allegations.

According to the State Services of Ukraine on Food Safety and Consumer Protection officially received claims on quality issued were few, for example, as of May 2023 in current year Ukraine received only 13 notifications regarding the grain quality issues, which mostly related to mycotoxins<sup>14</sup>.

Provided the mycotoxins issues will become more widespread it can be a serious hazard for Ukrainian grain export and food security in general, and subsequently will negatively impact logistical business as well.

Another environmental issue which will have indirect influence of the Company's business is Kakhovka dam destruction by russian federation.

The results of explosion will have long lasting negative impact on agricultural production in the region. It is expected that substantial land areas will not be suitable for grain and oilseeds production either permanently or for the indefinite period of time.

https://latifundist.com/novosti/61486-ukrayina-u-2023-rotsi-otrimala-vzhe-13-notifikatsij-shchodo-zernovih

<sup>&</sup>lt;sup>13</sup> Latifundist.com, 27 April 2023, Pesticides in grain and "Chornobyl flour". https://latifundist.com/interview/678-pestitsidi-u-zerni-i-chornobilske-boroshno-yevropejtsi-priskipuyutsya-chi-naspravdi-vse-tak-pogano-z-yakistyu-zerna
<sup>14</sup> Latifundist.com, 02 May 2023, Ukraine received 13 notification of grain quality in 2023,



Though the Company identified its main areas of geographical coverage as western and central regions of Ukraine, the above events in the Southern regions of Ukraine will likely influence the business environment and competition we will operate in.

Specifically, due to disruption of production in the Southern region there will be less goods to transport, and transportation facilities which were used to transport agricultural goods produced in the South will likely be looking for other fields they can operate at. Therefore, we should expect more competition in the areas of our geographical coverage.

# 1.3.2. Market review and competitors

Since the beginning of the Russia-Ukraine war on February 24, 2022, which resulted in the occupation of territories, destruction of critically important infrastructure, and a significant reduction of GDP, the transportation of goods by rail has decreased sharply.

However, there was a gradual increase from 8.3 million tons in March to 12.1 million tons in October. In November, volumes decreased to 10.6 million tons due to reasons that are given below. During the 11 months of 2022, 140.4 million tons of cargo were transported, which is 146.6 million tons or 51.1% less than in the same period of 2021. This includes 70.8 million tons (-67 million tons or -48.6%) transported in internal connections, 55.2 million tons (-46.7 million tons or -45.8%) exported for export, 8 million tons (-25.1 million tons or -68%) for transit, and 2.6 million tons (-7.9 million tons or -75.2%) for other purposes <sup>15</sup>.

<sup>&</sup>lt;sup>15</sup> Presentation of JSC "Ukrzaliznytsia", dated December 2022.



Total volumes of cargo transportation for 2020-2022, million tons

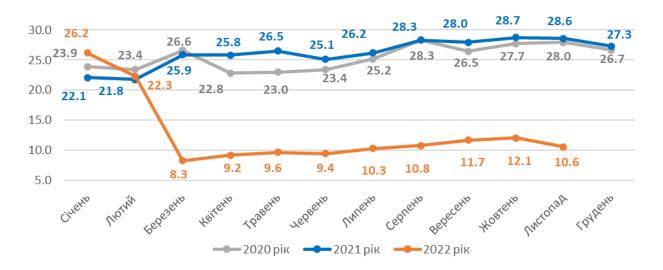


Table 6

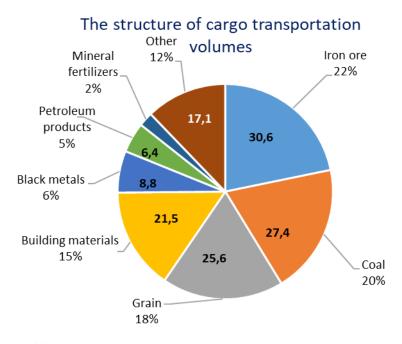


Table 7

In general, the reduction in cargo transportation was influenced by missile strikes on critical infrastructure in Ukraine. For ferrous metals, the largest reduction in load occurred on the domestic market from PJSC «Kamet-steel» due to emergency furnace and rolling state shutdowns caused by damage to energy infrastructure and power supply.



Additionally, the rolled condition was stopped at PJSC «Zaporizhstal» due to a lack of electricity.

For construction cargo, the load decreased for both the domestic market and exports, according to the needs of recipients, due to the slowdown of construction during the cold season.

Regarding grain cargoes, there has been an increase in the volume of transportation compared to last month (October 2022) in the direction of western crossings, but a significant decrease is observed in the direction of ports. The ports of Odessa are currently operating at only 50% of their capacity because, even though the «Ilrain initiative» has been extended by 120 days, Russia is artificially limiting its capabilities. Usually, 77 vessels are in line for inspection in Turkey. The reduction in load was also affected by the slowdown in port work due to a long-term emergency power outage.

Name of indicators	11 months of 2022			year %	
Average daily load, thousand tons, incl.	377.23	728.87	<b>↓</b> -351.64	51.8	
Coal	67.08	78.02	<b>↓</b> -10.93	86.0	
Iron and manganese ore	88.37	199.12	<b>↓</b> -110.75	44.4	
Black metals	20.10	37.09	<b>↓</b> -17.00	54.2	
<b>Building materials</b>	34.24	112.30	<b>↓</b> -78.06	30.5	
Grain	71.97	86.15	<b>-14.18</b>	83.5	

Table 8

Despite the challenges and limitations caused by the ongoing conflict with Russia and the related infrastructure damage, grain export by railway from Ukraine remained an important and relatively stable channel for transportation in 2022. According to the State Statistics Service of Ukraine, during the period from January to November 2022, a total of 8 million tons of grain were transported for export by railway, which is 25.1 million tons (68%) less than in the same period in 2021.

This decrease in export by railway can be attributed to a variety of factors, including the disruption of infrastructure, limited capacity, and geopolitical tensions that have affected trade relationships with some neighboring countries.

However, despite these challenges, export by railway remains an important mode of transportation for grain from Ukraine, particularly for landlocked countries in Europe and Asia. Moreover, it is worth noting that Ukraine is investing in the development of its railway infrastructure to support and enhance the export of grain and other goods. The country has plans to modernize and expand its railway system, including the construction



of new railway lines and stations, which will help increase transportation capacity and efficiency in the coming years.

# Total volumes of grain cargo transportation for 2020-2022, million tons 4.0 3.9 3.9 3.1 3.7 3.4 3.7 3.7 3.6 4.0

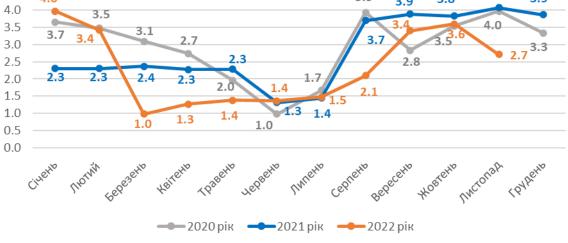


Table 9

4.5

In table number 7, we can compare the main exporters of grain products from Ukraine to Western European countries.

The main competitor is Kernel Trade. In 2023, Kernel Trade invested in the purchase of 100 specialized containers for the export of grain products from Ukraine. The advantage of this enterprise is that this company has a constant load of grain for transportation because it is a direct producer of grain products.

All other companies are carriers that export grain in their own wagons or wagons owned by JSC «Ukrzaliznytsia».

Our company has an advantage among these participants in the market, because it plans to transport grain in specialized containers, and not in ordinary grain wagons. The advantage of our company will be the speed of delivery, ease of loading and unloading, as well as preservation of grain safety in special conditions, which cannot be ensured by an ordinary grain wagon. At the same time, our Company should implement the function of the traking system, which will allow the customer to track the movement of his cargo and have real information about the reliability and location of the cargo.



Company	Transportation volumes in 2022, thousand to					tons		
Company	I quarter	II quarter	III quarter	October	November		"-" till tober	Sum
Kernel Trade LLC	903	205	666	400	234	<b>4</b>	-166	2,40
Promvagontrans LLC	462	382	492	211	192	<b>4</b>	-19	1,73
TEP Transco LLC	456	237	379	203	117	Ψ	-86	1,39
Grainsvard LLC	547	182	369	143	119	Ψ	-24	1,3
Nibulon LLC	282	131	378	143	102	<b>4</b>	-41	1,0
AP Marin LLC	242	77	371	127	63	<b>4</b>	-64	8
UTL - 2 LLC	351	47	194	157	116	<b>4</b>	-41	8
ERANT LLC	228	122	222	62	77	1	15	7
ATLANTA AGRO LLC	294	198	63	65	67	1	2	6
Beregivske Grain-Receiving Enterprise LLC	101	199	207	83	95	1	12	6
Other	4,296	2,288	3,795	2,064	1,614	<b>4</b>	-450	14,0
Total	8,062	3,868	6,931	3,575	2,701	J	-874	25,1

Table 10

# 1.3.3. Internal analysis

Internal Resource	V	R	I	0	Compared to competitors (1-4)
Lower transportation costs (price of containers)	Y	N	N	Y	2
Simple service, digitalization of process	Y	Y	N	N	2
Innovation method of bulk cargo transportations in containers	Y	Y	Y	N	3
Fast delivery and handling of cargo	Y	Y	N	N	2
Multifunctionality (can be transported by any type of freight transport, including cars, ships, railway equipment)	Y	Y	Y	N	2
Convenience of storage in the port if it is not possible to immediately unload the cargo	Y	Y	N	Y	3

Table 11

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<sup>&</sup>lt;sup>16</sup> Presentation of JSC "Ukrzaliznytsia", dated December 2022.



The ability to transport grain in containers by rail is a valuable resource/capability for the Company, as it allows for efficient and cost-effective transportation of large volumes of grain over long distances.

The ability to transport grain in containers by rail is not necessarily rare, as other companies in the industry may also use this mode of transportation. However, if the Company has specialized knowledge or expertise in containerization, this could be a rare capability. It may be difficult for competitors to imitate the company's containerization system without significant investment and expertise.

The Company's ability to transport grain in containers by rail can be imitated by competitors. However, if the Company has established strong relationships with key suppliers and customers, this may be difficult for competitors to replicate.

Container storage provides a secure and reliable place to store grain until it can be transported to its destination. There are several advantages to using container storage in the port. Firstly, it provides a secure and protected environment for grain, protecting it from theft, damage, or weather-related issues. Additionally, container storage allows for easy access to grain, as the containers can be easily loaded and unloaded using cranes or other handling equipment.

### 1.3.4. SWOT

This analysis is used to assess external and internal factors that have significant impact on the Company. Therefore, below are summed up strength and weaknesses – internal factors which influence business operations; and opportunities and threats – which are by substance external factors.

### **Strengths**

- Fastest innovation roll-out
- Simple service, digitalization of process
- Availability to transport on railway tracks of two standards - wide and standard
- Fast delivery and handling of cargo
- Cheaper costs (for transportation)

### Weaknesses

- Return of the container a specialized container for transporting grain will be returned «empty», which requires additional costs, reducing the profitability of transportation
- Not all elevators have equipment to load containers



pportunities	Threats
• Expansion into new market – European countries	<ul><li>New players entering market</li><li>High costs of new technology</li></ul>

Table 12

### 1.3.5. Porter's Five forces

It is used for understanding the competitiveness of the container transportation of grains, and for identifying the strategy's potential profitability. The analysis is based on reviewing the following five forces which shape every market and every industry in the world.

**Bargaining power of customers**. What power/how much power supplier has in terms of volume of grain, and which further will have effect on reduction of industry's profitability. There is a big number of different suppliers of grain – the key resource for transportation. Moreover, these suppliers have similar cargo and in theory it would be easy to switch from one supplier to another. Currently we asses this power as low as its possibility to affect the container transportation of grains profitability.

This power refers to what pressure end-users can exert on businesses to get them to provide higher quality of products, better customer service and lower prices. Number of customers/consumers is significant – and we see that that consumption is growing. In Ukraine, and throughout the world, the grain market is a single system of economic relations. The main actors of these relations are producers, traders and buyers. All players in the agrarian business strive to sell or buy grain, the price per ton of which is constantly jumping, with maximum benefit for themselves.

More than 50 organizations are engaged in transhipment of wheat and other grains in our country. And 5 of them exceed more than 50% of the total number. It is not easy for entrepreneurs to choose which port and which terminal to choose. Here it is desirable to consider logistics costs and once again conduct a thorough analysis of the price policy in this field.

In this aspect, the carrier that can provide grain transportation service at the most optimal price and with simple logistics will win.

Therefore, it can be concluded that it is lower logistics costs when transporting grain in containers that will help reach a larger number of users than competitors.



It is important to communicate directly to our consumers that the transportation service offered by our company is cheaper, faster, and more convenient.

**Bargaining power of suppliers.** Our main suppliers are JSC «Ukrzaliznytsia» and software system providers.

JSC «Ukrzaliznytsia» is a monopolist in the field of cargo transportation services, so its influence is significant on the Company's activities. The increase in railway tariffs for transportation, which took place in the fall of 2022, and the constant change in the rules and conditions of the transportation of goods by railway transport have an impact on the Company's operational activities.

Software companies do not have such influence as JSC «Ukrzaliznytsia», because the company will be able to choose the best offer among many providers.

**Threat of new entrants.** This threat measures how likely it is for a new entrant or entrants to enter the industry. New companies tend to put downward pressure on prices, upward pressure on costs, and an increased necessity for capital expenditures to compete. Competitors are trying to steal profits and market shares from one another. The share of container transportation in Ukraine remains extremely low - about 5% of the total rail freight flow, while in the developed countries of the world it reaches 45% or more. Lack of terminals for transhipment and cargo storage is one of the reasons for this situation. However, since 2022, grain transportation in containers has a very high growth rate, regardless of whether the grain corridor is working or not.

JSC «Ukrzaliznytsia» plans to present 4 new container trains to EU countries in May, Vyacheslav Yeromin, a member of the board of the company, said during the Elevator 2022 forum in Kyiv. It is necessary to carefully monitor the dynamics of the market in the direction of containerization. Threat of new entrants is hight. Currently, there is competition at the western border crossings, at the crossings for the shipment of products. The market is actively replenished with players who use containers.

## 1.3.6. Conclusions

There is a strong demand for grain transportation services in Ukraine and further export to Europe. The company should focus on expanding their market share in by offering competitive pricing, reliable service, and a range of value-added services, such as tracking and safety.

The Company should prioritize building relationships with key customers, such as large agricultural producers and food manufacturers, to ensure a steady flow of business and



mainly JSC «Ukrzaliznytsia». It should also explore opportunities to expand its customer base, such as by targeting smaller agricultural producers or expanding into new geographic regions (Poland, EU).

The Company should keep a close eye on market trends and disruptions that could impact its business, such as changes in commodity prices, new regulations, war or shifts in trade policies. It should be prepared to adapt its operations as needed to remain competitive and profitable.

The Company should monitor the activities of its competitors and stay up to date on its pricing, service offerings, and marketing strategies. It should look for opportunities to differentiate itself, such as by offering faster delivery times, more flexible service options, or superior customer service.



# 2.1. Marketing plan

# 2.1.1. Market segmentation, targeting and positioning

The major exporters of agricultural goods from Ukraine are multinational grain traders and agroholdings.

Specifically, according to the review published in Forbes Ukraine<sup>17</sup>, the major exporters of agricultural goods in 2022 were the following companies:

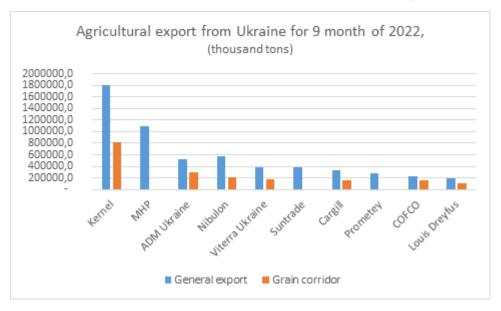


Table 13

As it can be seen from the diagram most of the exported goods were transported by inland transport (including rail and trucks).

The same market players are also the major consumer of logistics services.

Smaller exporters and consumers of logistical services are middle sized and small farmers and local grain traders.

Many major grain traders who have local offices in Ukraine invested into their own fleet of railcars, which was purchased before the beginning of full-scale war, mostly represented by hopper railcars used for the inland transportation of grain to the ports.

<sup>17</sup> Forbes Ukraine, 50 major exporters in Ukraine in 2022, 07 March 2023, https://forbes.ua/ratings/50-naybilshikheksporteriv-ukraini-2022-02032023-12098



As mentioned before, hopper railcars if used for international transportation of goods to EU countries require change of wheels pairs due to the differences in gauge in Ukraine and EU countries.

Use of standard 20-foot shipping container allows for faster handling through transshipping terminals at the border.

Due to the war risks some of the market player will be reluctant to make further invest into railcars fleet, therefore we expect high demand for the logistical services with the use of standard 20-foot shipping container in all consumer segments.

Therefore, our target consumer groups are:

- International grain trading companies operating in Ukraine, and
- The biggest Ukrainian agrarian holding groups

We see the above market players as our target consumer groups because they have a need to transport large quantities of goods through the long distances and provided, we will be able to engage and secure such client if will ensure stable cash flow for our business.

Main segments for transportation – the following grains and oilseeds in bulk:

- o wheat
- o corn
- o barley
- o rye
- o rapeseeds
- o sunflower seeds
- o soybean seeds

The above cargoes do not require special handling or packaging for its transportation, therefore, we can expect that transportation of these goods will have minimum risks of claims of loss of quality or quantity during transportation.

Geographical coverage: mainly cargoes dispatched for the inland silos and storage facilities located in Central and Western regions of Ukraine to the western border crossings or container transshipment terminals.

# Differentiation points:

- Increased efficiency and speed of transportation —through the professional work of personnel and in cooperation with railway and other partners.
- Reduced risk of damage of the grain during transportation, which will be ensured through the regular maintenance of the containers and thorough control over loading of cargo and sealing of loaded containers.



• Enhanced traceability and visibility of shipments through the logistics and tracking software of partner company.

# 2.1.2. Marketing mix

### **Product**

The Company will offer services on transportation of grains and oilseeds in standard-feet containers. Containers will be in good condition and branded with company name.

The Service provided by the company will not be unique, but the niche in which we will be operating still has non-satisfied consumer demand and the Company will be able to stand-out in comparison to its competitors through the described above points of differentiation.

### **Price**

The Company will be limited in its price formation by several factors, the main of which will be:

- Price of the similar services provided by competitors and substitutes.
- Operating and administrative expenses, including labor costs, railway tariffs and costs of subcontracted services (e.g., maintenance of containers; logistics and tracking software etc.).

Therefore, the Company plans to establish flexible price policy formation based on the changes of the above factors as of the appropriate time of services provisions, which will be reflected in the contracts of our clients, provided, that for the transportation of the appropriate agreed cargo lot parties of the contract will fix relevant price.

### **Place**

The Company plans to narrow the geographical area of its operation by the Central and Western regions of Ukraine as cargo origination destinations and by the countries of European Union as destination.

Such approach will allow us to ensure more efficient and precise tracking of the cargoes, as well as it will allow to increase containers turnaround rate and reduce demurrage time in order to achieve maximum utility possible from the use of containers.

Such approach will be review in case of major change of circumstances and provided that we will have to introduce changes in our operational planning due to the circumstances out of our control.



The Company operates in B2B segment, as mentioned before, the product we offer, is not unique, therefore, the Company sees no need to run full scale advertising campaign in mass media.

We plan to build our customer relationships on trust, reliability, and excellent customer service through the direct communications with our potential clients by presenting them out commercial proposal.

Based on our analysis and professional experience in the sphere of agriculture, we note, that the major player in this market is known and familiar with each other.

This also brings us back to the point that it is crucial to ensure and maintain high quality of the services to earn and preserve reputation of reliable partner, as loss of trust and reputational damage will be hard to repair and most likely will result in loss of client and business failure.

The aim is to provide our customers with a seamless transportation experience from start to finish, with timely updates on shipment status and a responsive customer service team.

However, we plan to use such instruments of promotion as visual advertisements and hand-out materials at the professional specialized conferences.

Such promotion actions will not require expensive financing due to the facts that there are few specialized conferences taking place off-line, so the additional expenses which will be incurred are not substantial but will allow us to raise awareness amongst players of the market about our company.

The Company will launch its webpage with clear information about its services and mean of communications and will take measures to promote its visibility in search results by key words associated with the services we provide.

# Sales plan

The Company plans to arrange its sales though the following channels:

- Direct sales to customers, including participation in tenders for the services provisions, announced by the clients either on their webpages, or in major tender platforms, such as Smart-tender, Prozzoro, Cetam etc.
- Online platform for customers to book and track shipments.
- Partnership with logistics providers and shipping agents.

Financial targets of sales describes below if financials.



Analyzing possible ways to organize the Company we considered such organizational form as Limited Liability Company (LLC) and Private Joint Stock Company (PJSC).

The benefits to create the Company in the form of PJSC can be view as possibility to engage external investors by the open sale of share of the company and more advanced and secure system of protection of shareholding rights.

At the same time, the costs of administration of company in the form of PJSC in comparison to LLC will be much higher due to the special requirements of the law on reporting and corporate governance.

Therefore, taking into account the expected financing options of our business, which are investments of own money of the founders and loan financing, we opted to establish the Company in the form of Limited Liability Company under the law of Ukraine with two founding members, with a split of shares of 60 % and 40 %.

Each member will contribute and amount of required initial capital proportionally to its stake into the share capital of the newly established Limited Liability company.

The money, contributed to the share capital, will be used to start the business and to finance expenses.

The Company will be registered and located in Kyiv in its rented office.

Provided in future the Company will decide to engage additional financing by public sale of shares, LLC can be reorganized into PJSC.



# 3.1.1. Financing requirements

Total amount of financing required in total sum amounts to <u>USD 1,140,000</u>.

	Units		
Total financing required	USD	1,140,000	
Preparation period	months	3	
Start-up period	months	4	
Capital Expenditures into Fixed Assets, including:		1,133,500	100%
1 Rolling stock: Acquisition of the 20ft bulk containers	USD	1,120,000	99%
2 Software system	USD	5,500	0.49%
3 Office equipment and computers	USD	8,000	0.71%

### Table 14

# 3.1.2. <u>Model of financing of the project is carried out entirely at the expense of own capital</u>

Below there is a provided a model of the Company financed entirely at the expense of own capital, it means that the funds required for the project are being provided by the owners of the company or individuals involved in the project, rather than by external investors or lenders.

Financing a project using own capital has some advantages, such as greater control over the project and avoiding the costs and obligations associated with taking on external financing. However, it also means that the owners or individuals involved in the project bear all the risks and potential losses associated with the project.

### Calculation and analysis of the Company's capital budget

The financing of the project is carried out entirely at the expense of own capital

Project data				
The initial cost of the equipment	\$1,140,000	Income tax rate (Tax)		18.00%
Capitalized costs	\$4,250	Projected inflation		0.00%
Increase of current assets	\$116,800	Cost of debt component (Rd)		8.00%
Increase in accounts payable	\$5,250	Cost of equity (Re)		15.00%
Cash flow from sales	\$730,000	Interest rate on the loan ( I )	20.00%	
Cash payments for operating expenses	\$263,540	Loan repayment term	4	years
Liquidation value of the equipment	\$112,000	Project calculation horizon	5	years
Loan amount	\$0	Loan repayment model	ann	uity

Table 15



Calculating equipment depreciation is an important aspect of budgeting because it helps to accurately estimate the costs associated with the use and maintenance of equipment over time. Depreciation refers to the decrease in value of an asset due to wear and tear or obsolescence, and it is an expense that must be accounted for in financial statements. This helps to ensure that budgets are accurate and consider the true cost of owning and maintaining equipment.

The table below calculates the total amount of depreciation of containers during 5 years of their use.

Calculation of equipment depreciation								
Year	Initial cost	Depreciation rate (%)	Amount of depreciation (\$)					
1	\$1,144,250.00		\$38,720.00					
2	***		\$39,440.00					
3	***		\$36,240.00					
4	***		\$33,440.00					
5	***		\$31,680.00					
	Tota	al	\$147,840.00					

Table 16

Initial cash flow determines the amount of cash that will be required to start a project or investment. The initial cash flow is the amount of cash that will be needed at the beginning of a project to cover the initial investment costs, such as the purchase of equipment, materials, and other expenses.

The initial cash flow for the Company is USD 1,255,800.

The final cash flow represents the net cash inflows that will be generated by the project after all expenses have been paid and all revenues have been received. The final cash flow is an important input in capital budgeting, which involves making long-term investment decisions that involve significant cash outflows. By calculating the final cash flow, we decide about whether to continue or discontinue our investment.

The final cash flow of the Company project is USD 203,390.00.



DOCINE					
Calculation of the initial casl	n flow	Calculation of the final cash flow			
(+) The initial cost of the equipment	\$1,140,000.00	Liquidation value of the equipm	ent	112000.00	
(+) Capitalized expenses	\$4,250.00	(-) Income tax	18%	-20160.00	
(+) Increase of current assets	\$116,800.00	(+) Current assets		116800.00	
(-) Increase in accounts payable	-\$5,250.00	(-) Accounts payable		-5250.00	
То	tal: \$1,255,800.00		Total:	203390.00	

#### Table 17

The interim cash flows from operating activities represent the cash inflows and outflows that are generated by the Company's core operations, such as sales, OpEx and administrative activities.

By analysing the cash flows from operating activities of the Company in the table below, we find out that the Company has an ability to generate cash from its core operations.

Calculation of inter	im cash flow	s from operating	g activities (by	year)		
Indicator	0	1	2	3	4	5
Cash flows from sales		730000.00	730000.00	730000.00	730000.00	730000.00
(-) Cash payments for operating expenses		263540.00	263540.00	263540.00	263540.00	263540.00
(-) Equipment depreciation		38720.00	39440.00	36240.00	33440.00	31680.00
Earnings before interest and tax (EBIT)		427740.00	427020.00	430220.00	433020.00	434780.00
(-) Interest on the loan		0.00	0.00	0.00	0.00	0.00
Earnings before tax (EBT)	_	427740.00	427020.00	430220.00	433020.00	434780.00
(-) Income tax	18%	76993.20	76863.60	77439.60	77943.60	78260.40
Net Profit After Tax (NOPAT)		350746.80	350156.40	352780.40	355076.40	356519.60
(+) Equipment depreciation		38720.00	39440.00	36240.00	33440.00	31680.00
(+) Interest on the loan		0.00	0.00	0.00	0.00	0.00
Interim cash flows (CFFO)		389466.80	389596.40	389020.40	388516.40	388199.60

Table 18

Calculating the net cash flow is important for cash flow planning, which involves forecasting the amount of cash that will be coming in and going out of the Company over a period. The calculations are made for 5 years of operating activities of the Company.

This calculation allows us to plan for future expenses and be ensure that we have sufficient cash reserves to cover the Company obligations.



DOCITION												
	Calculation of Net Cash Flow of the project											
Indicator	0	1	2	3	4	5						
Initial Cash Flows (CFFI)	-1255800.00											
Cash flows from operations (CFFO)		389466.80	389596.40	389020.40	388516.40	388199.60						
Cash Flow From Investment (CFFI)						203390.00						
Project Net Cash Flows (NCF)	-1255800.00	389466.80	389596.40	389020.40	388516.40	591589.60						
Cash flow lending	0.00	0.00	0.00	0.00	0.00	0.00						
Net Cash Flow	-1255800.00	389466.80	389596.40	389020.40	388516.40	591589.60						

Table 19

The weighted average cost of capital (WACC) tells us the return that shareholders expect to receive in return for providing capital to the Company.

According to calculations WACC is 15%.

In this case, if the Company's cost of capital is 15%, it means that the Company must earn at least a 15% return on its investments to maintain its current market value.

This is an important metric for Company to consider when making investment decisions, as it helps to ensure that it is earning a sufficient return on their investments.

Weighted average cost of capital (WACC)													
WACC	1	х (	D/(E+D)	x	Rd	x	(1-Tax)	+	E/(E+D)	x	Re	) =	WACC
WACC	1.00	х (	0.0%	x	8.0%	X	82%	+	100%	x	15%	) =	15.0000%

Table 20

The Discounted Cash Flow helps to calculate the returns that would be got for the investments and how long it would take for getting the returns.

In the table below NPV calculates the present value of future cash flows, while DCF calculates the future value of present cash flows.

According to calculations below DCF of the Company is higher than its NPV. If the DCF is greater than the present cost, the investment is profitable. The higher the DCF, the greater return the investment generates.

According to calculations IRR of the Company is 19.6%. It is greater than the weighted average cost of capital WACC (15%). The internal rate of return from is higher than the weighted average cost of capital (WACC), so the project is profitable and should be accepted.



Calculation of discounted project cash flows (DCF project)										
Indicator		0	1	2	3	4	5			
Project Net Cash Flows (NCF)		-1255800.00	389466.80	389596.40	389020.40	388516.40	591589.60			
Discount multipliers \$1	15.0%	1.00	0.87	0.76	0.66	0.57	0.50			
Discounted Cash Flows (DCF)		-1255800.00	338666.78	294590.85	255787.23	222135.51	294124.59			
Net Present Value (NPV) \$149,504.96 Internal rate of return (IRR) 19.6419										

### Table 21

Calculation of discounted cash flows attributable to equity (DCF equity)									
Indacator		0	1	2	3	4	5		
Net Cash Flow		-1255800.00	389466.80	389596.40	389020.40	388516.40	591589.60		
Discount multipliers \$1	15.0%	1.00	0.87	0.76	0.66	0.57	0.50		
Discounted Cash Flows (DCF)		-1255800.00	338666.78	294590.85	255787.23	222135.51	294124.59		
Net Present Value (NPV)		\$149,504.96	Internal rate of re	eturn (IRR)			19.6419%		

Table 22

# 3.1.3. Model of financing of the project is partially carried out at the expense of a loan

Below there is a provided model of the Company financed partially by the expense of a loan, which means ffinancing a project partially through a loan and the Company is obligated to repay the loan amount with interest within a specified period.

It the calculations below we consider the terms and conditions of the loan agreement, including the interest rate, repayment schedule, and any fees associated with the loan.

We also below analyze business plan in place to ensure that the Company will generate sufficient revenue to cover the loan payments.

## Calculation and analysis of the Company's capital budget

The financing of the project is partially carried out at the expense of a loan

Project data				
The initial cost of the equipment	\$1,140,000	Income tax rate (Tax)		18.00%
Capitalized costs	\$4,250	Projected inflation		0.00%
Increase of current assets	\$116,800	Cost of debt component (Rd)		8.00%
Increase in accounts payable	\$5,250	Cost of equity (Re)		15.00%
Cash flow from sales	\$730,000	Interest rate on the loan ( I )		20.00%
Cash payments for operating expenses	\$263,540	Loan repayment term	4	years
Liquidation value of the equipment	\$112,000	Project calculation horizon	5 years	
Loan amount	\$200,000	Loan repayment model	an	nuity

Table 23



Calculations below forecasts and plan for loan payments over the life of the loan of the Company. Loan amount is USD 200,000,00. The settlement of the loan will be made within 4 years of the Company's operational activity, and the annual installment for the loan will be USD 77,257.82.

	Calculation of equipment depreciation			Calculation of loan amortization				
Year	Initial cost	Depreciation rate (%)	Amount of depreciation (\$)	Amount of contribution	Amount of interest	Repayment	Balance	
1	\$1,144,250.00		\$38,720.00	\$77,257.82	\$40,000.00	\$37,257.82	\$162,742.18	
2	***		\$39,440.00	\$77,257.82	\$32,548.44	\$44,709.39	\$118,032.79	
3	***		\$36,240.00	\$77,257.82	\$23,606.56	\$53,651.27	\$64,381.52	
4	***		\$33,440.00	\$77,257.82	\$12,876.30	\$64,381.52	\$0.00	
5	***		\$31,680.00					
	Total		\$147,840.00	Total			***	

Table 24

The initial cash flow of the Company and the final cash flow of the Company are the same as for the project is carried out entirely at the expense of own capital.

Calculation of the initia	I cash flow	Calculation of the final cash flow			
(+) The initial cost of the equipment	\$1,140,000.00	Liquidation value of the eq	uipment	112000.00	
(+) Capitalized expenses	\$4,250.00	(-) Income tax	18%	-20160.00	
(+) Increase of current assets	\$116,800.00	(+) Current assets		116800.00	
(-) Increase in accounts payable	-\$5,250.00	(-) Accounts payable		-5250.00	
	Total: \$1,255,800.00		Total:	203390.00	

Table 25

Calculation of interim cash flows from operating activities (by year) is made considering the interest paid on the loan.

Calculation of inter	im cash flow	s from operating	g activities (by	year)		
Indacator	0	1	2	3	4	5
Cash flows from sales		730000.00	730000.00	730000.00	730000.00	730000.00
(-) Cash payments for operating expenses		263540.00	263540.00	263540.00	263540.00	263540.00
(-) Equipment depreciation		38720.00	39440.00	36240.00	33440.00	31680.00
Earnings before interest and tax (EBIT)		427740.00	427020.00	430220.00	433020.00	434780.00
(-) Interest on the loan		40000.00	32548.44	23606.56	12876.30	0.00
Earnings before tax (EBT)	_	387740.00	394471.56	406613.44	420143.70	434780.00
(-) Income tax	18%	69793.20	71004.88	73190.42	75625.87	78260.40
Net Profit After Tax (NOPAT)		317946.80	323466.68	333423.02	344517.83	356519.60
(+) Equipment depreciation		38720.00	39440.00	36240.00	33440.00	31680.00
(+) Interest on the loan		40000.00	32548.44	23606.56	12876.30	0.00
Cash flows from operations (CFFO)		396666.80	395455.12	393269.58	390834.13	388199.60

Table 26





Table 27

Below is made the calculation of the possibility of loan repayment to ensure that the Company will be able to repay the loan without defaulting or causing financial distress.

According to the calculations, the Company will be able to repay the loan. The Company can afford to take on additional debt and plan its cash flows accordingly.

This information must also be provided to the creditor to show that the Company is able to repay such a loan within the stipulated time.

Calculation of the possibility of loan repayment									
Indicator	0	1	2	3	4				
Incremental cash flow		\$396,666.80	\$395,455.12	\$393,269.58	\$390,834.13				
The size of the loan contribution		\$77,257.82	\$77,257.82	\$77,257.82	\$77,257.82				
Ability to repay the loan		\$319,408.98	\$318,197.29	\$316,011.76	\$313,576.31				

Table 28

Calculation of Net Cash Flow of the Company is made considering cash flow from lending. Net Cash Flow for Y5 is the same as Net Cash Flow for Y5 in the model of financing of the project entirely at the expense of own capital.



DOCHILE						
	Calculation of Net C	ash Flow of the	project			
Indicator	0	1	2	3	4	5
Initial Cash Flows (CFFI)	-1255800.00					
Cash flows from operations (CFFO)		396666.80	395455.12	393269.58	390834.13	388199.60
Cash Flow From Investment (CFFI)						203390.00
Project Net Cash Flows (NCF)	-1255800.00	396666.80	395455.12	393269.58	390834.13	591589.60
Cash flow lending	200000.00	-77257.82	-77257.82	-77257.82	-77257.82	0.00
Net Cash Flow	-1055800.00	319408.98	318197.29	316011.76	313576.31	591589.60

Table 29

According to calculations below weighted average cost of capital (WACC) is 13.6%.

Weighted average cost of capital (WACC)  1 x ( D/(E+D) x Rd x (1-Tax) + E/(E+D) x Re ) = WACC  WACC													
14/4.00	1	х (	D/(E+D)	X	Rd	X	(1-Tax)	+	E/(E+D)	X	Re	) =	WACC
WACC	1.00	х (	15.9%	x	8.0%	x	82%	+	84.1%	x	15%	) =	13.6558%

Table 30

According to calculations below DCF of the Company is higher than its NPV. The DCF is greater than the present cost, so the investment is profitable. The higher the DCF, the greater return the investment generates.

According to calculations below IRR of the Company is 20%. It is greater than the weighted average cost of capital WACC (13%). The internal rate of return is higher than the weighted average cost of capital (WACC), so the project is profitable and should be accepted.

Calculation of discounted project cash flows (DCF project) Indicator 0 1 2 3 4 5										
Project Net Cash Flows (NCF)		-1255800.00	396666.80	395455.12	393269.58	390834.13	591589.60			
Discount multipliers \$1	13.7%	1.00	0.88	0.77	0.68	0.60	0.53			
Discounted Cash Flows (DCF)		-1255800.00	349006.98	306135.51	267864.48	234220.83	311933.35			
Net Present Value (NPV)		\$213,361.14	Internal rate of r	eturn (IRR)			20.1095%			

Table 31

Calculation of discounted cas	h flows a	nttributable to e 0	equity (DCF equit	y) 2	3	4	5
Net Cash Flow		-1055800.00	319408.98	318197.29	316011.76	313576.31	591589.60
Discount multipliers \$1	13.7%	1.00	0.88	0.77	0.68	0.60	0.53
Discounted Cash Flows (DCF)		-1055800.00	281031.74	246327.55	215242.49	187921.41	311933.35
Net Present Value (NPV)		\$186,656.55	Internal rate of re	eturn (IRR)			20.1259%

Table 32



The decision is to finance a project of the Company partially by loan rather than entirely at the expense of own capital. According to calculations above the Company has a solid plan for repaying the loan and managing its cash flow to avoid any financial difficulties down the road.

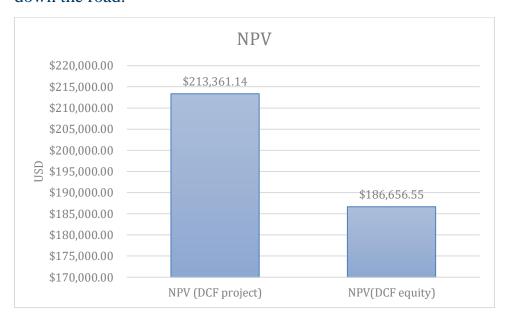


Table 33

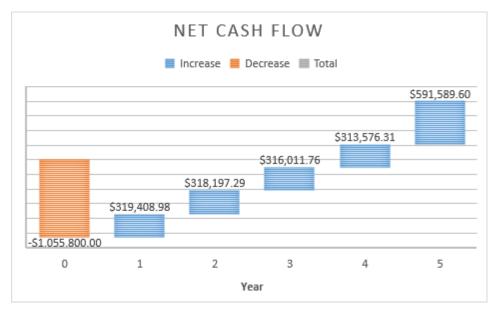


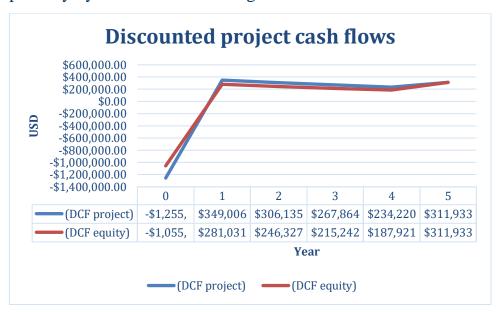
Table 34

By using a loan to finance part of the project, we can increase the Company's leverage and achieve a higher return on investment (IRR) -20%, according to the calculations



above. By using a loan to finance part of the project, we diversify sources of funding and reduce reliance on any one source of capital, which is important for stakeholders of the Company.

NPV is greater, it estimates of how much value it will create, so the project financed partially by loan will create the greater value.



# Table 35

Also, by taking out a loan to finance a project, the interest paid on the loan is considered a business expense. This means that the Company deduct the interest paid on the loan from its taxable income, reducing the amount of taxes it owes. As a result, cash flows from operations (CFFO) are higher.



# 3.1. Implementation plan including risk assessment and management

**Risks identification.** Below are identified potential risks that could impact the Company project and responds to such risks:

• Lack of containers on market in required quantity and quality.

Risk: Currently, due to the war, specifically occupation of territories with major metallurgy sites in Ukraine, such as Mariupol and Azovstal steel plant, most of the Ukrainian companies that manufacture containers have suspended their production the lack of necessary materials such as metals and in some cases due to damaged capacities, moreover, the shortage of personnel is also a problem in this industry as of today due to mobilization to the Armed Forces of Ukraine.

Risk response: To ensure that the Company will be able to purchase enough containers with appropriate quantity and quality it is planned to conclude contract with reliable supplier with partial prepayment for the containers to be delivered in time and in required quantity and quality. The Company may also consider purchasing containers from international companies, such as a Polish container manufacturer. This will ensure and allow the Company to receive quality containers and in the required quantity on time.

• Fraudulent and incompetent actions by personnel or engaged subcontractors.

Risk: There is a possibility that personnel or subcontractors may engage in fraudulent activities, such as embezzlement, bribery, or misrepresentation of financial information. This can result in financial losses, damage to the company's reputation, and legal consequences. Incompetence or lack of skill among personnel or subcontractors can lead to operational inefficiencies, errors, and poor decision-making. This can result in delays, quality issues, customer dissatisfaction, and financial losses.

Risk response: To mitigate the risks of fraudulent and incompetent actions of our personnel or subcontractors we intend to run regular internal audits and trainings to ensure that engaged personnel is aware of what is expected of them.

In regard to subcontractors we also intend to apply «Know your customer» (contractor in our case) procedures before the beginning of cooperation with each subcontractor, run the background checks based on open sources, including, but not limited to the checks of relevant entities being related to any persons or companies included in sanction lists issued by OFAC and other major international organizations, or included in other public black lists, such as black lists of GAFTA and FOSFA.

To ensure that the Company's subcontractors follow the same approach we plan to include relevant provisions in our contracts with subcontractors, including but not limited to the provisions in regard of:



- Obligations to comply with applicable anti-corruption and anti-bribery laws and regulations.
- Obligations to comply with economic sanction or other similar restrictive measures of any type, that may be relevant for the specific transportation regarding the involved parties, cargo, and transportation rout, including, but not limited to imposed by the United States of America, the United Nations, the European Union, the United Kingdom, Canada, or Switzerland.

Compliance to the above requirements is very important to ensure the smooth and timely transportation of the cargo with EU countries, as involvement of any of the service providers within the chain of transportation with any sanctioned persons may cause the delay in cargo delivery.

To the extent possible we also plan to cooperate with contractors that apply recognized quality management systems and hold relevant certificates.

• Failure or delay to contract required quantity of fitting platforms from JSC «Ukrzaliznytsia»

Risk: One of the most sensitive issues that can have significant impact on business is the availability of fitting platforms from the JSC «Ukrzaliznytsia».

Risk response: To ensure such availability, we plan to conclude contract with JSC «Ukrzaliznytsia» and keep good working relationships with this organization to ensure swift and lucrative cooperation in favor of our clients. JSC «Ukrzaliznytsia» is a monopolist and cannot be substituted by any other suppliers. In the worst-case scenario is due to the reasons out of our control we will not be able to obtain fitting planforms in required quantity the only alternative will be to reorient transportation of containers by trucks.

• Shortage of customers due to high competition (lower tariffs, better quality of services)

Risk: Competitors offering similar transportation services or alternative methods can impact market share and profitability. Intense competition may lead to price pressure and the need to differentiate services to attract and retain customers.

Risk response: In case of shortage of clients due to competition the Company plans to make internal audit of activity to identify possible points of improvement of services quality and to review if there are any options to reduce the costs of such services. Conduct a thorough analysis of the competitive landscape to identify unique selling points. Develop a strong marketing strategy to highlight the advantages of specialized container rail transport. Offer competitive pricing, reliable service, and value-added solutions to



differentiate from competitors. For example, tracking system which is rare on Ukrainian market for now.

• Disruption of work due to export restrictions from the EU countries

Risk: Political instability and political restrictions can disrupt operations and logistics. It can result in penalties, fines, legal issues with clients. It can harm the Company's reputation and credibility and lead to interruptions in the supply chain.

Risk response: In case of partial restrictions of export, the Company will look for the possible options to refocus on the transportation of grain in transit through countries that have restricted the import of Ukrainian grain and to start the transit of grain products through Poland to third countries that do not impose such restrictions, for example, to Spain.

In case if restrictions will be introduced without a due notice and certain pending transportations will be affected by such prohibitions, the Company will be able to appeal to such events as events of force-majeure in order to mitigate its risks being penalized by the customers for the delay of delivery. The relevant force-majeure provisions to be included into the contracts with customers.

In case of full prohibition of export for the long period of time (more than 3 month) the Company may have to suspend its main activity and look into other than agricultural cargoes for transportation, reorient its geographical coverage or even investigate the Company liquidation scenario.

• Equipment breakdown.

Risk: Mechanical failures in railcars or specialized containers can lead to delays, disruptions in service, and potential loss of revenue. Unplanned maintenance or repair work can affect operational efficiency.

Risk Response: Implement a rigorous maintenance program for railcars and specialized containers to minimize the risk of breakdowns. Establish contingency plans to quickly replace or repair equipment in case of failures. Maintain spare parts inventory to minimize downtime.



**Assess Risks:** Below we evaluated the probability and potential impact of each identified risk, prioritized them based on their significance and considered the likelihood of occurrence and the severity of consequences if the risks materialize.

Risk	Probability	Impact	P*I	Risk Response
Lack of containers on market in required quantity and quality	Medium	Medium	Medium	Mitigate
Fraudulent and incompetent actions by personnel or engaged subcontractors	Low	Low	Low	Mitigate
Shortage of customers due to high competition (lower tariffs, better quality of services)	Medium	Medium	Medium	Mitigate
Failure or delay to contract required quantity of fitting platforms from JSC «Ukrzaliznytsia»	Medium	Medium	Medium	Mitigate
Disruption of work due to export restrictions from the EU countries	High	High	High	Accept
Equipment breakdown	Low	Low	Low	Mitigate

Table 36



The Company understands the level of risk it is willing to accept considering factors such as the risk tolerance, financial capacity, and strategic objectives.

Provided certain risks materialization will result in higher loses, the Company may be forced to look into liquidation scenario or seek for additional financing.

Risk Tolerance: The Company has a moderate tolerance level, which reflects its willingness to accept risks. This is influenced by factors such as the Company's financial stability, experience in the industry, and risk management capabilities.

Since the Company employs highly qualified employees who have high expertise in the field of transportation of grain cargoes by rail in specialized containers and already have experience in such transportation, the Company has an average risk appetite and is ready to take certain risks, in particular, the high risk described below - the risk of bans from European countries on the export of grain products from Ukraine. Thanks to its professional knowledge in this field, the Company is ready to respond appropriately to this risk and quickly reorient its activities, namely, in the event of such bans, to start transporting grain products from Ukraine to third countries in transit through Poland, Hungary or Romania. Currently, countries such as Spain, Finland, and Denmark continue to need Ukrainian grain, so the Company will continue its activities in the event of a risk of a ban on grain exports to Eastern Europe.

Financial Capacity: Company's has a financial capacity to absorb potential losses or setbacks associated with the project. High financial capacity may allow the Company to accept a higher level of risk. The risk of disruption of work due to export restrictions from the Eastern EU countries is accepted by the Company because the Company according to financial calculations above has a positive and consistent cash flow which ensures that the Company can cover its expenses, which may arise due to the occurrence of risk of disruption of work due to export restrictions from the Eastern EU countries.

Return on Investment (ROI) Expectations: The expected return on investment of the Company is 20% which means the Company can accept high risk - export restrictions from the Eastern EU countries.

The Company estimation is that it can absorb loses in the amount, which should not exceed 50 % of net profit after the payment of interest on the loan.

The Company decides to use the practice of mitigating all but one risk, which it decides to accept - this risk export restrictions from the Eastern EU countries:

- Lack of containers on the market in required quantity and quality:
- 1. Establish contracts with reliable suppliers and make partial prepayments for timely delivery.



- 2. Explore international suppliers as an alternative source.
  - Fraudulent and incompetent actions by personnel or engaged subcontractors:
- 1. Conduct regular internal audits and provide training to ensure personnel awareness and compliance.
- 2. Include provisions in contracts with subcontractors regarding compliance and performance expectations.
  - Failure or delay to contract the required quantity of fitting platforms from JSC «Ukrzaliznytsia»:
- 1. Establish a contract with JSC «Ukrzaliznytsia» and maintain good working relationships.
- 2. Consider reorienting transportation by trucks as a contingency measure if fitting platforms are unavailable.
  - Shortage of customers due to high competition:
- 1. Conduct an internal audit to identify areas for service quality improvement and cost reduction.
- 2. Thoroughly analyse the competitive landscape and identify unique selling points.
- 3. Develop a strong marketing strategy highlighting the advantages of specialized container rail transport.
- 4. Offer competitive pricing and consider implementing features like tracking systems.
  - Disruption of work due to export restrictions from EU countries:
- 1. Explore alternative options, such as transit through countries without restrictions.
- 2. Consider reorienting transit routes, for example, through Poland to reach third countries.
- 3. If full prohibition of export persists for an extended period, consider suspending operations or exploring liquidation scenarios.
  - Equipment breakdown:
- 1. Implement a rigorous maintenance program for railcars and specialized containers.
- 2. Develop contingency plans for quick equipment replacement or repair.
- 3. Maintain an inventory of spare parts to minimize downtime and ensure operational efficiency.

By implementing these risk mitigation measures, the Company can effectively address the identified risks and increase the chances of project success while minimizing potential



negative impacts. Regular monitoring, evaluation, and adjustments should be made throughout the project's lifecycle to ensure their continued effectiveness.



# Section 4. Learned tools: reflection of usage

The project aims to establish a company that offers grain transportation by railway in specialized containers to address the challenges faced by the Ukrainian agricultural sector. The project's vision is to create an opportunity to export grain from Ukraine under any conditions, regardless of the state of war and blocked ports. The project goals include the investment in railway specialized containers being paid off by the end of Year 4, achieving a company internal rate of return (IRR) of 20% by Year 5, and securing cooperation agreements with at least five major grain traders in Ukraine by the end of Year 3.

The project management approach is a stage-gate approach, which involves managing the project team, controlling stages, and covering the risks of going over budget. The external factors influencing the business are analysed using the PESTEL model, considering political, economic, social, technological, environmental, and legal factors.

Overall, the project appears to address a significant challenge in the Ukrainian agricultural sector and has clear goals and objectives. However, the success of the project will depend on various factors, including the resolution of the ongoing war, the stability of the political and economic situation, and the cooperation of neighbouring countries. It is essential to carefully consider and mitigate the risks associated with these factors to ensure the project's success.

There are a large number of suppliers of grain and switching between suppliers is relatively easy as they offer similar cargo. However, the number of customers/consumers is significant, and their consumption is growing both in Ukraine and worldwide. This indicates a strong demand for grain transportation services.

To be successful in this competitive market, the company should focus on reaching a larger number of customers by offering a transportation service that is cheaper, faster, and more convenient than competitors. Lower logistics costs when transporting grain in containers can be a key advantage in attracting customers. Communicating this value proposition directly to consumers and highlighting the benefits of the company's services will be important.

On the other hand, the bargaining power of suppliers, particularly JSC «Ukrzaliznytsia» and software system providers, is significant. JSC «Ukrzaliznytsia» holds a monopoly in the field of cargo transportation services and its influence on the company's activities is substantial. The increase in railway tariffs and constant changes in transportation rules and conditions can impact the company's operational activities. Software companies, on the other hand, have less influence as the company can choose the best offer among many providers.



In terms of the threat of new entrants, it is considered high. Although the share of container transportation in Ukraine is currently low compared to developed countries, there is a high growth rate in grain transportation in containers. JSC «Ukrzaliznytsia» is also planning to introduce new container trains to EU countries, indicating increased competition in the market. The company should closely monitor the market dynamics and be prepared to adapt its operations to remain competitive.

In conclusion, there is a strong demand for grain transportation services in Ukraine, particularly for export to Europe. The company should focus on expanding its market share by offering competitive pricing, reliable service, and value-added services. Building relationships with key customers, particularly JSC «Ukrzaliznytsia», is crucial, but the company should also explore opportunities to expand its customer base and stay updated on market trends and disruptions. Monitoring competitors and finding ways to differentiate the company's services will also be important for long-term success.



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  - 16. Presentation of JSC «Ukrzaliznytsia», dated December 2022.
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