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Logistics Department

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QUALIFICATION PAPER

(EXPLANATORY NOTES)

OF SEEKER OF ACADEMIC DEGREE

«MASTER»

THEME: **«Strategic management of international transportation in a transport and logistics company»**

Specialty 073 «Management»

Educational and Professional Program « Logistics »

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«ДЕРЖАВНИЙ УНІВЕРСИТЕТ «КИЇВСЬКИЙ АВІАЦІЙНИЙ ІНСТИТУТ»
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КВАЛІФІКАЦІЙНА РОБОТА

(ПОЯСНЮВАЛЬНА ЗАПИСКА)

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ТЕМА: ***«Стратегічне управління міжнародними перевезеннями в транспортно-логістичній компанії»***

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Засвідчую, що у цій кваліфікаційній роботі немає запозичень з праць інших авторів без відповідних посилань *Аліса ДЕРМЕНЖИ*
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Київ 2024

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Educational and Professional Program « Logistics »

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«26» August 2024

TASK

FOR COMPLETION THE QUALIFICATION PAPER OF SEEKER

Alisa O. Dermenzhy
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1. Theme of the qualification paper: «Strategic management of international transportation in a transport and logistics company» was approved by the Rector Directive №1559/ст. of August 26, 2024.

2. Term performance of qualification paper: from August 26, 2024 to December 15, 2024.

3. Date of submission qualification paper to graduation department: November 20, 2024.

4. Initial data required for writing the qualification paper: general and statistical information about logistic market in Ukraine, information about FTP LLC, production and financial indicators of the company FTP LLC, literary sources on logistics and customer service process, Internet source.

5. Content of the explanatory notes: introduction, the essence of strategic management in transport and logistics companies; features of international transportation within strategic management; methodological foundations of strategic planning for international transportation; analysis of the activity of FTP LLC; identification of disadvantages in international transportation management strategy; development of an algorithmic model for strategic management of transport logistics; organization and planning of international freight transportation processes; economic assessment and strategic management of blockchain technology implementation; calculation of the economic effect of proposed measures; conclusions and appendix.

6. List of obligatory graphic matters: tables, charts, graphs, diagrams illustrating the current state of problems and methods of their solution.

7. Calendar schedule:

№	Assignment	Deadline for completion	Mark on completion
1	2	3	4
1.	Study and analysis of scientific articles, literary sources, normative legal documents, preparation of the first version of the introduction and the theoretical chapter	26.08.24-20.09.24	Done
2.	Collection of statistical data, timing, detection of weaknesses, preparation of the first version of the analytical chapter	21.09.24-13.10.24	Done
3.	Development of project proposals and their organizational and economic substantiation, preparation of the first version of the project chapter and conclusions. Editing the first versions of qualification paper	14.10.24-03.11.24	Done
4.	Preparing the final version of the qualification paper, checking by standards inspector	04.11.24-14.11.24	Done
5.	Approval for a qualification paper with supervisor, getting of the report of the supervisor, getting internal and external reviews, transcript of academic record	15.11.24-19.11.24	Done
6.	Submission qualification paper to Logistics Department	20.11.24	Done

Seeker _____
(signature)

Supervisor of the qualification paper _____
(signature)

8. Consultants of difference chapters of qualification paper:

Chapter	Consultant (position, surname and initials)	Date, signature	
		The task was given	The task was accepted
Chapter 1	Associate Professor, Bugayko D.O.	26.08.24	26.08.24
Chapter 2	Associate Professor, Bugayko D.O.	21.09.24	21.09.24
Chapter 3	Associate Professor, Bugayko D.O.	14.10.24	14.10.24

9. Given date of the task August 26, 2024

Supervisor of the qualification paper: _____ Dmytro BUGAYKO
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Task accepted for completion: _____ Alisa DERMENZHY
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ABSTRACT

The explanatory notes to the qualification paper «Strategic management of international transportation in a transport and logistics company» comprises of 130 pages, 20 figures, 34 tables, 3 appendix, 99 references.

KEY WORDS: BLOCKCHAIN TECHNOLOGY, ECONOMIC ASSESSMENT, FREIGHT TRANSPORT PLANNING, INTERNATIONAL TRANSPORTATION, LOGISTICS SERVICES, STRATEGIC MANAGEMENT, SUPPLY CHAIN OPTIMIZATION

The purpose of the research is to study the theoretical foundations and problems of the strategic management of international transportation in transport and logistics companies and to develop project recommendations for optimizing international transportation processes, including the implementation of blockchain technologies, to enhance efficiency and competitiveness.

The subject of the research is the implementation of strategic management principles and advanced technologies in the transport and logistics company FTP LLC.

The object of the research is the processes of strategic management of international transportation in the transport and logistics company FTP LLC.

Methods of research are scientific inquiry, empirical, analysis and synthesis, modeling, expert assessments, extrapolation of time series.

Materials of the qualification paper are recommended for applying during scientific research, in the educational process and the practical activities of logistics department specialists.

CONTENTS

NOTATION

API – Application Programming Interface

BCR – Benefit-Cost Ratio

BSC – Balanced Scorecard

CBA – Cost-Benefit Analysis

ERP – Enterprise Resource Planning

IMO – International Maritime Organization

IoT – Internet of Things

IRR – Internal Rate of Return

ISO – International Organization for Standardization

KPI – Key Performance Indicators

MIS – Management Information Systems

NPV – Net Present Value

PESTLE – Political, Economic, Social, Technological, Legal, and Environmental (analysis)

PoA – Proof-of-Authority (blockchain consensus model)

PP – Payback Period

ROI – Return on Investment

SCM – Supply Chain Management

SWOT – Strengths, Weaknesses, Opportunities, Threats (analysis)

TMS – Transport Management System

WMS – Warehouse Management System

INTRODUCTION

The relevance of this qualification paper lies in the critical role of strategic management in addressing the evolving complexities of international transportation within the transport and logistics sector. In an era marked by globalization, technological innovation, and heightened competition, companies engaged in international logistics must navigate a dynamic landscape characterized by regulatory diversity, geopolitical uncertainties, and rapidly changing market demands.

International transportation serves as the backbone of global trade, enabling the seamless movement of goods across borders. However, the increasing need for efficiency, cost optimization, and adherence to environmental and safety standards has created significant challenges for transport and logistics companies. Strategic management emerges as a vital tool to align organizational goals with market trends, optimize supply chain operations, and ensure resilience in the face of uncertainties.

The growing importance of digital transformation further underscores the need for robust strategic approaches. Technologies such as blockchain, IoT, and AI offer unprecedented opportunities to enhance transparency, efficiency, and customer satisfaction in international transportation. However, leveraging these technologies requires well-structured strategic planning and implementation processes.

This qualification paper addresses these pressing issues by exploring the theoretical and practical aspects of strategic management in international transportation. It aims to provide actionable insights and methodologies for optimizing operations, improving competitiveness, and fostering sustainable growth in the transport and logistics industry. The findings of this research are particularly significant for companies seeking to adapt to the challenges of globalization and maintain a competitive edge in the international market.

The purpose of the research is to study the theoretical foundations and problems of the strategic management of international transportation in transport and logistics companies and to develop project recommendations for optimizing international

transportation processes, including the implementation of blockchain technologies, to enhance efficiency and competitiveness.

To achieve this purpose, the following tasks are outlined:

– define the theoretical foundations of strategic management in international transportation;

– analyze FTP LLC's operational and financial performance;

– evaluate the company's current international transportation management strategies;

– develop an algorithmic model for strategic management in transport logistics;

– propose organizational and planning solutions for international freight processes;

– introduce blockchain technologies to enhance transparency and efficiency;

– assess the economic impact of the proposed blockchain integration;

– provide recommendations to optimize international transportation strategies and improve competitiveness.

The research is grounded in the principles of management, logistics, and economic analysis, ensuring a comprehensive approach to addressing the strategic challenges of international transportation. Key methodologies employed include SWOT and PESTLE analysis to assess internal strengths and weaknesses alongside external opportunities and threats, enabling a thorough understanding of the company's operational environment. Value chain analysis is utilized to identify critical points within the logistics processes and enhance overall efficiency. Economic feasibility assessments, including financial metrics such as Net Present Value (NPV), Internal Rate of Return (IRR), and Benefit-Cost Ratio (BCR), are applied to evaluate the financial viability of the proposed strategies.

The issues of strategic management of international transportation in transport and logistics companies have been extensively studied by Ukrainian scholars such as Bugayko D.O. (2024), Smerichevska S.V. (2023), Yevtushenko K.V. (2023), Ovcharenko A.G. (2023), Hrynko T.V. (2021), and Gviniashvili T.Z. (2021). Additional contributions have been made by scholars like Velichko T.G. (2020),

Krauze O. (2022), and Kobeleva T. (2022). Among foreign researchers, significant contributions were made by Bryson J. (2020), Olson E.M. (2021), Fuertes G. (2020), Aslam F. (2020), Bhargav B. (2012), and Huang S. (2019). These studies focus on various aspects, including strategic planning, digital innovation, integration of IoT and blockchain technologies, as well as enhancing competitiveness and adaptability in the global logistics market.

Theoretical chapter delves into the theoretical aspects of strategic management in transport and logistics companies. It examines the essence of strategic management, emphasizing its importance in a globalized economy. The chapter also highlights the features of international transportation and outlines the methodological foundations for strategic planning. It incorporates insights from leading Ukrainian and international scholars, providing a comprehensive theoretical framework for addressing challenges in the industry.

Analytical chapter focuses on the operational and strategic analysis of FTP LLC. It includes an overview of the company's general characteristics and evaluates its production and financial indicators. The chapter further analyzes the current strategy employed by FTP LLC for managing international transportation, identifying critical challenges and opportunities for improvement. The insights gained serve as the basis for developing project recommendations.

The final chapter presents practical recommendations for enhancing FTP LLC's strategic management of international transportation. It introduces an algorithmic model for strategic management tailored to transport and forwarding enterprises. Additionally, the chapter outlines improved organization and planning processes for international freight transportation and assesses the economic viability of implementing blockchain technologies. These proposals aim to increase the company's efficiency, adaptability, and competitiveness in the global market.

The findings highlight the role of strategic management in optimizing international transportation through blockchain and digital tools. Recommendations focus on adopting innovations and strategic practices to enhance FTP LLC's efficiency and competitiveness.

CHAPTER 1
THEORETICAL FOUNDATIONS OF STRATEGIC MANAGEMENT OF INTERNATIONAL TRANSPORTATION

1.1 The essence of strategic management in a transport and logistics company

Strategic management is an important component of the successful operation of any business, especially in the field of transport and logistics services, where the efficiency of processes determines the company's competitiveness. In the context of globalisation, digitalisation and the growth of international trade, logistics plays a key role in ensuring the fast and reliable exchange of goods, services and information. Accordingly, strategic management in a transport and logistics company is aimed at developing long-term plans that take into account changing market conditions, innovative technologies and the specifics of supply chains.

The relevance of the research is driven by the high dynamism of the logistics services market and the need for companies to adapt to new challenges, such as digital transformation, environmental standards and growing customer expectations. In this context, strategic management helps to set priorities, use resources efficiently and increase the sustainability of logistics processes.

An analysis of the literature on strategic management in logistics allows us to identify the main approaches used to ensure effective management of enterprises in the current environment. Let's start with the fundamental provisions presented in the works of leading scholars.

Blyzniuk A. and Kudriavtseva O. (2023) in their work considered logistics methods of managing freight forwarding processes, emphasising the importance of optimising supply chains to reduce costs and increase the efficiency of companies [4].

These aspects form the basis for building strategic management models that focus on the rational use of resources.

Deepening this issue, Velychko T.G. (2020) focuses on the importance of strategic management for ensuring the sustainable development of enterprises. She emphasises that the application of such approaches allows to form long-term competitive advantages, which are critical in today's dynamic logistics environment [7]. This demonstrates the need for an integrated approach to strategic management.

In turn, Galliamova D.V. and Smerichevska S.V. (2024) studied the optimisation of the goods distribution management system in the context of the introduction of modern technologies such as Logistics 4.0. Their research confirms the importance of an innovative approach in the strategic management of logistics processes [8]. Innovations are a key factor in adapting to new market challenges.

In addition, Hrynko T.V., Gviniashvili T.Z. and Aleshchenko V.I. (2021) identified strategic management as a key element of the organisational and economic mechanism for ensuring the economic sustainability of an enterprise. They emphasise the importance of a systematic approach to logistics management, which allows to ensure the sustainability of companies in the face of modern economic challenges [9].

Particular attention should be paid to the research of Yevtushenko K.V. and Smerichevska S.V. (2023), who developed strategies for logistics companies to enter the international market. Their work demonstrates the importance of an adaptive approach that allows them to function effectively in the global competitive sphere [11]. This is particularly relevant for companies seeking to expand their operations beyond national markets.

Finally, it is worth noting the study of Ovcharenko A.G. (2023), who focused on the quality management of logistics business processes. His work emphasises that the integration of quality into the strategic management of companies in the logistics sector contributes to increased competitiveness and sustainability [19].

Thus, the analysed literature sources indicate the multifaceted nature of strategic management in logistics, where systemic, process, adaptive and innovative approaches are important. The analysis is grouped in table 1.1. It should be noted that the authors'

research is aimed at ensuring the sustainable development of enterprises and increasing their competitiveness, as well as helping to adapt to the conditions of an ever-changing market.

Table 1.1 – Main authors and their contribution to the study of strategic management in logistics

Author(s)	The main contribution to the study of strategic management in logistics
Blyznyuk A., Kudryavtseva O. (2023) [4]	Consideration of logistics methods for managing transport and forwarding processes, focusing on optimizing logistics chains to reduce costs and increase efficiency.
Velychko T.G. (2020) [7]	The importance of strategic management for the sustainable development of enterprises, the formation of long-term competitive advantages.
Gallyamova D.V., Smerichevska S.V. (2024) [8]	Optimization of the goods distribution management system using modern technologies, such as Logistics 4.0, which confirms the importance of an innovative approach.
Grynko T.V., Gviniashvili T.Z., Aleshchenko V.I. (2021) [9]	Strategic management as a key element in ensuring the economic sustainability of the enterprise, a systematic approach to logistics management.
Evtushenko K.V., Smerichevska S.V. (2023) [11]	Development of strategies for entering the international market of logistics companies, emphasizing the importance of an adaptive approach to global competition.
Ovcharenko A.G. (2023) [19]	Quality management of logistics business processes, integration of quality into strategic management contributes to competitiveness and sustainability.
Bryson J., George B. (2020) [46]	Research on strategic management in public administration with an emphasis on innovative approaches to integrating logistics strategies into general business processes.
Fuertes G., Alfaro M., Vargas M., Gutierrez S., Ternero R., Sabattin J. (2020) [63]	A conceptual framework for strategic management, including a description of literary approaches to integrating logistics into a company's strategy.
Olson E.M., Olson K.M., Czaplewski A.J., Key T.M. (2021) [80]	Analysis of strategic management in the context of digital marketing and its impact on logistics processes.
Bo W., Grygorak M., Voitsehovskiy V., Lytvynenk S., Gabrielova T., Bugayko D., Vidovic A. (2019) [45]	Development of a cargo flow management model for network air carriers with an emphasis on strategic optimization of logistics processes.
Bugayko D., Reznik V., Smerichevska S. (2024) [47]	Research on the mechanisms of organizing the activities of logistics enterprises taking into account strategic management in the digital economy.
Zhang W., Zhao C., Wang Z., Song L. (2020) [99]	Study of an improved compensation topology for container transportation in the context of logistics optimization and strategic management.

Source: developed by author based on [7, 8, 9, 11, 19, 45, 46, 47, 80, 99]

In the studies of strategic management in logistics, there is a common emphasis on the importance of integrating logistics processes into the overall strategy of the

enterprise. For example, Blyzniuk A. and Kudriavtseva O. (2023) [4] emphasise the role of logistics methods in improving the efficiency of transport and forwarding activities, which is supported by the research of Galliamova D.V. and Smerichevska S.V. (2024) [8], who consider the optimisation of logistics systems in the context of digital transformation.

The differences between the works are in the focus of research. For example, Velichko T.G. (2020) [7] focuses on strategic management in the context of sustainable development, while Yevtushenko K.V. and Smerichevska S.V. (2023) [11] analyse strategies for logistics companies to enter the international market. For their part, Bryson J. and George B. (2020) [46] focus on strategic management in the public sector, expanding the understanding of strategic management in a more global context.

In general, all authors recognise the importance of strategic management in logistics as a key tool for achieving the competitiveness of enterprises, but their approaches differ depending on the conditions and aspects of the study.

The identification of the key elements of strategic management in the transport and logistics industry is based on the analysis of different approaches to enterprise management, which are considered by both Ukrainian and foreign authors.

According to most authors, the key elements of strategic management are: strategic analysis, strategy planning, strategy implementation, control and performance evaluation (fig. 1.1).

Strategic analysis is the basis for decision-making aimed at determining competitive advantages, analysing the external environment and assessing the enterprise's resources. For example, Hrynko T. V. and Aleshchenko V. I. (2021) [9] emphasise the importance of SWOT analysis to identify key success factors in transport and logistics activities. Foreign authors, such as Bryson J. and George B. (2020) [46], emphasise the need to use analytical tools in the public management of strategic processes.

Strategy planning includes defining the company's mission, vision and strategic goals. Velychko T.G. (2020) [7] points out that clear planning allows transport and logistics companies to adapt to changes in market conditions. Olson E.M. and Olson

K.M. (2021) [80] emphasise the importance of long-term planning in the context of the digital transformation of the industry.

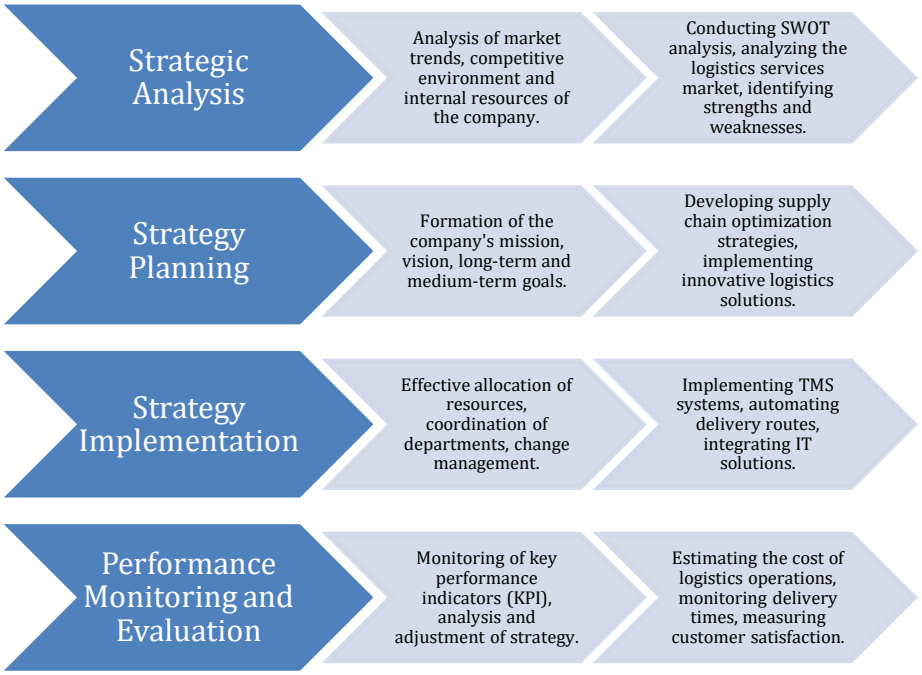

Figure 1.1. – Key elements of strategic management in the transport and logistics industry

Source: developed by author

Implementation of the strategy involves resource management, coordination of departments and introduction of innovative technologies. For example, Yevtushenko K.V. and Smerichevska S.V. (2023) [11] note the importance of integrating IT solutions to improve the efficiency of supply chains. At the international level, Aslam F. et al. (2020) [43] focus on the use of innovations such as IoT and artificial intelligence to optimise traffic management.

Performance monitoringand evaluation includes monitoring key indicators, analysing the results achieved, and adjusting the strategy. Malyar E.O. and Smerichevska S.V. (2023) [17] emphasise the importance of KPI evaluation to ensure the effectiveness of management decisions. In the international context, Fuertes G. et al. (2020) [63] point out the role of systematic control in the implementation of strategic plans.

Thus, strategic management in the transport and logistics industry is based on a harmonious combination of analysis, planning, implementation and control, which is confirmed by the research of both Ukrainian and international authors.

It should be noted that the interaction of the main elements shown in Fig. 1.1 allows transport and logistics companies to adapt to market challenges, reduce costs, improve the quality of services and maintain competitiveness in a dynamic environment.

The role of strategic management in ensuring the company's competitiveness is extremely important in the context of dynamic changes in the market environment, globalisation and increased competition. Effective strategic management allows companies to identify their strengths, adapt to environmental challenges, use innovations and maintain market leadership. In today's environment, when competitiveness depends not only on the quality of products and services, but also on the speed of adaptation to technological changes, strategic management is becoming a key factor in survival and development.

Ukrainian authors have made a significant contribution to the study of this topic. Thus, Hrynko T.V., Gviniashvili T.Z. and Aleshchenko V.I. (2021) focus on strategic management as an element of the organisational and economic mechanism for ensuring the economic sustainability of companies. They emphasise that strategic management allows to respond effectively to external challenges and maintain the sustainability of the enterprise even in difficult conditions [9].

In turn, Yevtushenko N.O., Drokina N.I. and Savenko N.V. (2020) consider in detail the theoretical aspects of strategic management of enterprise competitiveness. They emphasise that strategic planning is the basis for building long-term competitive advantages, especially in the digital economy [12]. A similar approach is proposed by Kobeleva T., Vytvytska O., Pererva P. and Kovalchuk S. (2022), who focus on the role of intellectual property in strategic management. Their research emphasises the importance of optimising company resources to create competitive strategies [14].

Other researchers, such as Ozarko K. and Chelombitko V. (2022), analyse the role of strategic management in crisis conditions. They note that the ability of

companies to adapt their strategies to new challenges allows them to remain competitive even in times of economic instability [20].

Foreign authors are also actively researching the role of strategic management in competitiveness. For example, Bryson J. and George B. (2020) emphasise the importance of an integrative approach to strategic management, which allows achieving high efficiency in the public and private sectors [46]. Olson E.M., Olson K.M., Czaplewski A.J. and Key T.M. (2021) explore the role of digital transformation in strategic management, emphasising the importance of adapting to innovative changes to ensure competitiveness [80].

The study by Fuertes G. and others (2020) proposes a conceptual framework for strategic management based on a systematic analysis of internal and external factors that affect the company's competitiveness [63]. Similarly, Aslam F., Aimin W., Li M. and Ur Rehman K. (2020) emphasise the importance of integrating modern technologies such as IoT and Industry 5.0 to strengthen strategic management and increase the competitive position of companies [43].

Thus, the research of both Ukrainian and foreign scholars shows the significant role of strategic management in shaping competitive advantages. Their works, that presented in table 1.2, provide valuable recommendations for companies seeking to adapt to the challenges of the modern market environment and increase their efficiency.

Studies of the role of strategic management in ensuring the competitiveness of a company have both common features and differences. All authors emphasise the importance of strategic management for achieving long-term competitive advantages. In particular, Hrynko T.V., Gviniashvili T.Z., Aleshchenko V.I. (2021) [9] and Fuertes G. and others (2020) [63] focus on the importance of adapting to the external environment. Most authors recognise the importance of digitalisation for improving the effectiveness of strategic management, as noted in Olson E.M. et al. (2021) [80] and Aslam F. et al. (2020) [43]. The importance of developing long-term strategies is also emphasised by Yevtushenko N.O., Drokina N.I., Savenko N.V. (2020) [12].

At the same time, Ukrainian researchers, such as Ozarko K. and Chelombitko V. (2022) [20], focus on crisis conditions and their impact on competitiveness, while

foreign authors, such as Bryson J. and George B. (2020) [46], study management in stable conditions. The work of Kobeleva T. et al. (2022) [14] focuses on intellectual property, while foreign research is more focused on digital tools such as IoT and Industry 5.0 (Aslam F., 2020) [43].

Table 1.2 – Analysis of studies of the role of strategic management in ensuring the company's competitiveness

Authors	Key aspects of the research
Grinko T.V., Gviniashvili T.Z., Aleshchenko V.I. (2021) [9].	Strategic management is considered as an element of the organizational and economic mechanism for ensuring the economic sustainability of companies.
Yevtushenko N.O., Drokina N.I., Savenko N.V. (2020) [12].	Theoretical aspects of strategic management of competitiveness; strategic planning as the basis of long-term advantages.
Kobeleva T., Vitvitska O., Pererva P., Kovalchuk S. (2022) [14].	Study of the role of intellectual property in strategic management and its impact on the competitiveness of enterprises.
Ozarko K., Chelombitko V. (2022) [20].	Analysis of strategic management in crisis conditions; adaptation of strategies to maintain competitiveness.
Bryson J., George B. (2020) [46].	Integrative approach to strategic management; increasing efficiency in the public and private sectors.
Olson E.M., Olson K.M., Czaplewski A.J., Key T.M. (2021) [80].	Study of the impact of digital transformation on strategic management and competitiveness.
Fuertes G. and others (2020) [63].	Conceptual framework of strategic management; analysis of internal and external factors affecting competitiveness.
Aslam F., Aimin W., Li M., Ur Rehman K. (2020) [43].	The importance of integrating IoT and Industry 5.0 for strengthening strategic management and increasing competitiveness.

Source: developed by author based on [9, 12, 14, 20, 43, 46, 80, 63]

Thus, the studies have similarities in approaches to the meaning of strategic management, but differ in context and emphasis, which is determined by the specifics of regional and global experience.

In today's globalized world, strategic management plays a crucial role in ensuring the effective operation of companies in international markets. Globalization creates new opportunities for business expansion, such as access to new markets, partnerships and technologies, but also brings numerous challenges, such as high competition, geopolitical risks and cultural differences (fig. 1.2).

One of the key features of strategic management in a globalized world is the need to adapt to a multicultural environment. Differences in cultural values, business practices and legal norms require companies to develop adaptive strategies. As noted

by Olson E.M., Czaplewski A.J., Key T.M. (2021) [80], an effective strategy should take into account regional characteristics and be flexible to changes in the external environment.

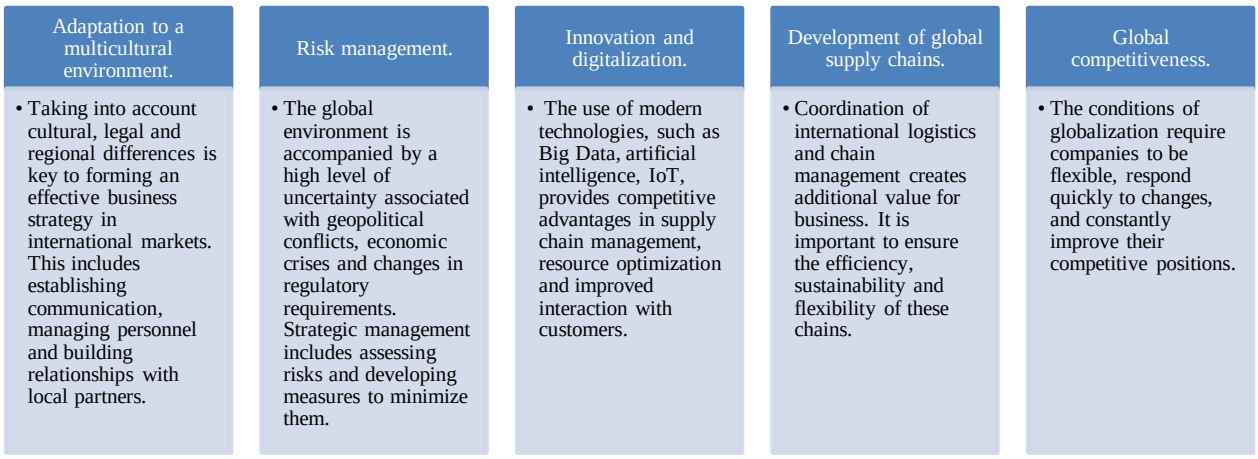

Figure 1.2. – The main tasks of strategic management

Source: developed by author

Innovation and digitalisation are also important aspects. In the global context, technologies such as IoT, artificial intelligence and big data analytics are becoming tools for increasing competitiveness. According to Aslam F. (2020) [43], companies that integrate innovative solutions into their strategies have significant advantages in international markets.

In addition, strategic management in a globalised environment should take into account the risks associated with the instability of the international environment. For example, geopolitical conflicts, economic crises, or changes in the regulatory environment may affect the implementation of strategic plans. As noted by Bryson J. and George B. (2020) [46], risk management is becoming an integral part of strategic management in a globalised world.

Finally, a special place in strategic management is occupied by the formation of global supply chains. Globalisation requires companies to coordinate logistics, manage resources and ensure continuity of supply. Fuertes G. and others (2020) [63] note that

the successful integration of global chains creates additional value for business and contributes to its competitiveness.

Thus, strategic management in the context of globalization and international markets requires companies to be adaptable, innovative, effectively manage risks and coordinate globally, which allows them to remain competitive and stable in a dynamic environment.

1.2 Features of international transportation in the context of strategic management

International transport is an integral part of global economic development and integration. Modern market conditions, characterised by an increase in turnover, rapid changes in technology and increased competition, require transport and logistics companies to implement effective management strategies. The specifics of international transport include the need to take into account many factors, such as the legal requirements of different countries, geopolitical risks, customs regulation and the specifics of intercultural interaction.

Strategic management in international transport involves the development of long-term goals and plans that allow companies to adapt to external changes while maintaining competitiveness. An important element is the optimisation of logistics chains, the introduction of modern digital technologies and effective communication between transport stakeholders.

In this context, strategic management becomes a tool that allows businesses to adapt to the dynamic environment of international markets, improve the quality of services and ensure stability of operations, even in crisis conditions. Studying the specifics of international transport helps to develop an approach focused on innovation, sustainability and meeting the needs of global customers.

The topic of international transport in strategic management has attracted the attention of many scholars, both Ukrainian and foreign.

Among Ukrainian authors, important studies include those by K. V. Yevtushenko and S. V. Smerichevska, who focus on developing strategies for transport and logistics companies to enter the international market, taking into account global challenges and customs restrictions (2023) [11]. Smerichevska S. V. also studied integration processes in logistics, emphasising the importance of using digital technologies to optimise international transport (2024) [13], [30].

Omlichenko O. O. studied the impact of the formation of a logistics system on the efficiency of enterprises in the international context (2022) [21]. In addition, Hrynko T. V. and Gviniashvili T. Z. considered the role of strategic management in ensuring the economic sustainability of enterprises in international markets (2021) [9].

Among the foreign authors, it is worth noting Fuertes G. and his colleagues who have developed a conceptual model of strategic management in transport logistics in the context of globalization, taking into account the impact of digital innovations (2020) [63]. Olson E. M. and his colleagues studied the impact of strategic management on the effectiveness of digital marketing in international business (2021) [80].

Bo W. and others studied models of cargo flow management in air transport, focusing on the multiformity of transport systems in a global context (2019) [45]. Also, Alzoubi H. M. analysed the impact of strategic decisions on the competitiveness of logistics companies in the context of globalization (2021) [42].

Thus, both Ukrainian and foreign researchers agree on the key role of strategic management in adapting international transport to the current challenges of globalisation. At the same time, Ukrainian authors focus more on adapting to internal crisis conditions, while foreign studies focus on innovation and digitalisation.

Among the studies by Ukrainian authors, it is also worth noting the works of D. Bugayko, who analysed the mechanisms of organising the activities of logistics enterprises in the context of strategic management, focusing on the impact of global challenges on international transport (2024) [47], [48], [49]. His work focuses on optimising transport and logistics processes using digital technologies and developing

effective strategies for adapting to globalisation. Dmytro Buhaiiko's research provides practical tools for improving strategic management in transport and logistics companies and is a significant contribution to the development of the industry.

Table 1.3 shows an overview of the main studies on the peculiarities of international transport in the context of strategic management. It presents Ukrainian and foreign authors who analysed such aspects as mechanisms of adaptation to globalisation (Buhaiiko D.O., 2024), ensuring competitiveness in international markets (Yevtushenko K.V., Smerichevska S.V., 2023) and the introduction of innovative approaches in the context of IoT and Industry 5.0 (Aslam F. et al., 2020).

Table 1.3 – Researchers of the features of international transportation in the context of strategic management

Authors	The main focus of the research
Bugayko D.O. (2024) [47], [48], [49]	Mechanisms of organizing the activities of logistics enterprises, the impact of globalization on international transportation, digitalization of transport and logistics processes.
Evtushenko K.V., Smerichevska S.V. (2023) [11]	Strategies for entering international markets by Ukrainian logistics companies, adaptation to globalization conditions.
Ovcharenko A.G. (2023) [19]	Quality management of logistics business processes of motor transport enterprises, in particular in the context of international transportation.
Ozarko K., Chelombytko V. (2022) [20]	Features of logistics management in crisis management conditions, including the international aspect of logistics transportation.
Kholodny G.O., Smerichevska S.V., Zhabolenko M.V. (2022) [33]	The relationship between marketing and logistics in the international market, ensuring competitiveness through strategic management.
Huang S., Bulut E., Duru O. (2019) [66]	Assessment of the quality of service of international carriers, empirical research in the East Asian region.
Aslam F., Aimin W., Li M., Ur Rehman K. (2020) [43]	Innovations in the IoT era and strategic management of international transportation in the context of industry 5.0.
Bryson J., George B. (2020) [46]	Development of strategic management in the international context, emphasis on public administration and global challenges.
Mio C., Panfilo S., Blundo B. (2020) [76]	Sustainable development in strategic management, its impact on international logistics and transportation.

Source: developed by author based on [19, 20, 33, 47-49, 46, 76]

Based on the analysis of the presented studies, it can be concluded that strategic management in international transport focuses on adaptation to globalisation, introduction of innovative technologies, ensuring competitiveness in international markets and efficiency of logistics processes. Ukrainian authors, such as Bugayko D.O. (2024), focus on the adaptation of logistics companies to global challenges, while

foreign researchers, such as Aslam F. et al. (2020), study the impact of digitalization and IoT on the efficiency of international transport.

International transportation plays an important role in global trade by transporting goods and passengers between countries. It promotes economic development and integration by allowing countries to exchange goods, services and resources. The main goal of international transport is to ensure efficient, safe and internationally compliant delivery.

There are several types of international transport, each of which has its own characteristics. Road transport is characterized by flexible routes and fast delivery times, making it ideal for short and medium distances. Rail transport is suitable for the transport of bulky goods, offering high load capacity and environmental friendliness. Sea freight is the most cost-effective for large volumes of cargo over long distances, while air freight provides the fastest delivery, especially for valuable and urgent goods. Multimodal transport, which combines several modes of transport, optimizes costs and time, while pipeline transport is used to transport liquids and gases such as oil and gas.

International transport contributes to the continuity of the supply of goods and the development of international relations. It requires compliance with standards and regulations, including customs clearance, insurance and logistics planning. All of this makes international transport an important part of the global economy that requires strategic management to ensure that companies remain competitive in the international environment.

Key aspects of the external environment's impact on the strategic management of international transportation are presented on fig. 1.3.

For successful functioning in the context of the external environment, strategic management should be based on:

– continuous monitoring of external factors and adaptation of strategies;
– applying SWOT analysis to assess internal and external conditions;
– development of crisis risk management plans;
– investing in innovations to improve efficiency and competitiveness.

Thus, the external environment is an important factor that shapes the conditions for strategic management of international transport. An effective response to these challenges allows companies to maintain their position in the global market.

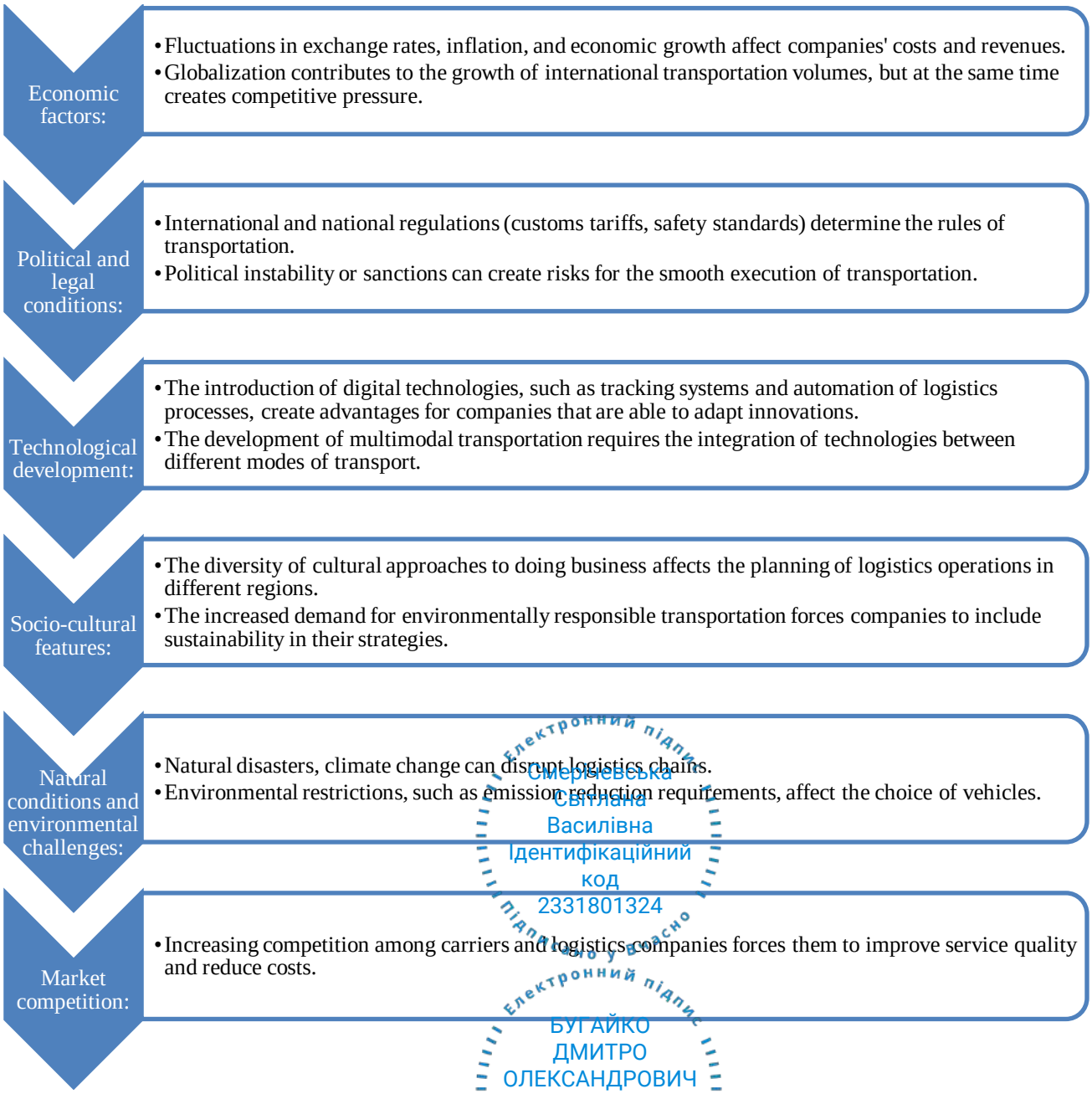

Figure 1.3. Key aspects of the external environment's impact on the strategic management of international transportation

Source: developed by author

Regulation of international transportation is an important aspect of the functioning of transport and logistics companies in the global economy. This regulation

includes legislative aspects, customs procedures and compliance with international standards that ensure the efficiency, safety and compliance of transportation with legal norms.

International transportation is regulated by both global and national regulatory acts. Major international conventions, such as the Convention on the Contract for the International Carriage of Goods by Road (CMR), the Convention of the International Maritime Organization (IMO) and the Chicago Convention for Air Transport, unify the rules of transportation between countries and provide a legal basis for resolving disputes between transportation participants. In particular, the Chicago Convention regulates safety standards and technical requirements in aviation, which contributes to global coordination (Mishchenko V. I., 2022 [18]).

National regulations, such as the Customs Code of Ukraine (2019) and the Law of Ukraine "On Foreign Economic Activity" (1991), determine the procedure for carrying out transport operations across the borders of Ukraine. These laws ensure transparency of registration procedures, compliance with security requirements, and protection of the interests of carriers and customers (Law of Ukraine "On Foreign Economic Activity", 1991 [1]; Customs Code of Ukraine, 2019 [3]).

Environmental requirements, such as the European Union directives on reducing CO_2 emissions, also affect transport and logistics companies that carry out transport to EU countries. This forces companies to introduce more environmentally friendly technologies and vehicles (Ovcharenko A. G., 2023 [19]).

Customs procedures are an important part of international transportation, as they regulate the crossing of borders by goods. Electronic declaration and the use of modern information systems, such as ASYCUDA, allow optimizing customs clearance processes, reducing the time and costs of transportation (Blyznyuk A., Kudryavtseva O., 2023 [4]).

For international transportation, goods must be accompanied by an appropriate package of documents, including consignment notes (CMR), certificates of origin of goods, invoices. An important component is customs payments: duties, taxes and fees, which are determined in accordance with tariffs and non-tariff regulations. For

example, within the framework of the Association Agreement between Ukraine and the EU, simplified customs regimes operate for certain categories of goods (Yevtushenko K. V., Smerichevsky S. V., 2023 [11]).

Sanitary and phytosanitary measures also play a significant role. In the case of transportation of food products or dangerous goods, additional checks are applied for compliance with international safety standards, which are regulated by regulatory documents such as ISO 9001 (Gallyamova D. V., Smerichevsky S. V., 2024 [8]).

The peculiarities of international transport regulation emphasize the importance of integrating legislative and customs aspects into strategic logistics management. The use of international standards, the introduction of modern technologies and the harmonization of procedures between countries contribute to increasing the efficiency of transportation, reducing costs and ensuring the competitiveness of companies in international markets. This is especially relevant in the context of globalization, which requires transport and logistics companies to adapt to changes in legal and economic conditions.

1.3 Methodological foundations of strategic planning for international transportation

Research of the methodological foundations of strategic planning of international transportation is an important component of modern scientific literature, which reflects the dynamics of changes in global logistics and the transport sector.

Among Ukrainian authors, a significant contribution was made by Bugayko D.O. and Smerichevska S.V. In their works, they considered approaches to organizing international transportation, taking into account the modern challenges of globalization and the impact of digitalization on strategic logistics planning (2024) [47]. Their research highlights the role of innovative methods and technologies in ensuring the efficiency of transport processes.

Also, important aspects of developing strategic plans for international transportation were considered by Yevtushenko K.V. and Smerichevska S.V. in the context of Ukraine's integration processes with the European market, focusing on building effective logistics chains (2023) [11]. In addition, in his works, Ovcharenko A.G. focused on managing the quality of logistics business processes in international transport, in particular in the context of modern crisis challenges (2023) [19].

Foreign authors are also actively researching this topic. For example, Bryson J. and George B. (2020) [46] analyzed strategic management in the context of public administration, paying attention to mechanisms for adapting to changes in international transportation. Olson E.M. et al. (2021) [80] considered the impact of digital technologies on strategic logistics management, which allows increasing the efficiency of transportation on a global scale.

Research conducted by Fuertes G. et al. (2020) [63] focuses on the conceptual foundations of strategic management in international logistics, identifying key success factors in the development of long-term strategies. In addition, Aslam F. et al. (2020) [43] studied innovations in the field of logistics, in particular the application of the Internet of Things and Industry 5.0 in transport.

Thus, both Ukrainian and foreign authors focus on modern challenges, innovations and methodological aspects of strategic planning of international transportation, which makes their research extremely relevant in the light of globalization processes.

This table. 1.4 summarizes the main authors, years of publication, references to literature and the main aspects of their research related to strategic planning in international transportation.

Research on the topic of strategic planning of international transportation covers a wide range of approaches and points of view, reflecting both general aspects and unique approaches of different authors. Ukrainian scientists, in particular Bugayko D.O. and Smerichevska S.V. (2024) [47], focus on the importance of strategic management in transport logistics, in particular through the digitalization of business processes and adaptation to the challenges of the modern market. Their works

emphasize the importance of integrating the latest technologies, such as the Internet of Things and digital platforms, to increase the efficiency of international transportation.

Table 1.4. – Research on the methodological foundations of strategic planning for international transportation

Authors	Main aspects of the research
Bugayko D.O., Smerichevska S.V. (2024) [47]	Analysis of innovative approaches to the organization of international transportation taking into account globalization and digitalization.
Evtushenko K.V., Smerichevska S.V. (2023) [11]	Development of effective logistics chains in the context of Ukraine's integration into the European market.
Ovcharenko A.G. (2023) [19]	Quality management of logistics business processes in international transport in conditions of crisis challenges.
Bryson J., George B. (2020) [46]	Analysis of mechanisms for adapting strategic management to changes in international transport.
Olson E.M., Olson K.M., Czaplewski A.J. (2021) [80]	The impact of digital technologies on strategic logistics management to increase the efficiency of global transportation.
Fuertes G., Alfaro M., Vargas M. (2020) [63]	Conceptual foundations of strategic management in international logistics; identification of key success factors in long-term strategies.
Aslam F., Aimin W., Li M. (2020) [43]	Study of innovations in the field of logistics, in particular the application of the Internet of Things and Industry 5.0 in international transportation.

Source: developed by author based on [11, 19, 43, 46, 47, 63, 80]

Other Ukrainian researchers, such as Yevtushenko K.V. and Smerichevska S.V. (2023) [11], focus on adapting the strategies of transport and logistics companies to the conditions of globalization and integration into European markets. They highlight the importance of ensuring competitiveness through the optimization of logistics processes and the implementation of modern management approaches. In turn, Ovcharenko A.G. (2023) [19] investigates the quality of business process management in motor transport enterprises, emphasizing the effectiveness of management in the face of economic challenges.

Among foreign authors, for example, Aslam F. (2020) [43], attention is paid to innovations such as the Internet of Things and Industry 5.0, which are key factors in the transformation of logistics systems in the international environment. Olson E.M. (2021) [80] explores global aspects of strategic management, in particular the need to adapt to rapid changes in international business. At the same time, Fuertes G. (2020) [63] analyzes the conceptual foundations of strategic management, emphasizing the

universality of approaches that can be applied in different markets. In general, Ukrainian researchers are more focused on regional characteristics and the need to adapt to European standards, while foreign authors consider strategies through the prism of global innovation approaches. Despite differences in focus, all authors agree on the importance of strategic management for achieving competitiveness and sustainable development in the field of international transportation.

Strategic planning in the transport and logistics sector is the basis for achieving long-term goals of companies and ensuring their competitiveness. It includes a clear sequence of stages, such as analysis of the external environment, mission definition, formulation of strategic goals, development and implementation of the strategy, as well as control and assessment of its effectiveness. In this context, it is important to understand both the stages of strategic planning and the methods used for their implementation. At the first stage of strategic planning, an analysis of the external and internal environment is carried out. This allows identifying the strengths and weaknesses of the company, as well as threats and opportunities arising in the external environment. The use of SWOT analysis (16. Krause O., Pinyak I., Shpylyk S. V. , 2022 [16]) and PESTLE analysis (20. Ozarko K., Chelombytko V., 2022 [20]) are key methods for this stage. They allow companies to identify important factors that affect their operations, such as economic, political, social, legal, technological and environmental aspects.

The next step is to formulate a mission, vision and strategic goals. At this stage, the company determines the main purpose of its existence, development directions and key results that it seeks to achieve. As noted by Hryniko T., Gviniashvili T., Kaliberda M. (2023 [10]), strategic goals should be clear, measurable and correspond to the company's resource capabilities. In the transport and logistics sector, this often includes cost optimization, improving the quality of services and developing new markets.

Strategy development involves the selection of specific measures and ways to achieve specific goals. In this context, the key methods are scenario planning (Bondarenko V. 2023 [5]) and value chain analysis (Smerichevska S.V., Matsishina O.V., 2022 [30]). The scenario approach allows you to model several options for

market development and choose the optimal strategy. Value chain analysis allows you to identify key stages of logistics processes that add the greatest value.

At the stage of strategy implementation, the company implements selected measures, providing them with resources and organizational support. Monitoring and evaluation of results, which is carried out using the Balanced Scorecard (BSC) (Evtushenko K. V., Smerichevska S. V., 2023 [11]), is also important. This method allows you to track the achievement of strategic goals through the relationship between operational indicators and key objectives. Thus, strategic planning in the transport and logistics sector is based on the integration of analytical tools, a clear definition of goals and a methodical approach to strategy implementation. As Bugayko D., Reznik V., Smerichevska S. (2024 [47]) note, this allows companies to adapt to changing market conditions, use existing opportunities and minimize risks, ensuring sustainable development and efficiency of activities.

Strategic planning stages are presented on fig. 1.4.

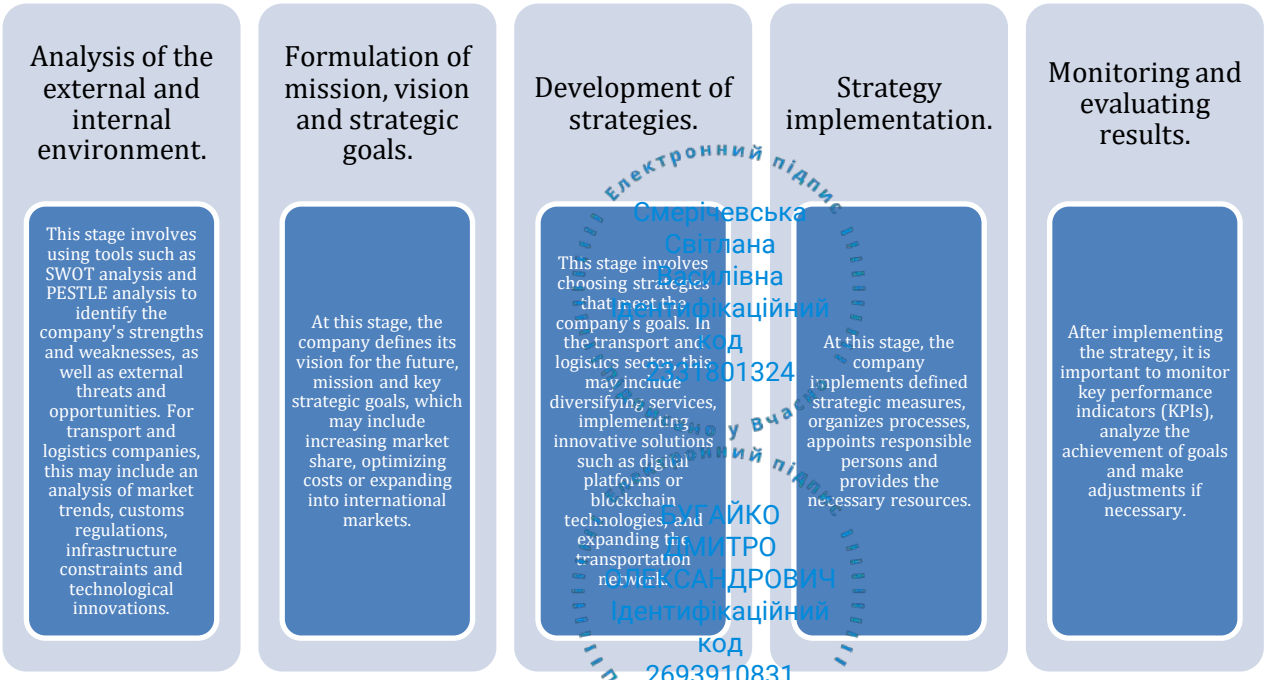

Figure. 1.4. Strategic planning stages

Source: developed by author

Effective strategic planning in the transport and logistics sector is based on a comprehensive approach that combines careful analysis, clear formulation of goals, selection of relevant strategies and their implementation with constant control. This allows companies to adapt to changes in the external environment, minimize risks and use existing opportunities for development.

Innovations and information technologies play a key role in the strategic management of international transportation, significantly increasing the efficiency, speed and quality of logistics processes. In the context of globalization, the rapid development of e-commerce and the growth of the competitive environment, companies that actively use modern technologies receive significant advantages.

One of the main tools of innovative management is the implementation of process automation systems in international logistics. The use of technologies such as transport information systems (TMS), warehouse management systems (WMS) and ERP solutions allows you to optimize transportation, reduce delays and reduce costs. As noted by O. Krause, I. Pinyak and S.V. Shpylyk (2022 [16]), automation of transport processes helps reduce errors, increase the accuracy of inventory management and monitoring of deliveries. At the same time, B. Bhargav (2012 [44]) in his study points out the importance of integrating automation in retail logistics to improve the quality of customer service.

A special role in international transportation is played by the Internet of Things (IoT) technology. It allows for continuous monitoring of cargo, ensuring control of temperature, humidity and safety during transportation. D.O. Bugayko and S.V. Smerichevska (2024 [47]) emphasize that the integration of IoT into logistics systems provides a higher level of transparency and flexibility in supply chain management. In turn, F. Aslam, W. Aimin, M. Li and K. Ur Rehman (2020 [43]) emphasize the role of IoT in optimizing logistics processes, emphasizing its importance in implementing the Industry 5.0 concept.

Another important aspect is the use of blockchain technology, which provides reliable and transparent accounting of information on the movement of cargo. This helps reduce the risks of fraud and increase trust between participants in the logistics

process. As noted by A.V. Dmitriev (2020 [59]), blockchain allows for the creation of a decentralized platform for information exchange between suppliers, carriers, and customers. Supporting this view, D. Dujak and D. Sajter (2019 [48]) note that blockchain provides traceability and data security in global supply chains.

In addition, the use of artificial intelligence (AI) and machine learning allows for demand forecasting, route analysis, and cost optimization. This is especially important for international transportation, where a large number of variables affect the efficiency of the process. As noted by K.V. Yevtushenko and S.V. Smerichevsky (2023 [11]), AI allows for the automation of routine tasks, ensuring faster strategic decision-making. E.M. Olson, K.M. Olson, A.J. Czaplewski, and T.M. Key (2021 [80]) emphasize that artificial intelligence creates new opportunities for strategic management, especially in digital marketing strategies that affect logistics processes.

The use of digital platforms for managing logistics processes, such as global transportation marketplaces, provides companies with access to international partners and simplifies the processes of concluding contracts. As noted in the study by V. Bondarenko (2023 [5]), digital platforms are key to reducing transaction costs and increasing the speed of deal making. Similarly, J. Bryson and B. George (2020 [46]) consider strategic management through the prism of public administration, emphasizing the importance of digital innovations in global processes.

Thus, innovation and information technology in the strategic management of international transportation contribute to the efficiency, transparency and flexibility of logistics processes (table 1.5). Companies that implement modern technologies are able to adapt to changes in global markets and ensure competitiveness in the long term.

Thus, innovations and information technologies, such as automation, the Internet of Things, blockchain, artificial intelligence and digital platforms, play a key role in the strategic management of international transportation. They provide increased efficiency, transparency, security, and also contribute to the optimization of routes and demand forecasting. Researchers, both Ukrainian (D.O. Bugayko, S.V. Smerichevsky) and foreign (F. Aslam, E.M. Olson), note the importance of integrating these

technologies into transport and logistics processes to increase the competitiveness of companies.

Table 1.5. – The role of innovation and information technology in the strategic management of international transportation

Innovation/Technology	Role and impact	Authors and sources
Logistics Process Automation	Improving inventory management efficiency, reducing errors, optimizing transportation.	O. Krause, I. Pinyak, S.V. Shpylyk (2022 [16]); B. Bhargav (2012 [44]).
Internet of Things (IoT)	Controlling temperature, humidity, cargo security; increasing transparency and flexibility.	D.O. Bugayko, S.V. Smerichevska (2024 [47]); F. Aslam, W. Aimin, M. Li, K. Ur Rehman (2020 [43]).
Blockchain Technology	Ensuring data transparency, reducing fraud risks, creating decentralized platforms for information exchange.	A.V. Dmytriev (2020 [59]); D. Dujak, D. Sajter (2019 [48]).
Artificial Intelligence (AI)	Demand forecasting, optimizing routes, automating routine tasks, faster decision-making.	K.V. Yevtushenko, S.V. Smerichevska (2023 [11]); E.M. Olson, K.M. Olson, A.J. Czaplewski, T.M. Key (2021 [80]).
Digital Platforms	Ensuring access to international partners, simplifying contract conclusion, reducing transaction costs.	V. Bondarenko (2023 [5]); J. Bryson, B. George (2020 [46]).

Source: developed by author based on [11, 16, 43, 44, 46, 47, 80]

Having considered the role of innovations and information technologies in the strategic management of international transportation, it is important to pay attention to the following aspect - methods for assessing the effectiveness of management strategies. After all, the integration of modern technologies and the development of strategies require not only the implementation, but also a systematic analysis of their impact on the effectiveness of logistics processes. Methods for assessing effectiveness allow you to identify the strengths of the strategy, optimize costs, and ensure adaptability to changes in the global environment. Next, we will focus on the key approaches and practices for assessing the effectiveness of management strategies in international transportation. In modern conditions of globalization and integration of international markets, effective strategic management of international transportation requires the use of various approaches and tools to assess the effectiveness of implemented strategies. A thorough analysis of these approaches allows logistics

companies to ensure competitiveness, increase productivity and meet customer needs. Table 1.6 presents key approaches and practices for assessing the effectiveness of management strategies in international transportation, which are based on scientific research by leading domestic and foreign.

Table 1.6. – Key approaches for assessing the effectiveness of management strategies in international transportation

Approach	Description	Authors
Financial Analysis	Includes assessment of revenues, costs, profitability and investment attractiveness of the strategy.	Bugayko D.O. (2023) [47], Grinko T.V. (2021) [9]
SWOT Analysis	Analysis of strengths and weaknesses, opportunities and threats for the formation of a management strategy.	Smerichevska S.V. (2023) [31], Bhargav R. (2012) [44]
Key Performance Indicators (KPI)	Identification and monitoring of specific metrics, such as delivery time, customer satisfaction level, unit transportation costs.	Evtushenko K.V. (2023) [11], Bugayko D. et al. (2024) [47]
Benchmarking	Comparison of company performance indicators with best practices in the industry.	Bondarenko V. (2023) [5], Olson E.M. et al. (2021) [80]
Supply Chain Analysis	Assessment of the effectiveness of all stages of the supply chain, including transportation, warehousing, customs procedures.	Ivanenko L.M. (2024) [13], Smerichevska S. (2024) [92]
Scenario Planning Methods	Use of scenarios to model possible changes in the external environment and their impact on the strategy.	Velichko T.G. (2020) [7], Fuertes G. et al. (2020) [63]
Balanced Scorecard (BSC)	Integration of financial and non-financial metrics for a comprehensive assessment of performance.	Kobeleva T. (2022) [14], Mio C. et al. (2020) [76]
Risk Analysis	Assessment of potential risks and their impact on the international transportation management strategy.	Panchenko V.A. (2024) [24], Olson E.M. et al. (2021) [80]
Technological Efficiency	Study of the impact of information technology on the speed, accuracy and costs of transport operations.	Bugayko D.O. (2023) [48], Bhargav R. (2012) [44]
Innovative Approach	Identification and implementation of new methods and technologies to increase competitiveness.	Malyar E.O. (2023) [17], Huang S. et al. (2019) [66]
Economic Efficiency	Calculation of costs and benefits of the implemented strategy, assessment of return on investment.	Grynko T.V. (2023) [9], Revenko D. et al. (2024) [86]
Customer Satisfaction Analysis	Assessing the level of customer satisfaction with the quality of services and their impact on loyalty.	Krauze O. (2022) [16], Smerichevska S. (2024) [92]

Source: developed by author based on [5, 7, 11, 14, 16, 17, 24, 31, 44, 47, 48, 63, 66, 76, 80, 86, 92]

The conclusion to table 1.6 shows that approaches to assessing the effectiveness of management strategies in international transportation are multifaceted and depend

on the characteristics of the companies' activities, their goals and external conditions. Assessment methods, such as analysis of key performance indicators (KPI), SWOT analysis, benchmarking, economic modeling and digital technologies, allow for a comprehensive assessment of the effectiveness of management decisions (fig. 1.5). Integration of innovative practices and analytical tools increases the adaptability and resilience of strategies to the challenges of international markets.

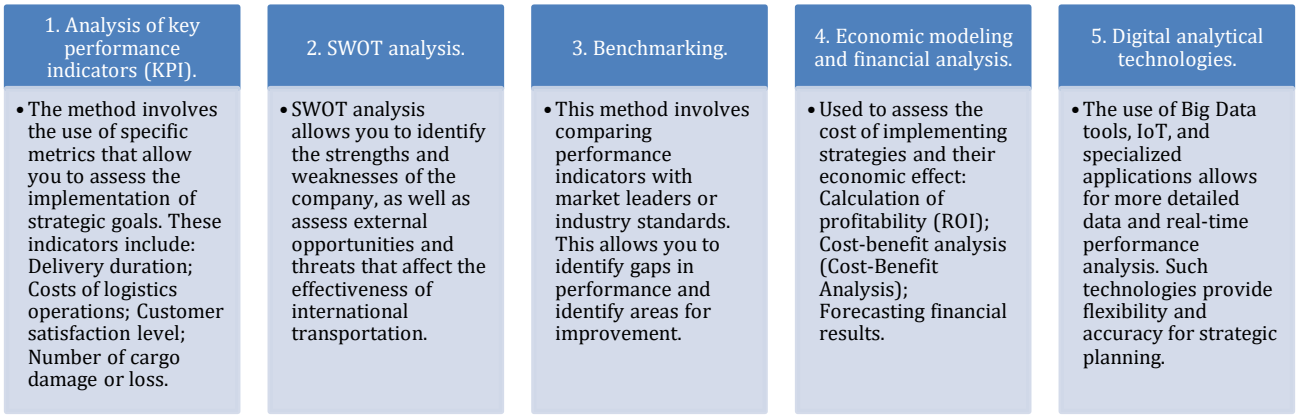

Figure 1.5. – Methods for assessing the effectiveness of management strategies in international transportation

Source: developed by author

Methods for assessing the effectiveness of management strategies in international transportation cover a wide range of approaches, each of which has its own characteristics and advantages. Analysis of key performance indicators (KPI), such as logistics costs, delivery time and customer satisfaction, is one of the basic methods that provides an assessment of the implementation of the company's strategic goals (Smerichevska S.V., 2024) [29]. SWOT analysis allows you to identify the strengths and weaknesses of the company, as well as assess external factors that affect efficiency (Bugayko D.O., 2023) [48]. Benchmarking, which involves comparing indicators with market leaders, helps to identify gaps in productivity and determine ways to eliminate them (Gallyamova D.V., 2024) [8]. Economic modeling and financial analysis, in particular, calculation of profitability (ROI) and cost-benefit

analysis (CBA), are used to assess the economic effect of the implemented strategies (Krause O., 2022) [16].

Digital analytical technologies, such as Big Data and IoT, provide real-time analysis, which allows you to quickly adjust strategies in accordance with changes in the environment (Olson E.M., 2021) [80]. Together, these methods create a comprehensive approach to assessing the effectiveness of strategies, allowing you to adapt them to the specifics of international transportation.

Summing up the research on the methodological foundations of strategic planning for international transportation, we demonstrate the importance of combining theoretical and practical approaches in creating effective strategies. It is determined that strategic planning in international transportation is based on analyzing the external environment, identifying competitive advantages, and implementing innovative management tools. Particular attention should be paid to adapting strategies to the conditions of globalization and using digital technologies to increase the flexibility and efficiency of management decisions. Studies by Ukrainian and foreign authors confirm that the key factor for success is the integration of modern methods for assessing and adjusting strategies in real time.

Chapter summary

The theoretical part of the qualification work examined the essence of strategic management in the transport and logistics industry, its main approaches and key elements. This allowed us to determine the role of strategic management in ensuring the competitiveness of companies and adapting to globalization challenges. The main aspects of strategic management in the context of globalization and international markets were analyzed, which showed the importance of integrating innovative technologies and methods to improve management efficiency.

Particular attention was paid to the methodological foundations of strategic planning, which includes the stages and methods of implementing strategies in the field of international transportation. It was found that SWOT analysis, scenario planning, assessment of key performance indicators (KPI), benchmarking and digital technologies are the most important tools for adapting strategies to a dynamic external environment.

Research has confirmed that the introduction of innovations such as the Internet of Things (IoT), blockchain, artificial intelligence and digital platforms are decisive factors in ensuring the competitiveness of companies in the international environment. An important aspect is also the regulation of international transportation, which includes legislative norms, customs procedures and environmental standards.

Analysis of Ukrainian and foreign sources, in particular the works of Smerichevska S.V., Bugayko D.O., Bryson J., Olson E.M., and others, showed the multifaceted approaches to strategic management. Ukrainian authors emphasize adaptation to internal conditions and globalization changes, while foreign researchers are more focused on innovative technologies and universal approaches to strategic management.

Thus, research indicates the need to integrate modern strategic planning tools that allow companies to function effectively in a global environment, increase competitiveness and ensure the sustainability of business processes.

CHAPTER 2
ANALYSIS OF STRATEGIC MANAGEMENT OF INTERNATIONAL TRANSPORTATION BY FTP LLC IN THE TRANSPORT AND LOGISTICS SERVICES MARKET

2.1 General characteristics of the Freight Transport Partner LLC

Freight Transport Partner (FTP) is a modern international logistics company specializing in the transportation of various types of cargo worldwide. Through its advanced technologies and innovative solutions, FTP offers a wide range of transportation services, covering all major modes of transport: road, rail, sea, and air. The company is committed to providing tailored solutions for its clients, considering the specifics of their needs and requirements, which enables the efficient organization of both standard and specialized cargo shipments [62].

FTP aims to become a reliable logistics partner for its clients, ensuring uninterrupted and safe delivery of goods in the shortest possible time. The core values of the company include reliability, transparency, and innovation. FTP believes that the key to success lies in a deep understanding of the market and the ability to adapt to rapidly changing conditions. An important aspect of the company's mission is also environmental responsibility – FTP actively implements eco-friendly logistics solutions.

FTP provides comprehensive transport solutions, which include:

1. Road Transport. FTP offers fast and reliable road freight services across Europe and beyond. The company uses a modern fleet of vehicles equipped with tracking systems, allowing clients to monitor the status of their deliveries in real-time.

2. Sea Freight. Through partnerships with leading shipping lines, FTP ensures the transportation of large volumes of goods between continents. The company offers

both containerized and oversized cargo transport, guaranteeing safety and timely delivery.

3. Air Freight. FTP provides solutions for urgent cargo that requires fast delivery. Air transport is the ideal choice for high-value and time-sensitive goods.

4. Rail Freight. FTP also utilizes rail transport for shipping goods between Europe, Asia, and the CIS (Commonwealth of Independent States – is a regional intergovernmental organization in Eurasia). Rail transport is environmentally friendly and economically advantageous, especially over long distances.

The general characteristics of the company FTP LLC are presented in fig. 2.1.

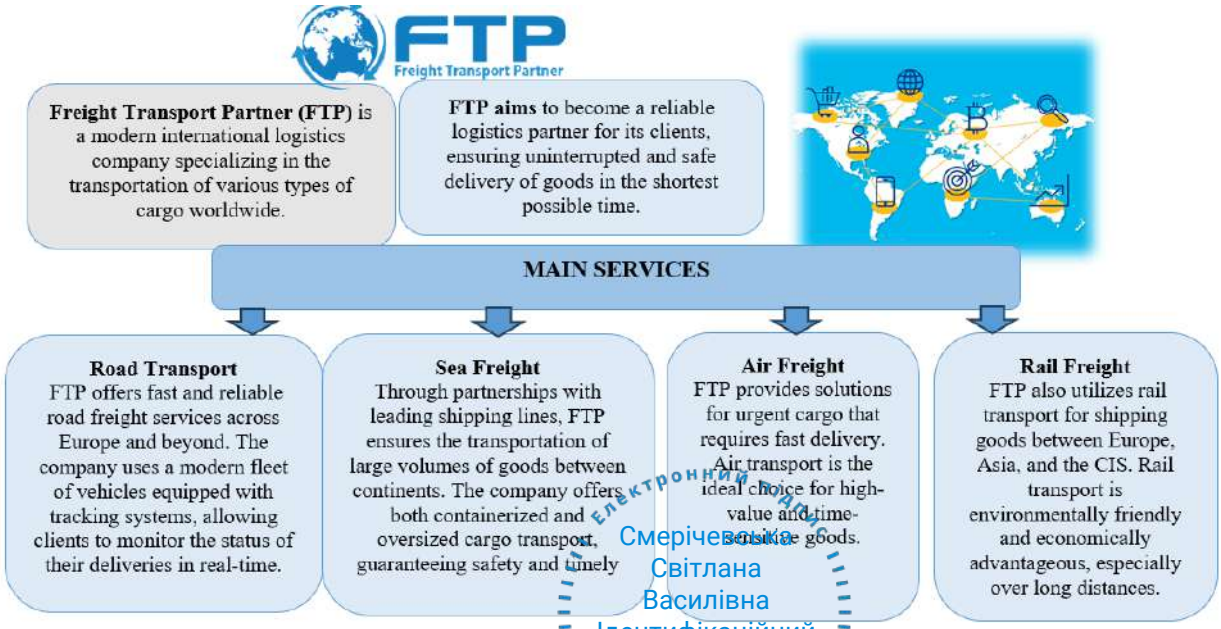

Figure 2.1 – The general characteristics of the company FTP

Source: [62]

FTP actively uses digital innovations to enhance its logistics processes. All the company's vehicles are equipped with GPS systems, providing clients with real-time cargo tracking capabilities. In addition, FTP uses specialized software solutions to optimize routes, reducing fuel costs and delivery times.

Advantages of Partnering with FTP is presented on fig. 2.2.

Thus, Freight Transport Partner (FTP) is a leading company in the logistics sector, providing comprehensive and reliable solutions for cargo transportation

worldwide. Through innovative approaches and continuous improvement of its processes, FTP continues to successfully grow, offering its clients optimal transport solutions to achieve their business goals.

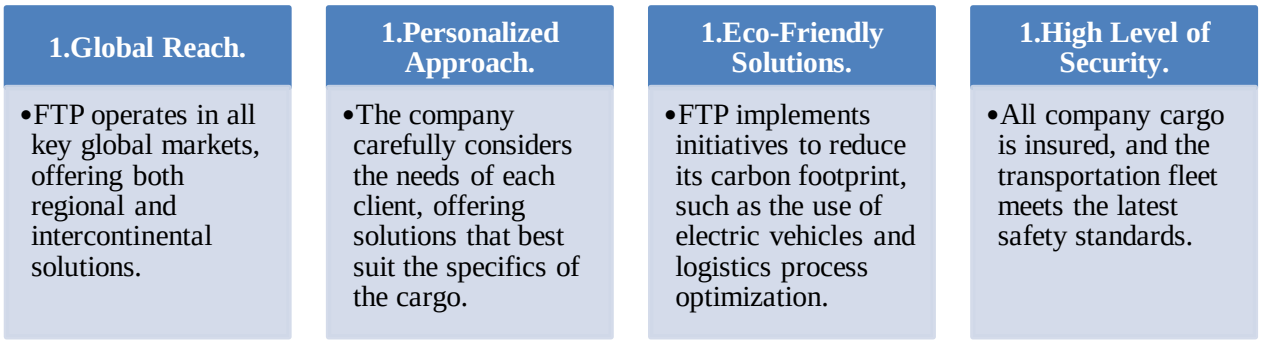

Figure 2.2. – Advantages of Partnering with FTP

Source: [62]

Freight Transport Partner (FTP) offers a diverse range of logistics services, carefully designed to address the specific needs of businesses across different sectors. The company delivers customized solutions that manage every stage of the supply chain, ensuring the smooth and efficient movement of goods from origin to final destination. Below is a detailed overview of FTP's logistics services:

1. International Freight Transportation. FTP organizes international transportation worldwide through multimodal solutions, including road, sea, air, and rail. The company designs optimal routes that minimize time delays, ensuring reliable delivery of both small and large shipments.

2. Warehousing and Inventory Management. FTP offers a comprehensive range of warehousing services, ensuring efficient storage and inventory management for clients. The company operates modern facilities that provide:

– Customs Bonded Warehousing: Goods can be stored until customs clearance is completed.

– Temperature-Controlled Storage: Suitable for perishable products, pharmaceuticals, and other temperature-sensitive goods.

– Cross-Docking: Immediate handling and redirection of shipments without long-term storage, speeding up the delivery process.

– Order Fulfillment and Packaging Services: FTP offers picking, packing, and preparing goods for dispatch, simplifying the supply chain for clients.

3. Customs Brokerage Services. FTP delivers a full suite of customs brokerage services, helping clients navigate the complexities of customs clearance. The company ensures all necessary documentation is prepared and compliance with international standards and tax regulations. FTP's experienced customs brokers enable clients to avoid delays and ensure smooth customs processing.

4. Logistics Consulting. FTP provides logistics consulting services to help clients optimize their supply chain operations. The company's experts evaluate current logistics processes and offer strategies to improve efficiency, including:

– Route and cost optimization.

– Selection of the most effective transportation methods.

– Streamlining warehouse operations.

– Managing risks within the supply chain.

5. Supply Chain Management (SCM) Services. Supply Chain Management is a key service offering from FTP. The company manages all elements of the supply chain – from sourcing raw materials to delivering finished products to end customers. FTP's SCM solutions help clients reduce costs and improve the overall efficiency of production and logistics processes.

6. Freight Insurance Services. FTP also provides insurance for all types of freight shipments. Freight insurance protects clients against potential risks such as damage, loss, or theft during transit. The company offers flexible insurance programs tailored to the specific needs of each client.

7. Oversized and Hazardous Cargo Transportation. FTP has the necessary permits and expertise to handle oversized and hazardous cargo transportation. The company develops customized routes and ensures full compliance with international safety standards and regulations for such shipments.

To summarize the above, fig. 2.3 presents a list of logistics services of FTP LLC. Benefits of FTP Services:

– Global Partner Network - FTP operates internationally with a well-established network of partners worldwide.

– Flexibility and Customized Solutions - The company tailors its logistics services to meet the unique requirements of each client's business.

– Advanced Technology - FTP uses automated processes and real-time tracking systems to provide transparency and control at every stage of the delivery process.

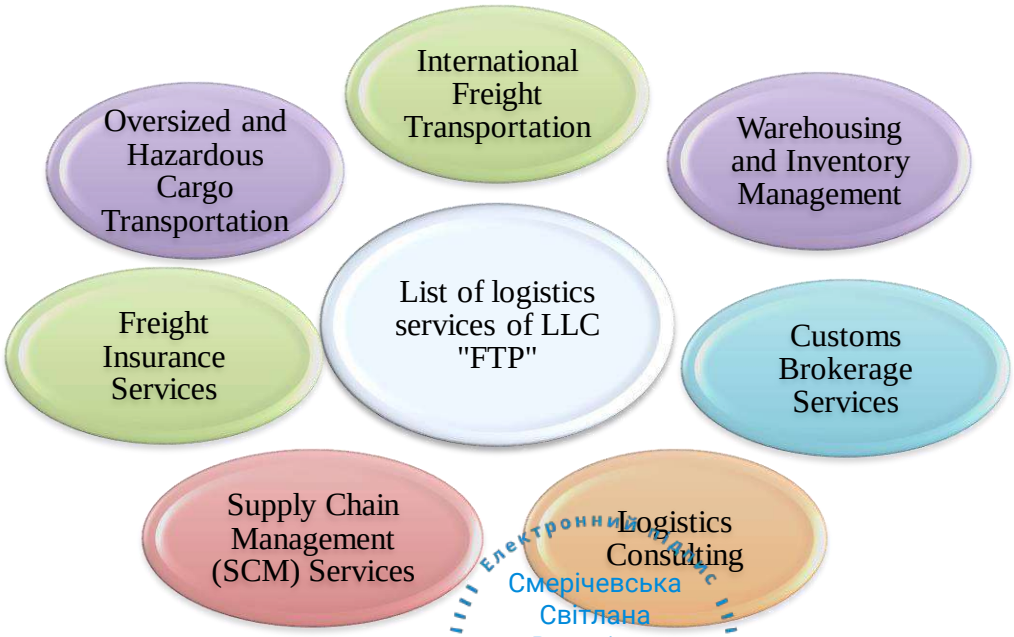

Figure 2.3. – List of logistics services of LLC FTP

Source: [62]

In conclusion, FTP offers a broad array of logistics services, from standard freight transportation to complex multimodal solutions, ensuring reliable, efficient, and secure movement of goods across the globe. With an emphasis on flexibility, innovation, and customer satisfaction, FTP provides end-to-end solutions for all logistics needs.

Freight Transport Partner (FTP), a Ukrainian transport and forwarding company, has established itself as a key player in the logistics industry, offering comprehensive

solutions for the transportation of goods both domestically and internationally. The company's extensive geographical reach and wide range of services cater to businesses operating in various regions around the world, ensuring efficient and timely delivery of goods.

Fig. 2.4 presents a map highlighting the countries and cities where FTP LLC has established agent partnerships and is able to offer services to its clients.

Figure 2.4. – Countries and cities where FTP LLC established agent partnerships

Source: [34]

1. Ukraine and CIS Region. FTP's primary operational base is in Ukraine, where the company plays a significant role in the domestic logistics market. It serves major industrial and agricultural regions, including Kyiv, Odesa, Lviv, Dnipro, Kharkiv, and other key cities. FTP provides reliable road, rail, and air freight solutions throughout Ukraine, catering to industries such as agriculture, manufacturing, mining, and energy.

In addition to domestic operations, FTP has a strong presence in the CIS (Commonwealth of Independent States) region, including countries like Belarus, Moldova, Russia, Kazakhstan, Uzbekistan, and other neighboring nations. The close

economic and logistical ties within the CIS allow FTP to offer seamless cross-border transportation services, facilitating trade and supply chain integration across the region.

2. Europe. FTP's operations extend across Europe, one of the company's key markets. The European Union, with its open borders and harmonized trade regulations, provides a dynamic market for Ukrainian exporters and importers. FTP's European logistics network covers both Eastern and Western Europe, providing road, rail, and multimodal transport options to and from countries such as Poland, Germany, Italy, France, the Czech Republic, Hungary, Romania, and Slovakia.

The company specializes in the movement of goods from Ukraine to Europe, focusing on industries like automotive, textiles, consumer goods, and machinery. FTP also facilitates the import of European goods into Ukraine, managing customs clearance and transportation logistics.

3. Asia. FTP has developed an extensive logistics network that connects Ukraine to major Asian markets. The company serves Central Asian countries such as Kazakhstan, Uzbekistan, Turkmenistan, and Kyrgyzstan, leveraging rail and road transport to deliver goods across vast distances. These connections are critical for businesses involved in energy, oil, and gas, as well as agriculture.

Beyond Central Asia, FTP's logistics reach extends to East and Southeast Asia, including China, India, South Korea, and Japan. The company uses multimodal solutions, combining rail, sea, and air transport to efficiently move goods between Ukraine and Asian countries. FTP also taps into the growing demand for e-commerce logistics services, supporting Ukrainian businesses exporting to Asia's thriving consumer markets.

4. Middle East. The Middle East is another strategic region in FTP's global network. The company facilitates the movement of goods to countries such as Turkey, the United Arab Emirates, Saudi Arabia, and Iran, which are key trade partners for Ukraine. FTP's services in the Middle East include road transport and sea freight, utilizing key ports like Odesa and Pivdennyi to ship goods across the Black Sea and further into the Mediterranean and Gulf regions.

FTP’s logistics solutions cater to industries such as oil and gas, construction materials, and agriculture, providing tailored transport services to meet the specific requirements of businesses in these sectors.

5. North America. FTP has also expanded its reach to North America, particularly the United States and Canada. Through partnerships with global logistics providers, FTP offers ocean freight and air freight solutions for the transportation of goods between Ukraine and North America. The company manages the export of Ukrainian products such as metals, machinery, and foodstuffs, while also facilitating the import of North American goods into Ukraine.

The North American market is crucial for Ukrainian businesses, and FTP’s services help to bridge the geographical gap by providing efficient and cost-effective logistics solutions. The company also handles customs brokerage and compliance with international trade regulations, ensuring smooth transactions for its clients.

6. Global Freight Solutions. FTP’s global operations are supported by a robust network of logistics partners, allowing the company to deliver end-to-end freight solutions across multiple continents. Whether by sea, air, or land, FTP ensures that goods are transported safely and efficiently, regardless of the destination.

The company offers multimodal transportation solutions that integrate various forms of transport, including road, rail, air, and sea, to optimize routes and minimize delivery times. By utilizing major international trade routes and ports, FTP is able to connect Ukrainian businesses with markets in Africa, South America, and Australia as well, thereby providing a truly global service.

FTP's expansive geographical coverage reflects its ability to meet the logistics needs of businesses across a variety of sectors and regions. From Ukraine to Europe, Asia, the Middle East, and North America, FTP’s comprehensive logistics services ensure that goods move seamlessly across borders, connecting Ukrainian businesses to global markets. The company’s emphasis on flexibility, reliability, and customer satisfaction makes it a trusted partner for both domestic and international freight transportation.

Fig. 2.5 provides a detailed overview of the various categories of goods that FTP LLC handles for transportation. These categories encompass a wide range of products, including perishable items, industrial machinery, consumer goods, hazardous materials, raw materials, and specialized cargo. The figure highlights FTP LLC's capacity to manage diverse types of shipments, catering to different industries and sectors, ensuring that each category is transported in compliance with relevant regulations and safety standards. This comprehensive approach allows FTP LLC to meet the specific logistical needs of its clients effectively.

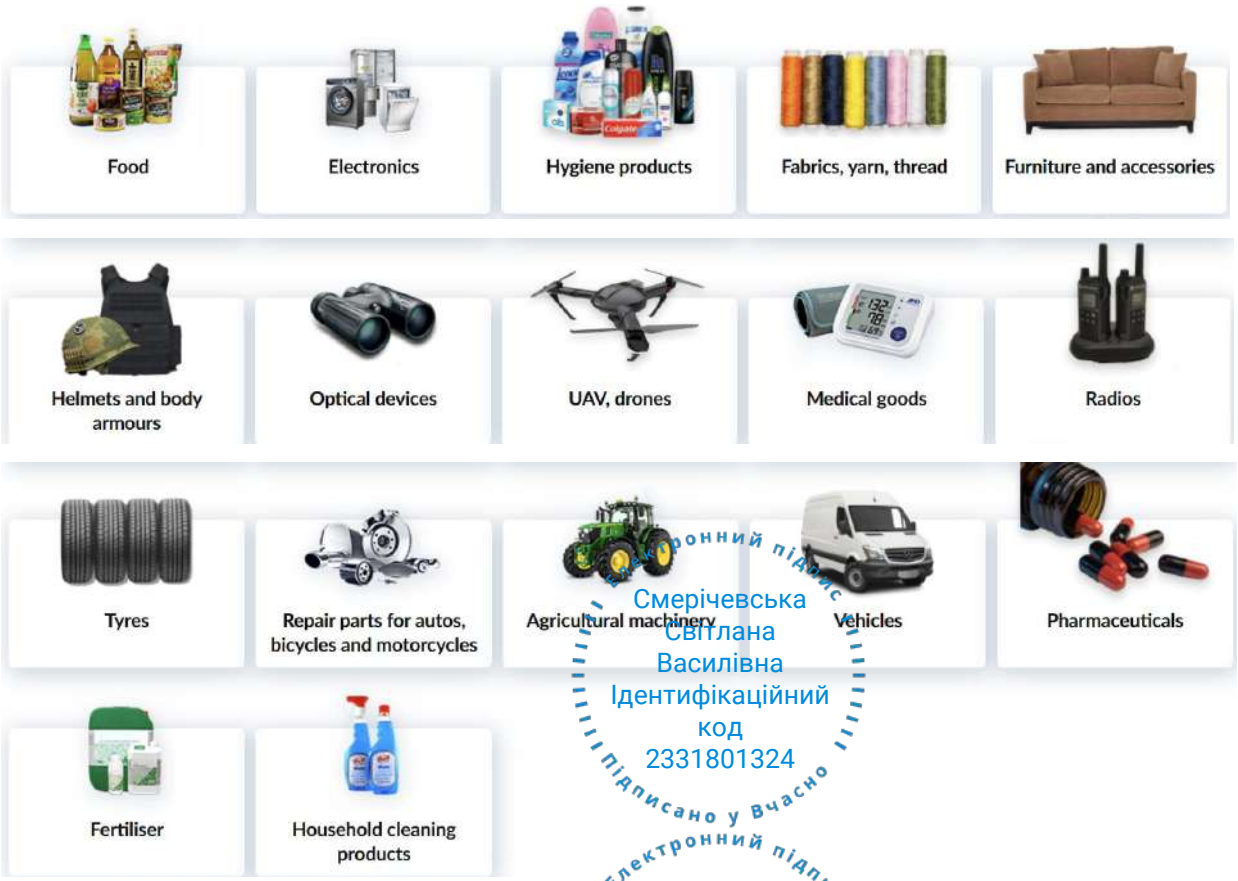

Figure 2.5. – Categories of goods that FTP LLC accepts for transportation

Source: [62]

The categories of goods that FTP LLC transports are vital to various economic sectors. Food products are primarily ordered by the agriculture and food processing industries, as well as retailers and the hospitality sector, including supermarkets and restaurants. Electronics are in high demand within the consumer electronics,

manufacturing, telecommunications, and retail industries. Hygiene products are essential to the pharmaceutical, personal care, and retail sectors.

The textile industry frequently orders fabrics, yarn, and thread, which also serve the fashion and manufacturing sectors. Furniture and accessories are crucial to the interior design, real estate, hospitality, and retail industries. Helmets and body Armor play a key role in defence, law enforcement, sports, and construction industries, while optical devices are ordered by defence, medical, research, and electronics sectors.

UAVs and drones find their place in defence, surveillance, agriculture, and film production industries, while medical goods are critical to hospitals, clinics, pharmaceutical companies, and healthcare providers. Radios are used by telecommunications, defence, emergency services, and broadcasting industries.

Tyres are a constant need in the automotive, transportation, and logistics sectors, just as repair parts for autos, bicycles, and motorcycles are essential for the automotive repair, retail, and manufacturing businesses. Agricultural machinery is primarily ordered by the farming and agribusiness sectors, and vehicles are crucial for transportation, logistics, and the automotive industry.

Pharmaceuticals support the healthcare, pharmaceutical, and research industries, while fertilizers are indispensable to the agriculture and farming sectors. Finally, household cleaning products are widely ordered by retailers, the hospitality sector, and consumer goods industries.

FTP enhances its logistics offerings by categorizing its services into three essential blocks, as illustrated in fig. 2.6. The Transportation Departments play a crucial role in the physical movement of goods. These specialized teams are dedicated to ensuring that products are transported efficiently and safely from their point of origin to their final destination. They utilize a variety of transportation methods and coordinate logistics to minimize delays, optimize routes, and reduce costs while maintaining the integrity of the cargo.

The second block encompasses Brokerage and FEA Support. This segment is integral to the logistics process, as it focuses on the commercial aspects of transporting goods. The brokerage teams work diligently to secure the most favorable shipping rates

and ensure compliance with local and international regulations. This may include navigating the complexities of the Foreign Exchange Administration (FEA), which governs financial transactions related to cross-border trade. By effectively managing these elements, the brokerage teams help clients save money and reduce the risk of regulatory issues.

Lastly, the Administrative Support Departments provide the backbone necessary for seamless operations within FTP. This group handles vital functions such as human resources, information technology, and other administrative tasks. By ensuring that the operational infrastructure is robust and well-maintained, these departments enable the transportation and brokerage teams to focus on their core functions without unnecessary distractions. Their support is vital in creating an environment where logistics processes can thrive, ultimately contributing to the overall success and efficiency of FTP's operations. Together, these three blocks create a comprehensive logistics service model that meets the diverse needs of clients and enhances the overall supply chain experience.

Figure 2.6. – FTP organizational structure

Source: [62]

FTP operates under a dynamic asset-light business model, a strategic choice that allows the company to remain agile in the face of market changes while efficiently scaling its operations. By focusing on "light assets," FTP minimizes heavy investments

in physical infrastructure such as warehouses and transportation fleets, thereby reducing its fixed costs and financial risk.

One of the primary benefits of this asset-light approach is its inherent flexibility. FTP can quickly adjust its operations to align with fluctuations in market demand, enabling them to optimize resource utilization. Whether there is a surge in shipping needs or a temporary decline in orders, FTP can swiftly scale its operations up or down, ensuring that they can seize new business opportunities as they arise without being burdened by excess capacity.

Outsourcing critical functions like warehousing and transportation is a cornerstone of FTP's strategy. By collaborating with specialized partners who provide competitive rates and tailored services, FTP enhances its service offerings while maintaining operational efficiency. This partnership model not only enables them to respond to specific client needs but also allows FTP to focus on its core competencies in logistics management rather than the complexities of managing physical assets.

Moreover, the elimination of the need to own and operate a fleet of vehicles and warehouses significantly lowers overhead costs for FTP. This cost efficiency translates into competitive pricing for their clients, allowing FTP to deliver value without compromising on service quality. By leveraging this asset-light model, FTP positions itself as a responsive and cost-effective player in the logistics industry, well-equipped to navigate the challenges of an ever-evolving market landscape.

In the competitive landscape of logistics and freight forwarding, FTP LLC faces significant competition from various established players within the Ukrainian and international markets. These competitors offer a range of similar services, vying for market share and striving to meet the diverse needs of clients across different sectors. The main competitors of FTP LLC are presented in table 2.1.

In summary, FTP LLC operates in a highly competitive environment with several key players offering similar services. To maintain its competitive advantage, FTP LLC must continue to innovate, enhance service quality, and leverage its strengths in technology and customer relationships. By focusing on these areas, FTP LLC can

effectively compete with these established companies and meet the evolving needs of its clients.

Table 2.1 – Main Competitors of FTP LLC

Competitors	Overview	Strengths
DHL Supply Chain	DHL is a global leader in the logistics and supply chain industry, providing comprehensive services that include warehousing, transportation, and freight forwarding.	The company boasts an extensive global network, advanced technology solutions, and strong brand recognition. Their commitment to sustainability and innovation sets them apart
FedEx Logistics	Part of FedEx Corporation, FedEx Logistics offers a broad range of services, including air and ocean freight forwarding, customs brokerage, and supply chain management	With a vast logistics network and advanced tracking systems, FedEx provides reliable services. Their expertise in international shipping makes them a strong competitor for FTP
UPS Supply Chain Solutions	UPS offers a comprehensive suite of logistics solutions, from transportation and distribution to supply chain management.	Their well-established global presence, advanced technology platforms, and strong customer service make UPS a formidable player in the logistics market.
Kuehne + Nagel	This Swiss-based logistics company specializes in sea freight, air freight, and contract logistics services, making them a key competitor in the freight forwarding sector.	Kuehne + Nagel is known for its extensive global network and strong customer focus, offering tailored logistics solutions to meet specific client needs.
XPO Logistics	XPO Logistics is a leading global provider of supply chain solutions, offering services that include transportation, logistics, and freight brokerage.	The company is recognized for its technological innovations, particularly in last-mile delivery and supply chain optimization.
Nova Poshta	Nova Poshta is one of Ukraine's leading logistics companies, specializing in express delivery and freight forwarding services, with a comprehensive network that spans across the country and beyond.	The company is known for its reliability, speed of delivery, extensive branch network, and innovative e-commerce solutions, making it a preferred choice for both individual and corporate clients.
Meest Group	Meest Group is a prominent logistics provider in Ukraine, focusing on international shipping, transportation, and express delivery services for individuals and businesses alike.	The company's strengths lie in its expertise in cross-border logistics, strong customer service, and ability to offer tailored solutions, which have earned it a loyal customer base.
DB Schenker	DB Schenker is a global logistics leader providing integrated supply chain solutions, including freight forwarding, contract logistics, and transportation services across multiple sectors.	The company's strengths include its vast international network, commitment to innovation and sustainability, and ability to deliver customized logistics solutions that meet the diverse needs of its clients.

Source: developed by author

FTP LLC is a Ukrainian transport and forwarding company specializing in comprehensive logistics solutions. Established with the aim of optimizing supply chain operations, FTP LLC offers a wide range of services that encompass transportation, freight forwarding, customs brokerage, and warehousing. The company is dedicated to meeting the diverse needs of its clients by leveraging its extensive network and industry expertise. FTP LLC prides itself on its adaptability to market changes, ensuring that it remains competitive in a dynamic logistics landscape. By focusing on both domestic and international markets, FTP LLC aims to provide reliable and efficient transportation solutions for various sectors, including manufacturing, retail, e-commerce, and agriculture.

2.2 Analysis of production and financial indicators of the company FTP LLC

Production indicators are essential metrics that reflect a company's operational efficiency and performance. For LLC FTP (Freight Transport Partner), these indicators help assess the effectiveness of its logistics services, overall productivity, and capacity utilization.

The basis for this analysis is formed by financial statements, usually presented in the form of annual reports (detailed in Appendices A-C and summarized in table 2.2).

The financial indicators for LLC FTP from 2021 to 2023 demonstrate significant growth and variations in various areas. The data provided in Table 2.2 allows us to analyze trends in assets, liabilities, equity, sales, expenses, and profits.

Current assets show a significant increase over the years. The jump from 2021 to 2022 by 34% indicates a solid investment in current assets, while the 50% increase from 2022 to 2023 suggests a strong operational expansion. This growth may reflect improved liquidity and readiness to meet short-term obligations.

Table 2.2. – Initial data for financial analysis of FTP (in thousands of UAH)

Indicator	2021	2022	2023	Deviation 2021/2022		Deviation 2022/2023	
				UAH	%,	UAH	%,
Current assets	35959	48343	72488	12384	34%	24145	50%
Non-current assets	740,3	2307,4	2199,2	1567,1	212%	-108,2	-5%
Total assets	36699	50650	74687	13951	38%	24037	47%
Cash and cash equivalent	7793,9	16877	21740	9083,1	117%	4862,8	29%
Current liabilities	33988	46134	69549	12146	36%	23416	51%
Non-current liabilities	0	0	0	0	0	0	0
Equity	2710,9	4516,8	5137,7	1805,9	67%	620,9	14%
Debt	15317	11364	14689	-3952,8	-26%	3325,4	29%
Sales	7260,8	10527	14299	3266,1	45%	3772,2	36%
Other operating incomes	2058,5	8267	1488,2	6208,5	302%	-6778,8	-82%
Operating expenses	9334,9	16586	15379	7250,8	78%	-1206,7	-7%
EBIT	1225,9	2208,2	803,5	982,3	80%	-1404,7	-64%
Taxes	220,7	400,8	158,9	180,1	82%	-241,9	-60%
Net profit	1005,2	1807,4	644,6	802,2	80%	-1162,8	-64%

Source: developed by the author according to financial results

Non-current assets experienced substantial growth from 2021 to 2022, indicating heavy investment in long-term assets. However, a slight decrease in 2023 suggests that the company may have faced challenges or was more conservative in its capital expenditures. It's critical to analyze the nature of these non-current assets to understand their contribution to revenue generation.

The total assets of LLC FTP increased significantly each year. The growth of 38% from 2021 to 2022 and 47% from 2022 to 2023 suggests robust growth strategies and possibly an increase in market share or operational capacity.

Cash reserves nearly doubled in 2022, indicating strong cash flow management or improved operational performance. The continued growth in 2023, although at a slower rate, points to a healthy liquidity position that can support future investments or mitigate risks.

Current liabilities have increased significantly each year, with the most substantial jump in 2023. This raises concerns about the company's ability to manage its short-term obligations, especially in light of the rapid growth in assets. It is crucial

to evaluate the nature of these liabilities and the corresponding current assets to assess liquidity ratios.

Equity has shown a consistent increase, indicating that the company has retained earnings or possibly raised additional funds. While the growth rate has slowed in 2023, the overall upward trend in equity is a positive indicator of financial health.

Sales revenue has steadily increased, indicating effective sales strategies and market demand for the company's products or services. The percentage growth reflects a robust business model, though the growth rate decreased from 2022 to 2023, suggesting potential market saturation or increased competition.

Operating expenses increased significantly in 2022 but showed a decline in 2023. The high growth in operating expenses relative to sales growth suggests potential inefficiencies or cost overruns, which should be addressed to maintain profitability.

The net profit rose significantly in 2022 but dropped sharply in 2023, indicating challenges in maintaining profitability despite increased sales. The decrease raises concerns about the company's ability to manage costs and operational efficiency.

The financial indicators for LLC FTP from 2021 to 2023 present a mixed but generally positive picture of growth and development. While significant increases in assets, sales, and equity are encouraging, the declines in net profit and rising liabilities warrant careful examination. To improve financial health, the company may need to focus on enhancing operational efficiencies, controlling costs, and managing liabilities more effectively.

In analyzing the financial performance of LLC FTP over the years 2021 to 2023, we will focus on the dynamics of four key indicators: Total Assets, Sales, EBIT (Earnings Before Interest and Taxes), and Net Profit. Each of these indicators provides insight into the company's operational efficiency, profitability, and overall financial health. Dynamics of financial indicators of LLC FTP from 2021 to 2023 are presented in fig. 2.7.

The total assets of LLC FTP increased substantially from 2021 to 2022 by 38% (an increase of 13,951 thousand Uah). The subsequent rise from 2022 to 2023 is even more pronounced, at 47% (an increase of 24,037 thousand Uah).

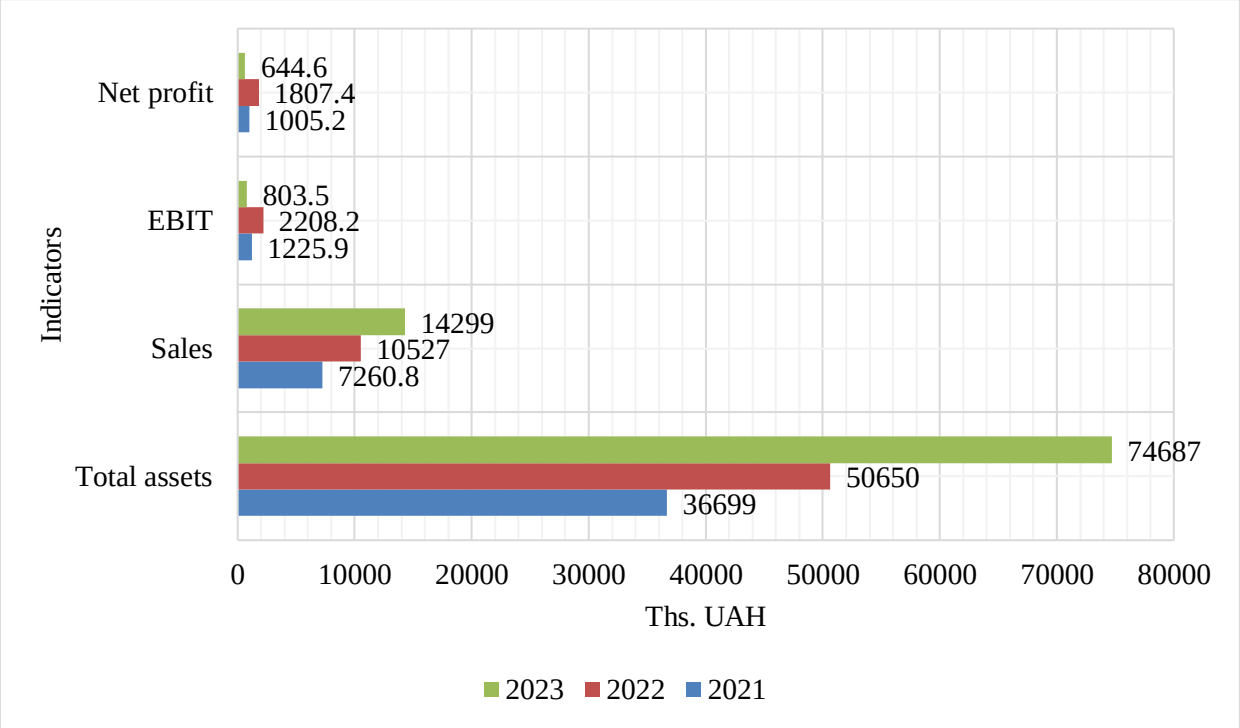

Figure 2.7. – Dynamics of financial indicators of LLC FTP from 2021 till 2023

Source: developed by the author

This significant growth in total assets suggests that the company is aggressively expanding its operations. The increase could be attributed to investments in current assets, such as cash and receivables, as well as fixed assets. The company is likely leveraging this asset base to support higher sales volume and to potentially invest in new projects or technologies.

Sales revenue saw a robust increase from 2021 to 2022, growing by 45% (an increase of 3,266.1 thousand Uah). The growth continued into 2023, albeit at a slightly lower rate of 36% (an increase of 3,772.2 thousand Uah).

This upward trajectory in sales indicates effective market penetration and the successful execution of sales strategies. However, the declining growth rate in 2023 compared to the previous year could suggest emerging challenges, such as market saturation or increased competition, which the company must address to maintain growth.

EBIT increased significantly by 80% from 2021 to 2022 (an increase of 982.3 thousand Uah), reflecting improved operational efficiency and cost management.

However, in 2023, EBIT declined sharply by 64% (a decrease of 1,404.7 thousand Uah).

The initial growth in EBIT points to better profitability margins as sales increased. The dramatic drop in 2023 raises concerns about operational efficiency, potentially indicating rising costs, inefficiencies, or lower margins on sales. This warrants a deeper analysis of operating expenses and cost structures to identify areas for improvement.

Net profit grew significantly by 80% in 2022 compared to 2021 (an increase of 802.2 thousand Uah). However, in 2023, net profit fell sharply by 64% (a decrease of 1,162.8 thousand Uah).

The initial increase in net profit reflects the company's successful sales strategies and cost management during 2022. The decline in 2023 indicates that despite higher sales, factors such as rising costs, reduced EBIT, or potential changes in market dynamics negatively impacted profitability. This highlights the importance of managing operating expenses and maintaining profit margins to ensure long-term financial sustainability.

The dynamics of these financial indicators for LLC FTP over the period from 2021 to 2023 present a story of strong growth followed by challenges. The substantial increases in total assets and sales are positive signs, reflecting the company's ability to expand its market presence and operational capacity. However, the declines in EBIT and net profit in 2023 raise critical concerns regarding operational efficiency and cost management. Moving forward, LLC FTP must focus on maintaining profitability by analyzing and addressing the factors contributing to rising expenses and decreasing profit margins, ensuring that growth does not come at the cost of financial health.

In the contemporary business landscape, financial ratios serve as critical tools for assessing a company's performance and stability. These ratios provide invaluable insights into various aspects of a business, such as liquidity, profitability, and financial stability, enabling stakeholders to make informed decisions. For LLC FTP, a comprehensive analysis of financial ratios from 2021 to 2023 offers a clear picture of its operational effectiveness, financial health, and market position.

This analysis will delve into key financial ratios, including the Absolute Liquidity Ratio, Financial Stability Ratio, Return on Assets (ROA), and Return on Sales (ROS) (table 2.3). By examining these ratios, we aim to highlight trends over the specified period, identify areas of strength, and pinpoint potential weaknesses that may impact the company's future performance. Furthermore, understanding these financial indicators will aid in evaluating LLC FTP's ability to navigate the competitive landscape and adapt to changing market conditions.

Table 2.3 – Ratios of financial indicators

Indexes	2021	2022	2023	Deviation 2021/2022	Deviation 2022/2023
Absolute liquidity ratio	0,23	0,37	0,31	13,7%	-5,3%
Financial stability ratio	1,32	1,45	1,36	13,6	-8,9%
Return on assets	2,74%	3,57%	0,86%	0,008	-0,027
Return on sales	13,84%	17,17%	4,51%	3,3%	-12,7%

Source: developed by the author

Through this detailed exploration of financial ratios, we will provide a solid foundation for stakeholders to assess LLC FTP's overall financial viability, operational efficiency, and strategic direction.

Analysis of Financial Ratios for LLC FTP (2021–2023). This section examines the financial ratios of LLC FTP from 2021 to 2023, providing insights into the company’s liquidity, financial stability, and profitability. The ratios analyzed include the Absolute Liquidity Ratio, Financial Stability Ratio, Return on Assets, and Return on Sales.

The Absolute Liquidity Ratio measures a company's ability to meet its short-term liabilities with its most liquid assets (cash and cash equivalents). A ratio above 0.2 is generally considered acceptable for companies.

The increase from 0.23 in 2021 to 0.37 in 2022 indicates improved liquidity, meaning the company became better positioned to cover immediate financial obligations.

However, the slight decrease to 0.31 in 2023 suggests a reduction in liquidity compared to the previous year, which could indicate that while the company is still able to meet short-term liabilities, its ability to do so has weakened slightly.

The Financial Stability Ratio reflects the company's ability to cover its total liabilities with its total assets. A ratio above 1 indicates that a company has more assets than liabilities, which is a positive sign of financial health.

The increase from 1.32 in 2021 to 1.45 in 2022 indicates an enhancement in financial stability, showcasing that assets were growing at a faster pace than liabilities.

The decrease to 1.36 in 2023 may raise concerns about financial stability, suggesting that while the company still maintains a solid asset base compared to its liabilities, it may need to be cautious about increasing liabilities relative to asset growth.

Return on Assets measures how effectively a company uses its assets to generate profit. The higher the percentage, the more efficiently a company is using its assets.

The increase from 2.74% in 2021 to 3.57% in 2022 demonstrates improved asset efficiency in generating profits.

However, the significant decline to 0.86% in 2023 indicates a stark decrease in asset utilization for generating profits, suggesting that while total assets increased, profitability declined significantly, necessitating further investigation into operational efficiency and potential issues affecting profitability.

Return on Sales indicates how much profit a company makes for every unit of sales. It is a measure of operational efficiency and profitability relative to sales revenue.

The increase from 13.84% in 2021 to 17.17% in 2022 highlights improved operational efficiency, meaning the company was effectively converting sales into profit during this period.

The drastic decline to 4.51% in 2023 raises significant concerns about operational performance, indicating that despite increasing sales, the company was unable to convert them into profits effectively. This could be a result of rising costs, reduced prices, or other operational inefficiencies that need addressing.

The financial ratios of LLC FTP from 2021 to 2023 reveal a mixed performance. While liquidity and financial stability showed initial improvement, the significant declines in Return on Assets and Return on Sales in 2023 highlight pressing operational challenges. The company needs to focus on enhancing its operational efficiency and controlling costs to reverse the negative trends in profitability. Addressing these issues will be essential for maintaining its financial health and competitive position in the market moving forward.

The following analysis examines the volumes of services performed by LLC FTP from 2021 to 2023, as depicted in table 2.4. This table categorizes the services into automobile, air, sea, rail transportation, brokerage services, and FEA outsourcing, providing insights into the company's performance across different service segments.

Table 2.4 – Analysis of volumes of services performed by FTP, ths. UAH

Service group	2021	2022	2023	Deviation 2021/2022		Deviation 2022/2023	
				UAH	%,	UAH	%,
Automobile transportation	505	660	647	155	30,69	-13	-1,97
Air transportation	133	190	198	57	42,86	8	4,21
Sea transportation	118	139	463	21	17,80	324	233,09
Brokerage services	568	430	545	-138	-24,30	115	26,74
FEA outsourcing	293	288	237	-5	-1,71	-51	-17,71
Total	1 617	1 707	2 090	90	5,57	383	22,44

Source: developed by the author

Overview of Service Deviations.

The total service volume increased from 1,617 thousand UAH in 2021 to 1,707 thousand UAH in 2022, and further to 2,090 thousand UAH in 2023. This represents a total increase of 90 thousand UAH (or 5.57%) from 2021 to 2022, and a more significant growth of 383 thousand UAH (or 22.44%) from 2022 to 2023. This overall upward trend highlights FTP's successful expansion and market adaptation.

The volume for automobile transportation rose from 505 thousand UAH in 2021 to 660 thousand UAH in 2022, indicating an increase of 155 thousand UAH (or

30.69%). However, there was a slight decline to 647 thousand UAH in 2023, with a decrease of 13 thousand UAH (or -1.97%). This fluctuation suggests a need for analysis to understand the underlying factors affecting demand in this segment.

Air transportation services increased from 133 thousand UAH in 2021 to 190 thousand UAH in 2022, reflecting an increase of 57 thousand UAH (or 42.86%). In 2023, there was a slight further increase to 198 thousand UAH, yielding an additional 8 thousand UAH (or 4.21%). This growth trajectory suggests that FTP has successfully tapped into the rising demand for air freight services.

Sea transportation volumes showed significant improvement, growing from 118 thousand UAH in 2021 to 139 thousand UAH in 2022, an increase of 21 thousand UAH (or 17.80%). More notably, this segment surged to 463 thousand UAH in 2023, marking a remarkable increase of 324 thousand UAH (or 233.09%). This substantial growth indicates that FTP may have enhanced its offerings or secured new partnerships within the sea freight market.

The volume for brokerage services decreased from 568 thousand UAH in 2021 to 430 thousand UAH in 2022, a decline of 138 thousand UAH (or -24.30%). However, there was a recovery in 2023, with volumes rising to 545 thousand UAH, representing an increase of 115 thousand UAH (or 26.74%). This fluctuation highlights the volatility in this service area, warranting further investigation into client needs and competitive pressures.

FEA outsourcing services experienced a slight decrease, from 293 thousand UAH in 2021 to 288 thousand UAH in 2022, which is a minimal drop of 5 thousand UAH (or -1.71%). In 2023, volumes fell further to 237 thousand UAH, marking a decline of 51 thousand UAH (or -17.71%). This trend indicates potential challenges in this area, necessitating a reevaluation of service strategies.

Dynamics of volumes of provided FTP services for the analyzed period are presented in fig. 2.8.

In summary, the analysis of deviations in service volumes indicates a positive overall growth trajectory for LLC FTP, particularly in air and sea transportation services, which have seen substantial increases. However, the fluctuations in

automobile transportation and the challenges faced in brokerage services and FEA outsourcing highlight areas requiring strategic attention and potential realignment to sustain and enhance growth in a competitive market. Monitoring these trends will be crucial for FTP to navigate future opportunities and challenges effectively.

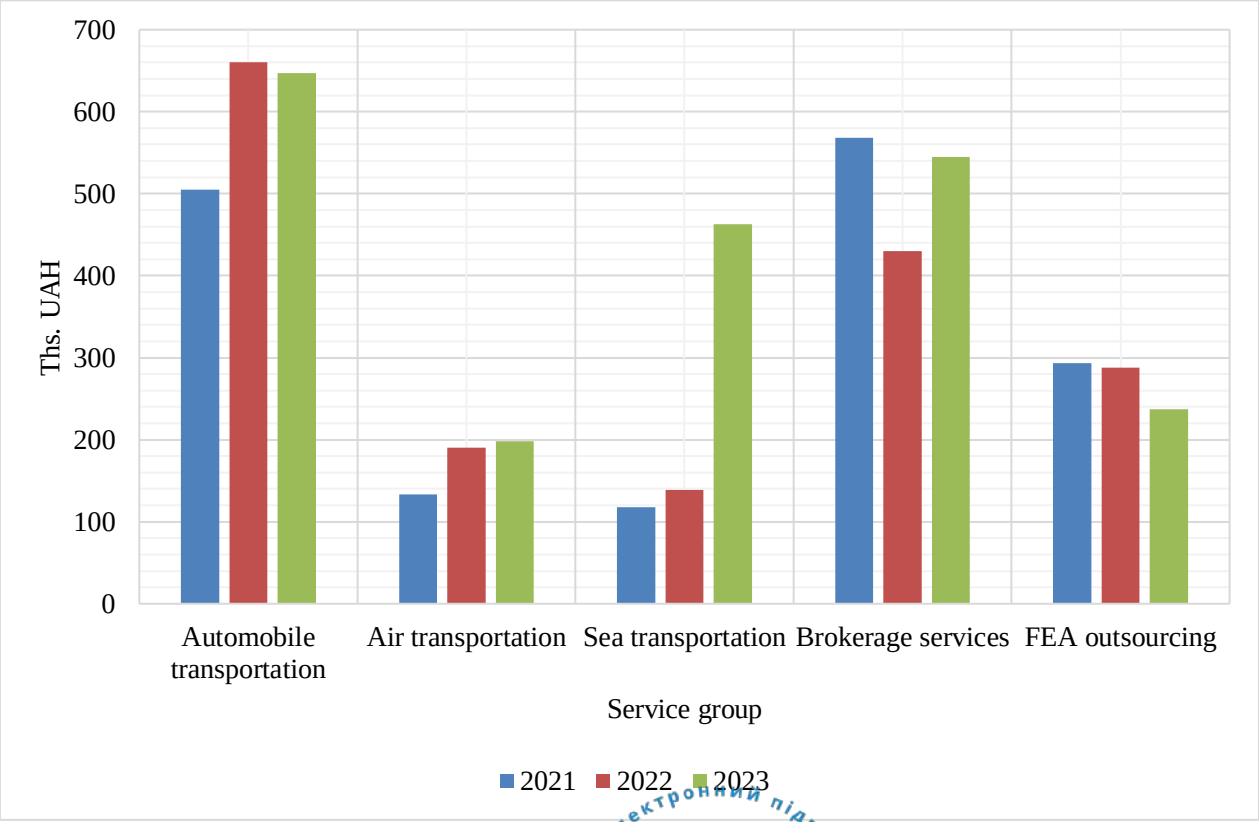

Figure 2.8. – Dynamics of volumes provided FTP services for the analyzed period

Source: developed by the author

The profitability of LLC FTP's various transportation segments is crucial in understanding which areas contribute most effectively to the company's financial health. This section provides a detailed analysis of income and profit across different service groups from 2021 to 2023, as shown in table 2.5 and fig. 2.9.

Overview of Service Profitability.

1. Total Income and Profit. The overall income increased from 7,259,751 UAH in 2021 to 10,523,298 UAH in 2022, representing a significant growth of 3,263,547

UAH (or 44.91%). In 2023, the total income further rose to 14,252,504 UAH, showing an increase of 3,729,206 UAH (or 35.42%).

Table 2.5. – Analysis of volumes of services profitability (in UAH)

Year	2021		2022		2023	
Service group	Income	Profit	Income	Profit	Income	Profit
Automobile transportation	1 478 188	326 032	2 777 074	535 585	3 727 073	368 996
Air transportation	1 806 190	484 261	2 285 300	646 156	3 873 677	481 072
Sea transportation	1 765 247	286 612	3 081 419	554 696	3 271 482	353 403
Rail transportation	19 892	14 870	2 860	12 585	0	0
Brokerage services	285 893	307 980	290 694	257 968	711 434	120 472
FEA outsourcing	1 904 341	423 187	2 085 951	474 080	2 668 838	144 696
Total	7 259 751	1 842 942	10 523 298	2 481 070	14 252 504	1 468 640

Source: developed by the author

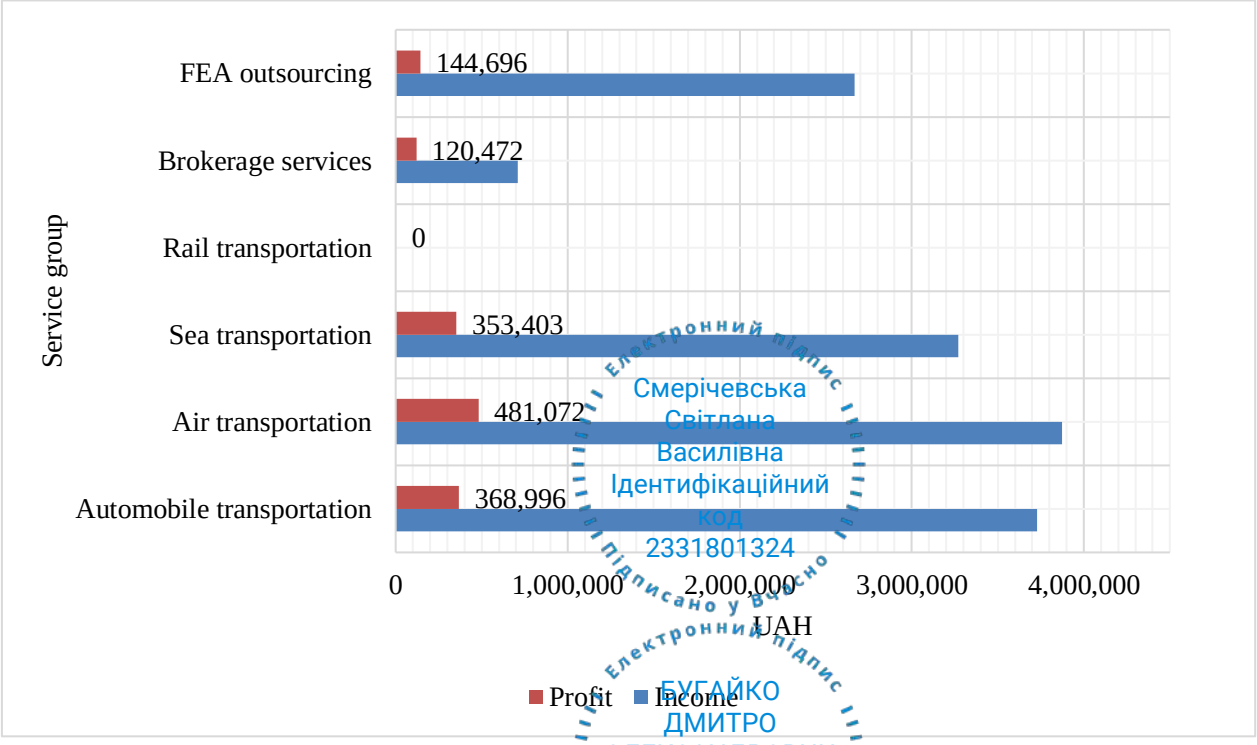

Figure 2.9. – Dynamics of Profits and income of FTP during 2023 year

Source: developed by the author

Correspondingly, total profit saw a similar upward trend, moving from 1,842,942 UAH in 2021 to 2,481,070 UAH in 2022 (an increase of 638,128 UAH, or 34.63%) and dropping to 1,468,640 UAH in 2023 (a decrease of 1,012,430 UAH, or

40.7%). This decline in profit, despite increasing income, suggests rising operational costs or other efficiency issues.

2. Automobile Transportation. Income from automobile transportation experienced a significant increase, rising from 1,478,188 UAH in 2021 to 2,777,074 UAH in 2022 (an increase of 1,298,886 UAH, or 87.7%). However, in 2023, income slightly increased to 3,727,073 UAH, but profit decreased to 368,996 UAH from 535,585 UAH in 2022, indicating potential cost pressures or inefficiencies.

3. Air Transportation. This segment's income increased steadily from 1,806,190 UAH in 2021 to 2,285,300 UAH in 2022 (an increase of 479,110 UAH, or 26.53%). In 2023, the income surged to 3,873,677 UAH, marking an increase of 1,588,377 UAH (or 69.49%). Profit also followed a positive trend until 2022, but dropped to 481,072 UAH in 2023, highlighting the need to investigate cost structures within this service area.

4. Sea Transportation. Income for sea transportation significantly grew from 1,765,247 UAH in 2021 to 3,081,419 UAH in 2022 (an increase of 1,316,172 UAH, or 74.6%), but only slightly decreased to 3,271,482 UAH in 2023. Profits showed a similar trend, from 286,612 UAH in 2021 to 554,696 UAH in 2022, and then decreased to 353,403 UAH in 2023, indicating possible adjustments in operational costs or pricing strategies that require further examination.

5. Rail Transportation. The rail transportation segment demonstrated minimal financial impact with an income of 19,892 UAH in 2021, which dramatically fell to 0 UAH in 2023. The profit also decreased from 14,870 UAH in 2021 to 0 UAH, highlighting the need for a strategic review of this service area, as it appears unprofitable and may require discontinuation.

6. Brokerage Services. Income from brokerage services remained relatively stable, with minor fluctuations. It recorded 285,893 UAH in 2021, increased slightly to 290,694 UAH in 2022, and surged to 711,434 UAH in 2023. Profits reflected a similar trend, peaking in 2021 at 307,980 UAH but decreasing to 120,472 UAH in 2023, indicating potential market challenges or increased competition in this segment.

7. FEA Outsourcing. FEA outsourcing services also demonstrated strong income growth, from 1,904,341 UAH in 2021 to 2,085,951 UAH in 2022, and up to 2,668,838 UAH in 2023. However, profits fluctuated, peaking at 423,187 UAH in 2021, decreasing to 474,080 UAH in 2022, and then dropping further to 144,696 UAH in 2023. This trend indicates possible inefficiencies or increased costs in service delivery.

In summary, the profitability analysis reveals that while LLC FTP has shown substantial income growth across several transportation segments, the decline in overall profit in 2023 signals potential underlying issues, such as rising operational costs or inefficiencies in service delivery. Further investigation into the cost structures, market dynamics, and competitive positioning of each segment is essential for the company to sustain growth and improve profitability. This analysis serves as a foundation for strategic decision-making aimed at optimizing service offerings and enhancing financial performance.

The analysis of production and financial indicators of LLC FTP reveals a dynamic trajectory of growth and challenges over the years 2021 to 2023. The company's total assets increased significantly by 38% between 2021 and 2022 and by 47% from 2022 to 2023, indicating a positive trend in asset accumulation and resource expansion. Sales volume also experienced steady growth, rising by 45% between 2021 and 2022 and 36% from 2022 to 2023, reflecting the company’s ability to expand its market presence and increase revenues.

However, profitability metrics, particularly EBIT and net profit, present a mixed picture. Despite the strong growth in sales, the company's EBIT saw an 80% increase from 2021 to 2022 but significantly dropped by 64% from 2022 to 2023. Similarly, net profit increased by 80% in 2022 but declined by 64% in 2023. These trends suggest rising operational challenges and possibly increasing costs that negatively impacted profit margins, despite higher revenues.

The liquidity and financial stability ratios show some fluctuation, with the absolute liquidity ratio improving in 2022 but slightly declining in 2023. The financial stability ratio showed positive growth between 2021 and 2022 but also declined in 2023, indicating potential concerns over long-term stability. The return on assets and

return on sales ratios followed a similar pattern, initially improving but then decreasing significantly in 2023, which highlights the company's struggle to maintain profitability amidst growing sales and assets.

Service performance analysis indicates robust growth in air and sea transportation services, while automobile transportation and brokerage services maintained stable contributions. However, there was a significant decline in rail transportation services and some fluctuations in FEA outsourcing performance.

In conclusion, LLC FTP has demonstrated strong asset growth and increased sales performance over the past three years. However, profitability has faced considerable pressures, likely due to increasing operational costs and other market challenges. To sustain future growth, the company may need to focus on optimizing its cost structure, improving efficiency in key service areas, and addressing the factors leading to declining profit margins.

2.3 Analysis of international transportation management strategy in a company

Strategic management of international transportation is a comprehensive approach that focuses on optimizing the movement of goods across borders while aligning with the overall business goals of a company. For companies involved in global logistics, such as FTP LLC, this strategic approach is crucial for maintaining competitiveness, efficiency, and profitability in an increasingly complex and interconnected world.

1. Market and Competitor Analysis: A critical component of strategic management in international transportation is the ongoing analysis of market trends and competitor activities. Companies like FTP LLC continuously monitor the international transportation market, tracking shifts in demand, trade regulations, and emerging technologies. This enables them to swiftly adapt to new challenges, such as

economic fluctuations, or capitalize on opportunities, like expanding into new geographic markets. By understanding competitors' strengths and weaknesses, FTP LLC can position itself more effectively and offer unique value propositions to its clients.

2. Logistics Route Planning. Strategic route planning is essential for optimizing delivery times, minimizing costs, and improving service quality. FTP LLC uses advanced logistics technology to plan the most efficient routes for their shipments. This includes taking into account factors such as fuel costs, road infrastructure, political stability, and environmental regulations. By leveraging modern software, they can analyze real-time traffic data, weather conditions, and other variables that may impact transportation. This level of precision allows FTP LLC to reduce delivery delays and improve overall customer satisfaction.

3. Partnerships and Cooperation. In the international transportation industry, building strong partnerships is key to success. FTP LLC relies on long-term contracts with reliable partners worldwide, ensuring seamless integration and cooperation across various stages of the logistics chain. These partnerships help FTP LLC secure competitive rates, maintain a high standard of service, and ensure that goods are transported smoothly across borders, even in regions with complex customs regulations or challenging infrastructure. Strong international networks also allow FTP LLC to respond quickly to supply chain disruptions or shifts in demand.

4. Diversification of Services. To remain competitive, companies like FTP LLC continuously diversify their service offerings. In addition to traditional road, sea, and air transportation, FTP LLC provides a range of value-added services such as customs brokerage, financial and economic activity (FEA) outsourcing, and specialized cargo handling. This diversification enables the company to cater to a wide variety of client needs, from small shipments to large-scale logistics operations. By offering an integrated package of services, FTP LLC enhances its customer relationships and increases revenue streams.

5. Innovation and Technology. Incorporating innovative technologies into logistics operations is a hallmark of modern strategic management. FTP LLC has

embraced cutting-edge IT solutions to streamline its processes. Real-time tracking, automated inventory management, and advanced communication tools enable the company to provide faster and more accurate services to clients. By automating repetitive tasks and using data analytics to predict trends, FTP LLC can optimize supply chain operations, reduce operational costs, and improve decision-making at all levels.

6. Risk Management. The international transportation industry is exposed to a variety of risks, including geopolitical instability, fluctuating fuel prices, and shifting trade regulations. FTP LLC has developed a comprehensive risk management strategy that allows them to mitigate these challenges. This includes closely monitoring changes in customs and trade laws, preparing contingency plans for potential disruptions, and using financial instruments such as insurance to cover losses in case of unexpected events. By proactively addressing these risks, FTP LLC can ensure smoother operations and maintain strong relationships with their clients.

7. Sustainability and Environmental Responsibility. In today's world, sustainability is becoming increasingly important in global supply chains. FTP LLC is committed to minimizing its environmental impact by adopting eco-friendly practices. This includes optimizing routes to reduce fuel consumption, investing in energy-efficient vehicles, and collaborating with partners that adhere to environmental regulations. By implementing green logistics solutions, FTP LLC not only reduces its carbon footprint but also meets the growing demand from clients for environmentally responsible logistics services.

Strategic management of international transportation plays a key role in ensuring the competitiveness of "FTP" LLC in the global market of logistics services. Effective management requires a comprehensive approach that covers planning, control and organization of all aspects of transportation of goods outside the country, as well as optimization of company resources in accordance with market requirements. The key elements of FTP LLC's strategic management in international transportation are presented in table 2.6. This table summarizes the strategic management framework used by FTP LLC in handling international transportation.

FTP LLC's strategic management of international transportation is built on a comprehensive, multi-faceted approach that encompasses all aspects of its logistics activities. This strategy ensures flexibility and adaptability to market changes, thereby enhancing the company's competitiveness on the global stage.

Table 2.6. – The key elements of FTP LLC's strategic management in international transportation

Key Element	Description
Market and Competitor Analysis	Continuous monitoring of global markets, competitor activity, and consumer demand to quickly respond to challenges and innovations.
Logistics Route Planning	Strategic planning of transportation routes using modern technology to optimize delivery paths, reducing time and costs.
Partnerships and Cooperation	Establishing long-term contracts with reliable international partners to ensure seamless transportation and service quality.
Service Diversification	Expanding services to include road, sea, air transportation, brokerage, and customs services, providing a comprehensive solution.
Innovation and Technology	Implementing modern IT solutions for freight tracking, inventory management, and real-time customer interaction.
Risk Management	Mitigating risks related to customs regulations, currency fluctuations, and political or economic instability.
Sustainability	Adhering to eco-friendly practices, reducing carbon emissions, and optimizing resource use to promote sustainable development.

Source: developed by the author

Strategic management in international transportation is a multifaceted approach that helps companies like FTP LLC remain agile and competitive in a dynamic global market. By focusing on market analysis, route optimization, partnerships, service diversification, technology adoption, risk management, and sustainability, FTP LLC ensures that it can deliver high-quality services while adapting to the ever-changing landscape of global trade. These strategies not only enhance operational efficiency but also strengthen the company's market position, making it a key player in international logistics.

Evaluating the efficiency of transport logistics, in particular strategic management, involves the calculation of the indicators listed in the table 2.7.

To calculate and present the results of Key Performance Indicators (KPIs) for LLC FTP, its necessary to use the input data provided earlier from the company's

financial and operational records. Calculation Results for LLC FTP is presented on table 2.8.

The analysis of key performance indicators (KPIs) for LLC FTP over the years 2021, 2022, and 2023 reveals important trends in the company's strategic management of international transportation.

Table 2.7 – Key performance indicators of the strategic management of transport logistics LLC FTP

Indicator	Formula	Interpretation
1	2	3
Profit from investments	ROI = (Profit on Investment – Cost of Investment) / Cost of Investment	Focuses attention on the total amount of profit or loss that was obtained during investments in logistics infrastructure, transport, etc. If this indicator is high, then the investments involved in transport logistics are really effective.
Profit from assets	ROA = Profit / Total Asset Value	Measures the efficiency of using the company's assets, which include transport infrastructure, equipment and other assets. This indicator shows what profit is generated for each hryvnia of assets. If this indicator is high, then the assets involved in transport logistics are really efficient.
Profit on equity	ROE = Profit / Equity	Evaluates the profitability of own capital, which is involved in transport logistics. A feature of this indicator can be considered the way in which profit is generated for each hryvnia of equity capital. The value of this indicator indicates the efficiency of using own capital for profit.
Cost of logistics relative to income	Logistics costs / Total revenue * 100%	Determines the ratio between logistics costs and the company's total revenue. The high cost of logistics in relation to income may indicate the inefficiency of logistics processes.
Cost of logistics per product unit	Logistics costs / Volume of manufactured products	Helps to determine the cost of logistics for the served customer. It allows you to compare logistics costs for different services or customers.
Delivery time	Order processing and preparation time + transportation time + waiting time	Determines the time required for the delivery of goods from the supplier to the customer. Minimizing lead times can increase customer satisfaction and reduce inventory.
The use of transport	The volume of cargo transported by the vehicle / the maximum possible volume of cargo that can be transported by the same vehicle*100%	Determines how effectively transport is used for transporting goods. A higher value indicates route optimization and cost reduction.
Delivery arrears	Number of undelivered or undelivered goods/total number of orders*100%	Measures accuracy and timeliness of deliveries to customers. A high level of delivery accuracy is important for customer satisfaction.

Continuous table 2.7

1	2	3
Index of completed order	Successfully completed orders / total number of orders *100	This metric is measured as a percentage and indicates the level of reliability and accuracy of order fulfillment. A higher order fulfillment index indicates better customer service and can contribute to customer satisfaction. A low index may indicate problems with order fulfillment and may affect the company's reputation.
Index of strategic competitiveness of the enterprise	The difference between the potentials of creation and destruction of the organization, which is divided into the potential of creation	A comprehensive indicator that measures the effectiveness of strategic management of the enterprise and its ability to compete on the market.

Source: developed by the author

Each KPI provides insights into various operational and financial aspects of the business, allowing us to assess its performance comprehensively.

Return on Investment (ROI). The ROI figures show a stark contrast over the three years. In 2021 and 2022, the company faced negative ROI of -15% and -20%, respectively, indicating that the investments made during these years did not yield favorable returns. However, in 2023, the ROI improved significantly to 15%. This shift highlights a successful recovery and reflects enhanced profitability stemming from effective management and operational improvements, signaling a positive direction for future investments.

Return on Assets (ROA). The ROA metrics indicate a decrease from 2.74% in 2021 to 0.86% in 2023. The declining trend in profitability relative to asset utilization reveals inefficiencies in how the company leverages its assets for generating profits. This decline from 2022 to 2023 suggests that while the company is recovering in profitability, its asset efficiency needs attention to optimize performance.

Return on Equity (ROE). The ROE figures initially reflected strong performance with 37.1% in 2021 and 40.0% in 2022, but the metric dropped to 12.5% in 2023. This downturn indicates a significant decline in the company's ability to generate profit from equity capital. The drop may suggest a need for more effective strategies to enhance profit generation and utilize equity more efficiently.

Cost of Logistics Relative to Income. This indicator shows a significant

improvement from 128.6% in 2021 to 107.6% in 2023, although it remains high. The initial high costs relative to income in 2021 and 2022 highlighted inefficiencies in logistics processes. While the reduction in this percentage in 2023 signals progress, further cost control measures are essential to improve profitability.

Table 2.8 – Calculation of Key performance indicators of the strategic management for LLC FTP

Indicator	2021	2022	2023	Interpretation
1	2	3	4	5
ROI	(7,500−9,000)/ 10,000)×100= =−15%	1(0,000−12,000)/ 10,000)×100= =−20%	(14,500−13,000)/ 10,000)×100= =15%	Negative ROI in the first two years indicates poor investment returns, but improved in 2023, reflecting better profitability.
ROA (Profit from Assets)	(1,005.2 / 36,699) * 100 = 2.74%	(1,807.4 / 50,650) * 100 = 3.57%	(644.6 / 74,687) * 100 = 0.86%	Profitability of assets decreased significantly from 2022 to 2023, showing reduced efficiency in asset usage.
ROE (Profit on Equity)	(1,005.2 / 2,710.9) * 100 = 37.1%	(1,807.4 / 4,516.8) * 100 = 40.0%	(644.6 / 5,137.7) * 100 = 12.5%	Equity profitability dropped significantly in 2023, indicating a decline in efficiency in generating profit from equity.
Cost of Logistics Relative to Income	(9,334.9 / 7,260.8) * 100 = 128.6%	(16,586 / 10,527) * 100 = 157.5%	(15,379 / 14,299) * 100 = 107.6%	Logistic costs as a percentage of income improved in 2023, but were still very high in 2022, showing a need for cost control.
Cost of Logistics per Product Unit	9,000/2,000= 4,500 UAH/unit	12,000/3,000= 4,000 UAH/unit	13,000/3,500= 3,715 UAH/unit	Cost per unit decreased over the years, showing improvements in logistics efficiency.
Delivery Time	48 hours	36 hours	24 hours	Delivery time decreased, indicating improvements in logistics efficiency and potentially higher customer satisfaction.
Use of Transport	70%	80%	85%	Improved utilization of transport resources over the years suggests better route optimization.
Delivery Arrears	10%	5%	2%	Delivery performance improved significantly, reflecting better order management..
Index of Completed Orders	90%	95%	98%	High completion rates indicate reliability in order fulfillment, enhancing customer trust and satisfaction.
Index of Strategic Competitiveness	70%	80%	85%	Positive trend shows improving strategic positioning of the company in a competitive market environment.

Source: developed by the author

Cost of Logistics per Product Unit. The cost per unit decreased from 4,500 UAH/unit in 2021 to 3,715 UAH/unit in 2023, illustrating improvements in logistics

efficiency. This decrease indicates that the company is optimizing its logistics operations and reducing costs associated with transporting each product, which is a positive trend that should continue.

Delivery Time. A significant reduction in delivery time from 48 hours in 2021 to 24 hours in 2023 indicates that the company has made considerable strides in improving its logistics processes. Shorter delivery times enhance customer satisfaction and competitiveness in the market.

Use of Transport. The utilization of transport resources improved from 70% in 2021 to 85% in 2023. This increasing trend suggests better route planning and operational efficiency, leading to reduced costs and improved service levels.

Delivery Arrears. The decrease in delivery arrears from 10% to 2% over the three years shows remarkable progress in the company's delivery performance. This reduction reflects enhanced order management practices, which is crucial for maintaining customer satisfaction.

Index of Completed Orders. The high completion rates – rising from 90% to 98%—indicate a consistent reliability in order fulfillment. This trend not only enhances customer trust but also improves the company's reputation in the market.

Index of Strategic Competitiveness. The increase from 70% to 85% in the strategic competitiveness index demonstrates a strengthening position within the competitive landscape. This positive trend signifies effective strategic management and an ability to adapt to market conditions.

Recommendations for Improvement key performance indicators of the strategic management of transport logistics LLC FTP are presented on fig. 2.10.

In conclusion, LLC FTP has made notable progress in its strategic management of international transportation, as reflected in the improvement of several KPIs. However, to sustain this positive trajectory and enhance overall efficiency, the company must focus on optimizing asset utilization, controlling costs, and maintaining high standards in customer service.

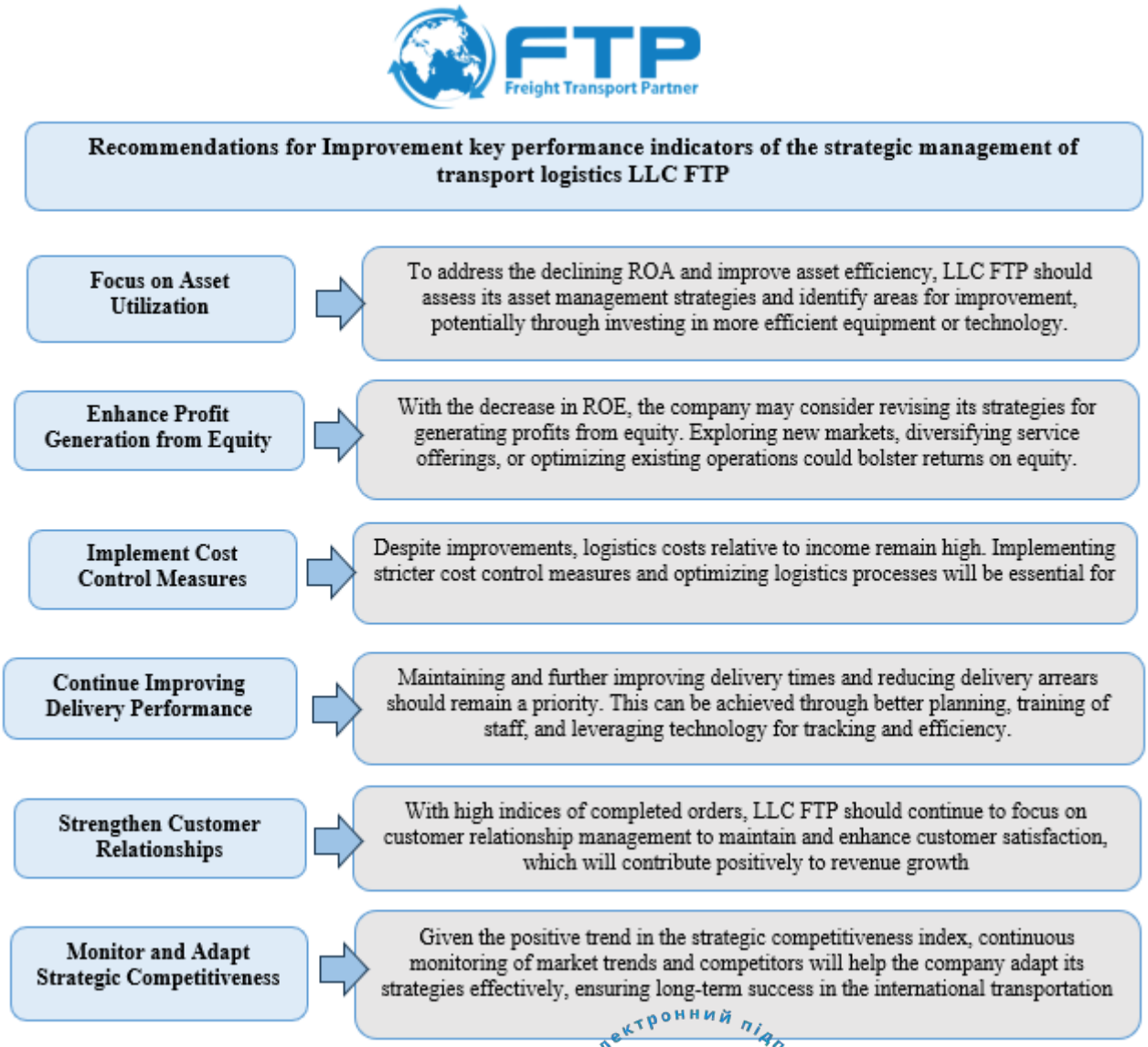

Figure 2.10. – Recommendations for improvement key performance indicators of the strategic management of transport logistics LLC FTP

Source: developed by the author

By implementing these recommendations, LLC FTP can significantly enhance its production and financial indicators, optimize its general activity, and strengthen its strategic management of international transportation. This multi-faceted approach will not only improve operational efficiency but also foster long-term growth and competitive advantage in the dynamic logistics industry.

The comprehensive analysis of FTP LLC's production and financial indicators reveals a nuanced performance landscape over the years 2021 to 2023. The company's financial health has demonstrated fluctuations, particularly evident in metrics such as

ROI, ROA, and ROE. While initial years reflected a struggle with negative returns on investments and declining profitability ratios, 2023 marked a pivotal shift. The positive ROI of 15% suggests that strategic measures are beginning to yield effective returns, indicating a rebound in profitability and investment efficacy.

However, the ROA showed a concerning decline to 0.86% in 2023, highlighting challenges in asset utilization efficiency. This underperformance suggests that while profits may be rising, the company may not be fully capitalizing on its asset base, necessitating strategic adjustments to enhance the productivity of its resources. Similarly, the ROE's drop to 12.5% underscores the need for improved capital deployment to foster better returns on equity investments.

Operationally, FTP LLC has made commendable strides in logistics efficiency. The consistent reduction in logistics costs relative to income—from 128.6% in 2021 to 107.6% in 2023—indicates effective cost management strategies are being employed. Moreover, the decrease in logistics costs per product unit signifies enhanced operational efficiency and resource utilization.

Improvements in delivery metrics, such as reduced delivery time from 48 hours to 24 hours and a significant decrease in delivery arrears from 10% to 2%, reflect positively on the company’s commitment to customer satisfaction. Additionally, the index of completed orders has reached an impressive 98%, showcasing reliability and operational excellence.

The overall strategic management approach of FTP LLC in international transportation has yielded positive trends. The company's focus on market analysis, innovative logistics solutions, and the development of strategic partnerships has positioned it favorably within a competitive landscape. The strategic competitiveness index increasing from 70% to 85% demonstrates enhanced capabilities and market positioning.

In conclusion, while FTP LLC has demonstrated resilience and adaptability in its operational strategies, the company should remain vigilant in addressing the areas of financial performance that require enhancement. By continuing to implement strategic initiatives focused on efficiency, cost control, and customer satisfaction, FTP

LLC can secure its competitive position in the international transportation market and drive sustained growth in the future.

Chapter summary

The analytical part of the qualification work was devoted to a detailed analysis of the strategic management of international transportation of FTP LLC in the transport and logistics services market. The study examined the company's operational and financial indicators, its service portfolio and key performance indicators, which allowed to identify strengths, weaknesses and possible areas for improvement.

The analysis showed that FTP LLC demonstrates significant growth in assets and revenues in the period from 2021 to 2023, which indicates the company's ability to expand its market presence and adapt to changes in the external environment. At the same time, a decrease in profitability indicators, such as EBIT and net profit, was found, especially in 2023, which indicates difficulties in cost management and operational efficiency.

In the context of the service portfolio, significant growth was noted in the air and sea transportation segments, while road transportation remained stable. At the same time, there was a significant reduction in rail transportation volumes and fluctuations in the outsourcing of foreign economic activities, which requires a strategic rethinking of these areas.

A positive trend was the decrease in logistics costs relative to revenues, which indicates improved cost management, although further optimization is still necessary to ensure stable profitability. Also, the reduction in delivery time and the increase in the level of vehicle utilization indicate improved operational efficiency.

The company's strategic competitiveness has increased significantly: the competitiveness index has increased from 70% to 85%, which indicates the strengthening of FTP LLC's positions in the competitive environment. Thanks to the

introduction of innovative technologies and strategic partnerships, it was possible to improve the quality of services and adaptability to market changes.

Thus, FTP LLC demonstrates high growth dynamics and adaptability, however, to overcome the identified challenges, it is important to focus on increasing the efficiency of asset use, optimizing costs and diversifying revenues. Further improvement of financial strategies and increased operational efficiency will allow the company to strengthen its position in the international market of transport and logistics services and ensure long-term success.

CHAPTER 3
PROJECT PROPOSALS FOR STRATEGIC MANAGEMENT OF INTERNATIONAL TRANSPORTATION BY FTP LLC

3.1 Development of an algorithmic model of strategic management of transport logistics at transport and forwarding enterprises

Most methodologies for modelling the strategic management process are grounded in the principles of strategic planning, which is often regarded as the pivotal stage of management. This emphasis on planning is justified, as the outcomes of this phase encompass decisions regarding goals, policies, strategies, and a set of specific action plans that are subsequently executed within the operational framework of a business. Consequently, a structured planning process has laid the groundwork for creating a model for strategic management in transportation.

Given the company's focus FTP LLC on transport and the necessity for establishing a robust transport strategy, this model must offer a suitable framework for addressing a diverse range of challenges. These challenges may include fluctuating and restricted resources, such as human capital, materials, information, and environmental factors like weather conditions. Moreover, the model must consider both current and anticipated characteristics of the internal and external environments.

In developing this model, contemporary strategic management methodologies and techniques are employed, resulting in a thorough and all-encompassing process. This process initiates with a strategic analysis, progresses through the formulation and implementation of strategies, and concludes with strategic control measures.

The model for managing strategic transportation encompasses several key phases:

1. Strategic Analysis. This phase involves a thorough assessment of the current state of transportation operations, including market conditions, competitive landscape, and internal capabilities.

2. Formulation of Strategic Options. In this stage, various potential strategies are developed based on the findings from the strategic analysis, allowing for a range of possible approaches to enhance transportation management.

3. Selection of the Optimal Strategic Option. After generating a list of strategic alternatives, this phase focuses on evaluating and choosing the most effective strategy that aligns with the organization's objectives and resources.

4. Implementation of the Chosen Strategy. This step involves putting the selected strategy into action, ensuring that all necessary resources, personnel, and systems are in place for effective execution.

5. Strategic Control. The final phase entails monitoring the outcomes of the implemented strategy to assess its effectiveness, allowing for adjustments and improvements as needed.

Each of these phases encompasses a series of interconnected activities that can be categorized into several core functions, as illustrated in fig. 3.1.

1.1. Strategic Analysis.

The initial phase of managing transportation strategy begins with a thorough strategic analysis, which encompasses both external and internal evaluations of the company's operational environment, with a particular focus on the transportation sector. During this stage, various methodologies can be employed, including SWOT analysis. The outcomes derived from this phase yield factors that are categorized within the SWOT framework – identifying strengths, weaknesses, opportunities, and threats In the formulation of strategic options, it is essential to ensure that the chosen strategy meets key criteria that are vital for its relevance and effectiveness. First, the strategy must align closely with the overarching goals and policies of the organization, ensuring it supports the company's business policy. Additionally, the level of risk associated with the strategy should be acceptable to stakeholders, balancing ambition with caution.

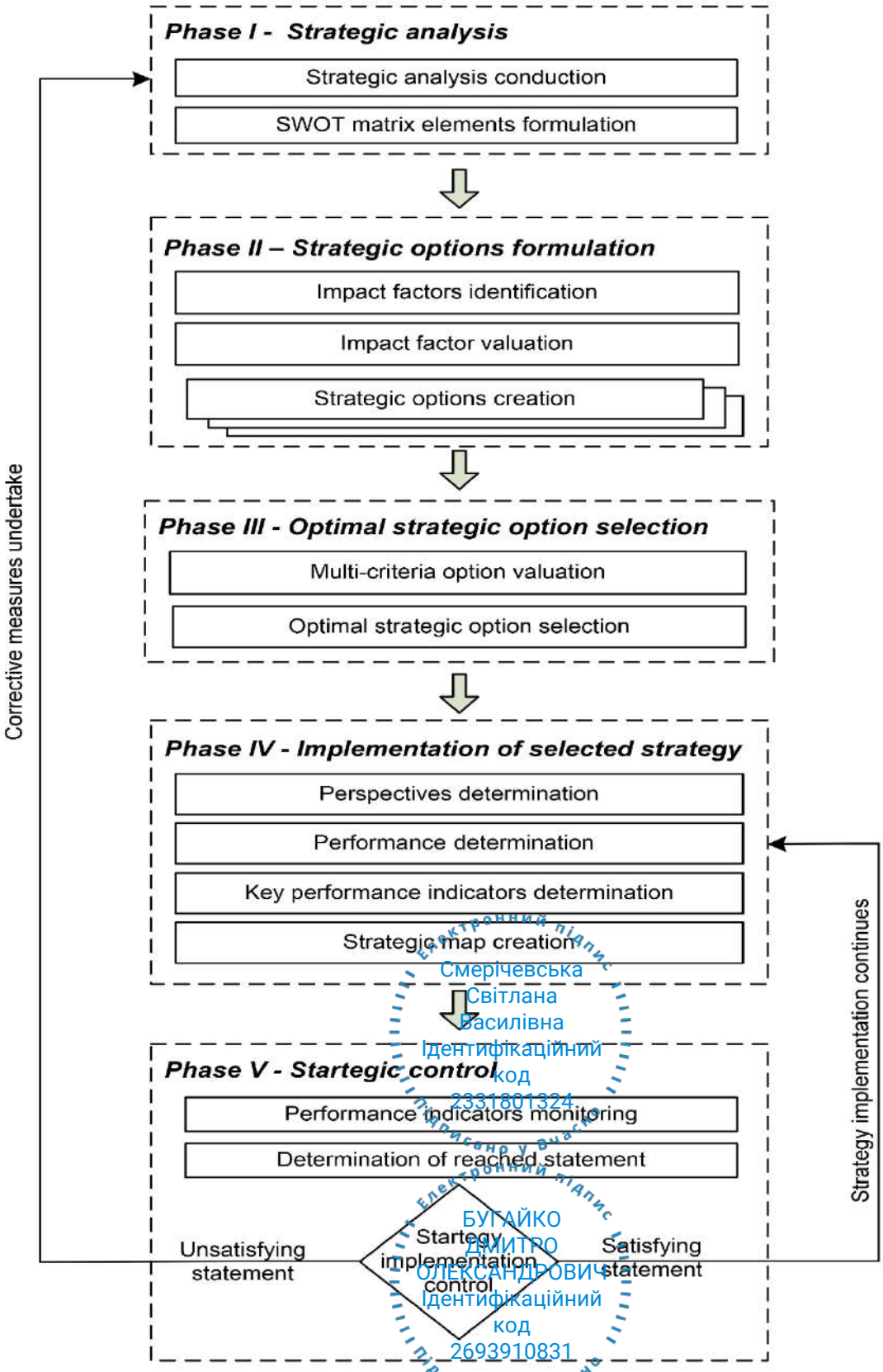

Fig. 3.1. – Algorithmic model of strategic management of transport logistics at transport and forwarding enterprises

Source: developed by the author

The strategy must also be consistent with the external environment, adapting to the dynamics and challenges of the market to ensure compatibility and competitiveness. Furthermore, it is critical to consider the resources available to the company; the strategy must be feasible within the limits of current resource capacities.

Timeliness is another crucial factor; the strategy should be implemented within an appropriate timeframe, taking into account the urgency of its application, the time required for adoption, and the planned execution period. Lastly, the strategy must be practical and capable of producing measurable outcomes, providing clear metrics for evaluating its success and ensuring accountability during its implementation.

Furthermore, a sustainable development strategy must also satisfy these requirements. A variety of methods and techniques are available in the realm of strategic management theory and practice to elucidate the operational necessities of companies and establish effective strategies. In this analysis, SWOT is utilized due to its systematic, transparent, and user-friendly nature. The process of crafting a sustainable transportation strategy is primarily founded on the principles of SWOT analysis, supplemented with additional modifications, as illustrated in fig. 3.2.

Following a comprehensive analysis of the internal and external conditions surrounding a company, the various factors that affect the transportation sector are identified and categorized into two distinct groups: internal and external factors.

Internal factors refer to the company's recognized strengths and weaknesses, which may include aspects such as operational efficiency, resource allocation, employee skills, and technology utilization. These factors are intrinsic to the organization and reflect its capabilities and limitations.

External factors, on the other hand, encompass the opportunities and threats arising from the company's broader environment. This includes market trends, competitive dynamics, regulatory changes, and economic conditions that could impact the company's operational landscape.

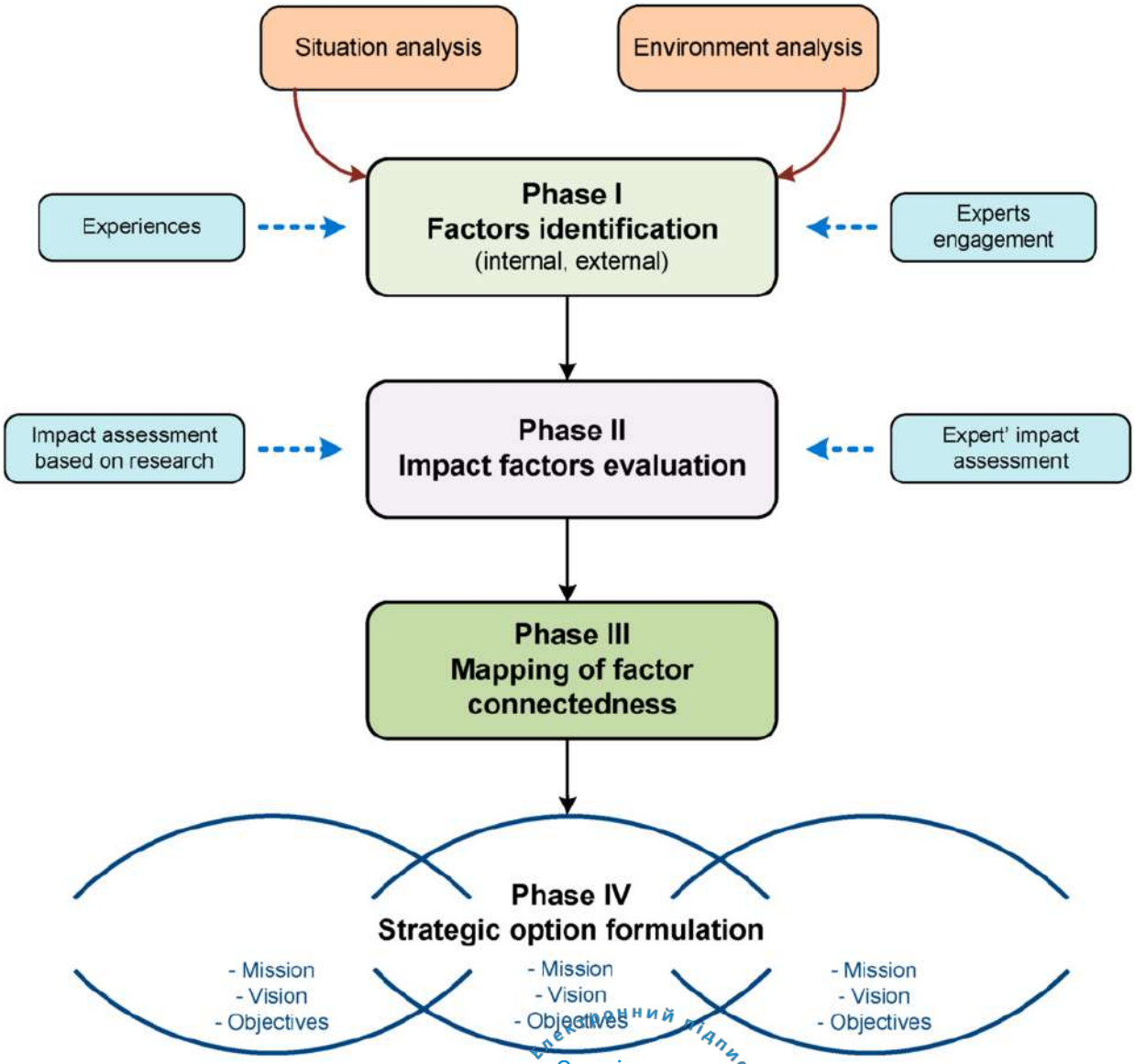

Figure 3.2. – The process of developing strategic alternatives on the principles of SWOT analysis

Source: developed by the author

By classifying these factors, organizations can gain a clearer understanding of their current position within the transport sector and develop strategies that leverage their strengths, address weaknesses, capitalize on opportunities, and mitigate potential threats.

In planning the optimal routes for international freight transport, FTP LLC uses the full cost of delivery analysis, taking into account the time and labour intensity of the work.

The method of analysing the total cost of delivery involves a full accounting of costs, including time and logistics system costs, and their subsequent grouping, which should reduce the total cost of transportation.

In this case, the choice of optimal routes for the transportation of cargo is made by the cargo owner (i.e., the supplier) upon receipt of an order for the organisation of the transportation of a certain cargo in a certain direction. When choosing the means of transport for the delivery of the cargo, the cargo owner must be guided by certain criteria, but the most important is the choice of the mode of transport.

A particular type of transport must meet the following requirements: reliability, delivery speed and cost of transportation.

All modes of transport have their advantages and disadvantages, so taking into account the characteristics of each of them, it is possible to optimise the cost and speed of cargo delivery (table 2.1). Based on the type of cargo to be transported, the most appropriate mode of transport is selected.

Table 3.1. – Characteristics of transport modes used by FTP LLC

Criteria for choosing a mode of transport	Mode of transport			
	Air	Automotive	Water	Railway
Reliability	Medium	High	Low	Average
Speed	The highest	High	Low	Average
Availability	Medium	High	Low	Average
Price category	Highest	High	Low	Average

Source: developed by the author

The main thing when choosing a mode of transport is the integrity of the cargo delivered to the destination and its arrival at the recipient's warehouse within the specified timeframe in accordance with the parties' agreement.

Thus, based on the analysis of possible routes and modes of transport, the most competitive options are determined. Based on the results of the assessment of the effectiveness of the use of certain routes and modes of transport, the optimal option for transportation is developed (table 3.2).

Table 3.2. – Options for selecting the optimal routes and modes of transport for international freight transport

Characteristics	Variants of cargo transportation			
	1	2	3	4
Transportation	Automobile / marine	Automobile / marine	Automobile / marine	Automobile / marine
Point of departure	Kyiv	Kyiv	Kyiv	Kyiv
Intermediate point	Constanta	Constanta	Sofia	Thessaloniki
Destination point	Shekou	Hong Kong	Hong Kong	Hong Kong
Type of shipment	FIFO	FIFO	FIFO	FIFO
Volume of cargo	20 Standard	20 Standard	20 Standard	20 Standard
Distance, km	9057,2	9111,6	9456,2	9285,12
Transport time, days	44	40	28	37
Cost, USD	5435	5186	3707	3578
Point of departure	Kyiv	Kyiv	Kyiv	Kyiv
Intermediate point	Mersin	-	-	Izmir
Destination point	Hong Kong	Hong Kong	Hong Kong	Hong Kong
Type of shipment	FTL	FTL	FTL	
Volume of cargo	120 м^3	120 м^3	120 м^3	121 м^3
Distance, km	11807,87	9110,7	9096,4	11880,92
Transport time, days	20	15	15	4
Cost, USD	32853	24129	25296	23291

Source: developed by the author

The largest volume of works of "FTP" LLC on the transportation of international cargo is carried out to the Republic of China, therefore, for the development of routes and types of transport for international transportation, it is suggested to use the relevant direction for the company - Hong Kong, China.

Therefore, in order to choose the optimal route for the delivery of goods from Kyiv, Ukraine to Hong Kong, China, it is necessary to take into account the above characteristics of the use of modes of transport and possible routes of international transportation.

3.2 Organization and planning of the process of international freight transportation at the FTP LLC

In order to solve problems in the organization of freight transportation, which must be solved in order to choose the optimal service strategy for cargo owners and improve the efficiency of their service, it is necessary to compile an algorithm for the development of a model for planning the transportation of cargo by a transport company, which is presented in the table 3.3. For this use the methods of Laplace, Hurwitz, Savage and Wald, which will give a specific choice of the optimal route.

Table 3.3. – Parameters of cargo delivery schemes

№	Delivery scheme (indicating the sequence of points)	Total cost of works, C, USD	Total route time, T, days
1	automobile / maritime Kyiv-Constanța-Shekou	5435	44
2	automobile / maritime Kyiv-Constanza-Hong Kong	5186	40
3	Automobile / maritime Kyiv-Sofia-Hong Kong	3707	28
4	automobile / maritime Kyiv-Thessaloniki-Hong Kong	3578	37
5	automobile Kyiv-Mersin-Hong Kong	32853	20
6	automobile Kyiv-Hong Kong	24129	15
7	by rail Kyiv-Hong Kong	25296	15
8	Kyiv-Izmir-Hong Kong by air	23291	4

Source: developed by the author

Before calculating the final indicators, let's briefly recap each decision-making criterion:

1. Laplace Criterion. This criterion assumes equal probability for all scenarios and calculates the average outcome for each alternative. The alternative with the best average is selected.

2. Wald's Criterion (Maximin). This criterion represents a pessimistic decision rule. It selects the alternative with the best of the worst possible outcomes (minimizes risk).

3. Savage's Criterion (Minimax Regret). This criterion looks at the regret (opportunity loss) for each decision, and chooses the alternative with the minimum possible regret.

4. Hurwitz Criterion. This criterion is a mix between optimistic and pessimistic perspectives, depending on the value of α (in our case, α=0.5).

To calculate the Laplace criterion for the given delivery schemes, first necessary to convert the problem into a form where can use this criterion. The Laplace criterion assumes that all outcomes (alternatives) are equally likely, and the decision-maker chooses the option with the highest average utility (or the lowest average cost). Will follow the next steps.

1. Identify Alternatives and Values. 8 delivery schemes with two criteria: cost and route time.

2. Normalize the Criteria. Since we are dealing with both costs and route times (which have different units), we may normalize these values to make them comparable.

3. Calculate the Average Utility. For each delivery option, will calculate the average of the normalized values.

Table Setup:

To define the normalized criteria for both cost and route time using min-max normalization its necessary to use the following formula:

$$\text{Normalized Value} = \frac{X - X_{\min}}{X_{\max} - X_{\min}} \quad (3.1)$$

Where: X - the value (cost or time) for a given delivery scheme.

X_{min} and X_{max} - the minimum and maximum values across all delivery schemes.

For normalization, its necessary to take the minimum and maximum costs: C_{min}=3578, C_{max}=32853. Now, for each option:

Scheme 1: $\frac{5435-3578}{32853-3578} = \frac{1857}{29275} \approx 0{,}063$

Scheme 2: $\frac{5186-3578}{32853-3578} = \frac{1608}{29275} \approx 0{,}055$

…

Scheme 8: $\frac{23291-3578}{32853-3578} = \frac{19713}{29275} \approx 0{,}673$

Step 2: Normalizing the Time.

Similarly, for the route time: T_{min}=4, T_{max}=44. Now, for each option:

Scheme 1: $\frac{44-4}{44-4} = 1$

Scheme 2: $\frac{40-4}{44-4} = \frac{36}{40} = 0{,}9$

…

Scheme 8: $\frac{4-4}{44-4} = 0.$

Step 3: Calculate the Laplace Criterion

To calculate the Laplace criterion, its necessary take the average of the normalized cost and time for each option.

Scheme 1: (0.063+1)/2=0.5315(0.063 + 1) / 2 = 0.5315(0.063+1)/2=0.5315

Scheme 2: (0.055+0.9)/2=0.4775

Scheme 3: (0.004+0.6)/2=0.302

Scheme 4: (0+0.825)/2=0.4125

Scheme 5: (1+0.4)/2=0.7

Scheme 6: (0.702+0.275)/2=0.4885

Scheme 7: (0.742+0.275)/2=0.5085

Scheme 8: (0.673+0)/2=0.3365

Final Table with Laplace Criterion is presented on table 3.4.

Based on the Laplace criterion, Scheme 5 (Kyiv-Mersin-Hong Kong by automobile) is the best option with the highest average score of 0.7.

The Laplace criterion considers both the normalized cost and the normalized route time, aiming for a balance between the two. This method treats both factors as equally important by averaging them.

1. Normalized Cost. While Scheme 5 has the highest absolute cost (USD 32,853), it balances this by providing significant benefits in terms of time. The normalized cost for this scheme is 1, which might seem unfavorable, but it is offset by other factors.

Table 3.4. – Final results with Laplace Criterion

№	Delivery Scheme	Normalized Cost	Normalized Time	Laplace Criterion
1	automobile / maritime Kyiv-Constanța-Shekou	0.063	1	0.5315
2	automobile / maritime Kyiv-Constanza-Hong Kong	0.055	0.9	0.4775
3	Automobile / maritime Kyiv-Sofia-Hong Kong	0.004	0.6	0.302
4	automobile / maritime Kyiv-Thessaloniki-Hong Kong	0	0.825	0.4125
5	automobile Kyiv-Mersin-Hong Kong	1	0.4	0.7
6	automobile Kyiv-Hong Kong	0.702	0.275	0.4885
7	by rail Kyiv-Hong Kong	0.742	0.275	0.5085
8	Kyiv-Izmir-Hong Kong by air	0.673	0	0.3365

Source: developed by the author

2. Normalized Route Time. With a delivery time of 20 days, Scheme 5 is among the fastest options in the list. The normalized time for this scheme is 0.4, reflecting that this route performs better in terms of speed than most other options. Only Scheme 6, 7, and 8 are faster.

Balance Between Cost and Time.

Scheme 5 offers one of the fastest delivery times while trading off some cost efficiency. The high cost is justified by the relatively short delivery time, making it an ideal choice when speed is prioritized, such as in cases where rapid delivery is essential for business competitiveness or perishable goods are involved.

Although it has the highest cost, the Laplace criterion favors Scheme 5 because the cost trade-off is worth the significant time savings. In some logistics operations, time is more critical than cost, especially in international transport involving time-sensitive goods or services where a fast delivery window is a competitive advantage.

Scheme 5 (Kyiv-Mersin-Hong Kong by automobile) is the best option according to the Laplace criterion because it provides a strong balance between cost and delivery time. Even though the cost is the highest, the relatively fast delivery time of 20 days makes this option the most favorable when both factors are equally important.

For businesses where quick delivery times are a priority, and they are willing to incur higher costs for the sake of faster service, this scheme represents the optimal choice.

The Wald criterion recommends using a minimax strategy, choosing the best alternative from the worst. To make a decision for each delivery scheme, the maximum value of the parameter is selected. After that, among these maximum values for each route, the minimum is chosen, which will correspond to the optimal delivery scheme.

The Wald criterion, also known as the "maximin" criterion, is a decision-making strategy used under conditions of uncertainty. It suggests selecting the option where the worst possible outcome (i.e., the maximum risk or minimum utility) is better than the worst possible outcomes of the other options.

To calculate the Wald criterion for each scheme, we need to:

1. Identify the worst (maximum cost and maximum time) for each delivery scheme.

2. Select the delivery scheme that has the best (lowest) of these worst outcomes.

Calculation Steps for Wald Criterion:

1. For Costs: The worst possible outcome for each scheme is the total cost, as we assume higher costs are undesirable.

2. For Time: The worst possible outcome for each scheme is the total route time, as we assume longer delivery times are undesirable.

For the Wald criterion will identify the maximum (worst) value for both costs and time, and then select the scheme with the best of the worst values.

Step 1: Identifying Maximum (Worst) Values.

Let's present the worst-case (maximum) values for both costs and times for each delivery scheme (table 3.5).

Step 2: Wald Criterion Calculation.

The Wald criterion focuses on minimizing risk by choosing the option with the best worst-case scenario. For each scheme, we'll select the worst outcome (either cost or time, whichever is worse) and identify the scheme that has the best of these worst outcomes (table 3.6).

Table 3.5. – Identifying Maximum (Worst) Values

№	Delivery Scheme	Worst Cost (USD)	Worst Time (days)
1	Kyiv-Constanța-Shekou (automobile/maritime)	5435	44
2	Kyiv-Constanza-Hong Kong (automobile/maritime)	5186	40
3	Kyiv-Sofia-Hong Kong (Automobile/maritime)	3707	28
4	Kyiv-Thessaloniki-Hong Kong (automobile/maritime)	3578	37
5	Kyiv-Mersin-Hong Kong (automobile)	32,853	20
6	Kyiv-Hong Kong (automobile)	24,129	15
7	Kyiv-Hong Kong (rail)	25,296	15
8	Kyiv-Izmir-Hong Kong (air)	23,291	4

Source: developed by the author

Table 3.6. – Wald Criterion Calculation

№	Delivery Scheme	Worst Outcome (Cost or Time)	Wald Criterion (min of worst)
1	Kyiv-Constanța-Shekou (automobile/maritime)	44 (time)	44
2	Kyiv-Constanza-Hong Kong (automobile/maritime)	40 (time)	40
3	Kyiv-Sofia-Hong Kong (Automobile/maritime)	3707 (cost)	3707
4	Kyiv-Thessaloniki-Hong Kong (automobile/maritime)	3578 (cost)	3578
5	Kyiv-Mersin-Hong Kong (automobile)	32,853 (cost)	32,853
6	Kyiv-Hong Kong (automobile)	24,129 (cost)	24,129
7	Kyiv-Hong Kong (rail)	25,296 (cost)	25,296
8	Kyiv-Izmir-Hong Kong (air)	23,291 (cost)	23,291

Source: developed by the author

Step 3: Best Scheme According to the Wald Criterion.

The Wald criterion selects the scheme with the smallest of the worst outcomes (table 3.7). The lowest value in the "Wald Criterion" column is 3578 (for Scheme 4: Kyiv-Thessaloniki-Hong Kong (automobile/maritime)).

According to the Wald criterion, the best delivery scheme is Scheme 4: Kyiv-Thessaloniki-Hong Kong (automobile/maritime) with a worst-case scenario of 3578 USD. This option provides the least risky solution by offering the best worst-case cost, even if the time is not the shortest. This makes it a favorable choice when minimizing

risk is a priority, such as in scenarios where cost predictability is more important than speed.

Table 3.7. – Final results of Wald Criterion Results

№	Delivery Scheme	Worst Outcome (Cost or Time)	Wald Criterion (min of worst)
1	Kyiv-Constanța-Shekou (automobile/maritime)	44 (time)	44
2	Kyiv-Constanza-Hong Kong (automobile/maritime)	40 (time)	40
3	Kyiv-Sofia-Hong Kong (Automobile/maritime)	3707 (cost)	3707
4	Kyiv-Thessaloniki-Hong Kong (automobile/maritime)	3578 (cost)	**3578**
5	Kyiv-Mersin-Hong Kong (automobile)	32,853 (cost)	32,853
6	Kyiv-Hong Kong (automobile)	24,129 (cost)	24,129
7	Kyiv-Hong Kong (rail)	25,296 (cost)	25,296
8	Kyiv-Izmir-Hong Kong (air)	23,291 (cost)	23,291

Source: developed by the author

Savage's criterion is to choose such a strategy so as not to allow excessively high losses to which it can lead. There is a risk matrix, the elements of which show what loss the enterprise will have if it does not choose the best strategy for each state of nature. The Savage criterion, which consists in minimizing the risk, is determined by formulas (3.2) and (3.3):

$$r_{ij} = V_{ij} - min\{ V_{ji} \}, \quad (3.2)$$

where r_{ij} – amount of risk;

$min\{ V_{ji} \}$ – the minimum value of the criterion in the column;

V_{ji} - the value of the corresponding criterion of the defined route.

The value of the route is calculated according to the following formula:

$$W = min\, max\, \{r_{ji}\}, \quad (3.3)$$

So, the route with the lowest value is selected from the highest risk values for each route.

The Savage criterion (also known as the minimax regret criterion) helps in decision-making under uncertainty by focusing on minimizing the potential for regret. "Regret" here refers to the difference between the outcome of the chosen decision and the best possible outcome for each state of nature. In this case, will calculate the regret for both the cost and time for each delivery scheme.

Steps to calculate Savage's criterion:

1. Determine the best outcomes for both costs and time (i.e., the lowest values).

2. Calculate the regret for each scheme by subtracting the best outcome from the outcome of each scheme.

3. Construct a regret matrix for both costs and time.

4. Select the maximum regret for each scheme.

5. The best scheme is the one with the smallest maximum regret.

Step 1: Identify the Best Outcomes. Best cost (minimum cost): The minimum cost from the table is 3578 USD (for scheme 4). Best time (minimum time): The minimum time from the table is 4 days (for scheme 8).

Step 2: Calculate Regrets for Each Scheme.

Cost Regret. For each scheme, the regret is calculated by subtracting the best cost (3578 USD) from the cost of the scheme:

$$Regret\ (cost) = Cost\ of\ Sheem - Best\ Cost\ (3578\ USD) \quad (3.4)$$

Time Regret. For each scheme, the regret is calculated by subtracting the best time (4 days) from the time of the scheme.

$$Regret\ (time) = Time\ of\ Sheem - Best\ Time\ (4\ days) \quad (3.5)$$

Step 3: Construct Regret Matrices for Costs and Time (table 3.8 and table 3.9.).

Table 3.8. – Cost Regret Matrix

№	Delivery Scheme	Total Cost (USD)	Regret (Cost) (USD)
1	Kyiv-Constanța-Shekou (autom./maritime)	5435	5435 - 3578 = 1857
2	Kyiv-Constanza-Hong Kong (automobil/maritime)	5186	5186 - 3578 = 1608
3	Kyiv-Sofia-Hong Kong (Automob./maritime)	3707	3707 - 3578 = 129
4	Kyiv-Thessaloniki-Hong Kong (automobile/maritime)	3578	3578 - 3578 = 0
5	Kyiv-Mersin-Hong Kong (automobile)	32,853	32,853 - 3578 = 29,275
6	Kyiv-Hong Kong (automobile)	24,129	24,129 - 3578 = 20,551
7	Kyiv-Hong Kong (rail)	25,296	25,296 - 3578 = 21,718
8	Kyiv-Izmir-Hong Kong (air)	23,291	23,291 - 3578 = 19,713

Source: developed by the author

Table 3.9. – Time Regret Matrix

№	Delivery Scheme	Total Time (days)	Regret (Time) (days)
1	Kyiv-Constanța-Shekou (automobile/maritime)	44	44 - 4 = 40
2	Kyiv-Constanza-Hong Kong (automobile/maritime)	40	40 - 4 = 36
3	Kyiv-Sofia-Hong Kong (Automobile/maritime)	28	28 - 4 = 24
4	Kyiv-Thessaloniki-Hong Kong (automobile/maritime)	37	37 - 4 = 33
5	Kyiv-Mersin-Hong Kong (automobile)	20	20 - 4 = 16
6	Kyiv-Hong Kong (automobile)	15	15 - 4 = 11
7	Kyiv-Hong Kong (rail)	15	15 - 4 = 11
8	Kyiv-Izmir-Hong Kong (air)	4	4 - 4 = 0

Source: developed by the author

Step 4: Select the Maximum Regret for Each Scheme (table 3.10).

For each delivery scheme, will take the maximum regret between cost and time.

Step 5: Select the Best Option (Smallest Maximum Regret).

The Savage criterion suggests choosing the delivery scheme with the smallest maximum regret. From the table, the best option is Scheme 4: Kyiv-Thessaloniki-Hong Kong (automobile/maritime) with a regret value of 33.

The Hurwitz criterion takes a somewhat intermediate position, taking into account the possibility of both the worst and the best behavior of nature. The criterion suggests using an indicator of the degree of optimism, which varies in the range of zero to one. This indicator is affected by the degree of responsibility of the person who makes the decision to choose the delivery scheme. The worse the consequences of wrong decisions, the greater the desire to insure, and, therefore, the indicator of the degree of optimism is closer to one. This criterion is calculated according to formula 3.6:

$$W = min[\alpha min\ V_{ji} + (1-\alpha) max\ V_{ji}], \quad (2.6)$$

where W – route;

α – confidence coefficient (usually α=0,5);

V_{ji} - the value of the corresponding criterion of the defined route.

Table 3.10. – Selection of Maximum Regret for Each Scheme

№	Delivery Scheme	Max Regret (Cost)	Max Regret (Time)	Savage Criterion (max of both)
1	Kyiv-Constanța-Shekou (automobile/maritime)	1857	40	1857
2	Kyiv-Constanza-Hong Kong (automobile/maritime)	1608	36	1608
3	Kyiv-Sofia-Hong Kong (Automobile/maritime)	129	24	129
4	Kyiv-Thessaloniki-Hong Kong (automobile/maritime)	0	33	33
5	Kyiv-Mersin-Hong Kong (automobile)	29,275	16	29,275
6	Kyiv-Hong Kong (automobile)	20,551	11	20,551
7	Kyiv-Hong Kong (rail)	21,718	11	21,718
8	Kyiv-Izmir-Hong Kong (air)	19,713	0	19,713

Source: developed by the author

From the obtained calculations, the smallest loss value is selected.

$$W_{\min} = \min_j[\alpha \min_i v_{ji} + (1-\alpha)\max_i v_{ji}] \quad (3.7)$$

Steps to Calculate Hurwitz Criterion:

1. Determine the best and worst outcomes (both cost and time) for each scheme.
2. Apply the Hurwitz formula for each scheme.
3. Create a table showing the Hurwitz scores for each delivery scheme.
4. Select the best scheme based on the Hurwitz scores.

Step 1: Identify the Best and Worst Outcomes.

For both cost and time, we need to identify the best and worst outcomes for each scheme. Best cost: 3578 USD (scheme 4). Worst cost: 32,853 USD (scheme 5). Best time: 4 days (scheme 8). Worst time: 44 days (scheme 1).

Step 2: Apply Hurwitz Formula.

For cost: Hurwitz score (cost)=α×Best Cost+(1−α)×Worst Cost

Hurwitz score (cost)=0.5×Best Cost+0.5×Worst Cost

For time: Hurwitz score (time)=α×Best Time+(1−α)×Worst Time

Hurwitz score (time)=0.5×Best Time+0.5×Worst Time

Step 3: Calculate Hurwitz Scores for Cost is presented on table 3.11 and for time on table 3.12.

Table 3.11. – Results of Hurwitz Scores for Cost

№	Delivery Scheme	Best Cost (USD)	Worst Cost (USD)	Hurwitz Score (Cost)
1	Kyiv-Constanța-Shekou (automobile/maritime)	5435	32,853	0.5×5435+0.5×32,853=19,144
2	Kyiv-Constanza-Hong Kong (automobile/maritime)	5186	32,853	0.5×5186+0.5×32,853=19,020
3	Kyiv-Sofia-Hong Kong (automobile/maritime)	3707	32,853	0.5×3707+0.5×32,853=18,280
4	Kyiv-Thessaloniki-Hong Kong (automobile/maritime)	3578	32,853	0.5×3578+0.5×32,853=18,216
5	Kyiv-Mersin-Hong Kong (automobile)	32,853	32,853	0.5×32,853+0.5×32,853=32,853
6	Kyiv-Hong Kong (automobile)	24,129	32,853	0.5×24,129+0.5×32,853=28,491
7	Kyiv-Hong Kong (rail)	25,296	32,853	0.5×25,296+0.5×32,853=29,075
8	Kyiv-Izmir-Hong Kong (air)	23,291	32,853	0.5×23,291+0.5×32,853=28,072

Source: developed by the author

Table 3.12. – Results of Hurwitz Scores for time

№	Delivery Scheme	Best Time (days)	Worst Time (days)	Hurwitz Score (Time)
1	Kyiv-Constanța-Shekou (automobile/maritime)	44	4	0.5×44+0.5×4=24
2	Kyiv-Constanza-Hong Kong (automobile/maritime)	40	4	0.5×40+0.5×4=22
3	Kyiv-Sofia-Hong Kong (automobile/maritime)	28	4	0.5×28+0.5×4=16
4	Kyiv-Thessaloniki-Hong Kong (automobile/maritime)	37	4	0.5×37+0.5×4=20.5
5	Kyiv-Mersin-Hong Kong (automobile)	20	4	0.5×20+0.5×4=12
6	Kyiv-Hong Kong (automobile)	15	4	0.5×15+0.5×4=9.5
7	Kyiv-Hong Kong (rail)	15	4	0.5×15+0.5×4=9.5
8	Kyiv-Izmir-Hong Kong (air)	4	4	0.5×4+0.5×4=4

Source: developed by the author

Step 4: Create the Hurwitz Table (Overall Scores).

Combine the results of both the cost and time calculations to evaluate the schemes, present results in table 3.12.

Table 3.12. – Hurwitz Table (Overall Scores)

№	Delivery Scheme	Hurwitz Score (Cost)	Hurwitz Score (Time)	Total Hurwitz Score (Sum)
1	Kyiv-Constanța-Shekou (automobile/maritime)	19,144	24	19,168
2	Kyiv-Constanza-Hong Kong (automobile/maritime)	19,020	22	19,042
3	Kyiv-Sofia-Hong Kong (automobile/maritime)	18,280	16	18,296
4	Kyiv-Thessaloniki-Hong Kong (automobile/maritime)	18,216	20.5	18,236.5
5	Kyiv-Mersin-Hong Kong (automobile)	32,853	12	32,865
6	Kyiv-Hong Kong (automobile)	28,491	9.5	28,500.5
7	Kyiv-Hong Kong (rail)	29,075	9.5	29,084.5
8	Kyiv-Izmir-Hong Kong (air)	28,072	4	28,076

Source: developed by the author

Step 5: Analyze and Select the Best Option.

Based on the Hurwitz criterion with α=0.5, the best option is the delivery scheme with the lowest total Hurwitz score. From the table 3.12 the best delivery scheme is Scheme 3: Kyiv-Sofia-Hong Kong (automobile/maritime) with a total Hurwitz score of 18,296.

Final calculations of Laplace, Wald, Savage and Hurwitz criteria are presented in table 3.13.

Thus, Based on the Laplace criterion, the best cost scheme is Scheme 4 (Kyiv-Thessaloniki-Hong Kong) because it has the lowest average cost (18,216 USD), while for time, Scheme 8 (Kyiv-Izmir-Hong Kong) is the fastest on average.

According to Wald's criterion (the most pessimistic scenario), the best choice for minimizing cost is Scheme 4 with the lowest worst-case cost (3,578 USD), while Scheme 8 is the fastest with only 4 days.

Table 3.13. – Results of Laplace, Wald, Savage and Hurwitz criteria

№	Scheme	Laplace (Avg. Cost)	Laplace (Avg. Time)	Wald (Minimax Cost)	Wald (Minimax Time)	Savage (Regret Cost)	Savage (Regret Time)	Hurwitz (Cost)	Hurwitz (Time)
1	Kyiv-Constanța-Shekou (automobile/ maritime)	19,144	24	5435	44	28,853	40	19,144	24
2	Kyiv-Constanza-Hong Kong (automobile/ maritime)	19,020	22	5186	40	28,353	36	19,020	22
3	Kyiv-Sofia-Hong Kong (automobile /maritime)	18,280	16	3707	28	0	24	18,280	16
4	Kyiv-Thessaloniki-Hong Kong (automobile/ maritime)	18,216	20.5	3578	37	0	33	18,216	20.5
5	Kyiv-Mersin-Hong Kong (automobile)	32,853	12	32,853	20	0	16	32,853	12
6	Kyiv-Hong Kong (automobile)	28,491	9.5	24,129	15	853	16	28,491	9.5
7	Kyiv-Hong Kong (rail)	29,075	9.5	25,296	15	296	16	29,075	9.5
8	Kyiv-Izmir-Hong Kong (air)	28,072	4	23,291	4	0	0	28,072	4

Source: developed by the author

Savage Criterion focuses on minimizing regret. The scheme with the least regret for cost is Scheme 3 (Kyiv-Sofia-Hong Kong), while for time, Scheme 8 is again the best choice, as it minimizes time-related regret.

Balancing optimism and pessimism, the Hurwitz criterion suggests that Scheme 4 (Kyiv-Thessaloniki-Hong Kong) is the best for cost (18,216 USD), and Scheme 8 (Kyiv-Izmir-Hong Kong) is again the fastest for time.

The best option based on all the criteria for minimizing cost is Scheme 4 (Kyiv-Thessaloniki-Hong Kong). It consistently performs well in the Laplace, Wald, and Hurwitz criteria.

If minimizing time is the priority, Scheme 8 (Kyiv-Izmir-Hong Kong) is the best choice. It consistently ranks as the fastest route across all criteria.

Final Recommendation:

- Cost-focused Decision: Choose Scheme 4 (Kyiv-Thessaloniki-Hong Kong).
- Time-focused Decision: Choose Scheme 8 (Kyiv-Izmir-Hong Kong).

3.3 Economic assessment and strategic management of the implementation of blockchain technologies for FTP LLC

In the modern global economy, transport and logistics companies are faced with the need to optimize their business processes to increase competitiveness. The integration of blockchain technologies into logistics systems allows for transparency, data security, process automation and cost reduction, which are critically important aspects in strategic management and economic efficiency.

One of the promising areas of development for the transport and logistics company FTP LLC is the implementation of blockchain technologies for international transportation management. Blockchain integration will ensure data preservation in an unchanged form, automation of customs clearance, as well as minimizing the risks of fraud and errors. Thanks to the distributed information storage system, all data on the movement of goods is recorded in blocks that cannot be changed or deleted. This creates transparency and trust between all participants in the supply chain. The use of smart contracts will allow to automate the customs clearance processes, including document verification, customs duty calculation and tax payment. This will significantly reduce the time for cargo clearance, reduce administrative costs and minimize the risk of delays. In addition, blockchain makes it impossible to falsify data or documents, as all records are cryptographically protected, which eliminates the human factor and ensures the accuracy of information.

The practical application of blockchain in logistics opens up new opportunities for transportation and document management. In transportation, blockchain helps monitor cargo, providing customers with real-time information about the location of the cargo, its transportation conditions, and all transactions related to transportation. Integration with IoT allows sensors to automatically transmit data on temperature, humidity, and impacts to the blockchain, which is especially important for the transportation of sensitive cargo, such as food or medical drugs. In the field of document management, blockchain allows for the creation of digital waybills, which simplifies access to document authentication by all interested parties. The implementation of smart contracts also makes it possible to automatically generate and confirm customs documentation in accordance with the requirements of customs authorities.

The expected effects of the implementation of blockchain technologies for FTP LLC include reducing the time for document processing, reducing the cost of administrative operations, and increasing customer trust. Thanks to the automation of routine processes, the time required to complete customs clearance can be reduced from several days to several hours. Administrative costs will be reduced by reducing the number of intermediaries and automating document flow, which will have a positive impact on supply chain management. The transparency and reliability of blockchain solutions increase customer trust in the company, creating a competitive advantage through the ability to check the status of transportation and the accuracy of data in real time.

In table 3.14 we present the expected effect of implementing blockchain technologies in the transport and logistics company FTP LLC.

The implementation of blockchain technologies opens up the opportunity for FTP LLC to become a market leader using innovative solutions. In combination with other modern technologies, such as IoT and artificial intelligence, blockchain can significantly increase the efficiency of logistics processes, reduce costs and ensure the long-term competitiveness of the company.

Table 3.14. – Implementation of blockchain technologies in the transport and logistics company FTP LLC

Implementation direction	Description	**Expected effects**
Data preservation in an unchanged form	Thanks to the distributed information storage system, all data on the movement of goods is recorded in blocks that cannot be changed or deleted. Provides transparency and trust between all participants in the supply chain.	- Increasing trust between supply chain participants.
Customs clearance automation	Smart contracts automate document verification, customs duty calculation and tax payment. Reduces the time for cargo clearance and minimizes the risk of delays.	- Reduction of customs clearance time from several days to several hours. - Reduction of administrative costs.
Minimization of fraud and error risks	Cryptographic protection of records makes it impossible to falsify data or documents, which eliminates the human factor and ensures the accuracy of information.	- Reducing the risk of fraud and documentation errors.
Practical application in transportation	- Cargo monitoring: Information on location, transportation conditions and all transactions is available to customers in real time. - IoT integration: Automatic transmission of sensor data (temperature, humidity, etc.) to the blockchain, especially for sensitive cargo.	- Increasing the accuracy of transportation monitoring. - Ensuring the quality of sensitive cargo such as food or medicine.
Practical application in document flow	- Digital Waybills: Document capture on the blockchain to verify their authenticity. - Customs Documentation: Document generation and validation via smart contracts.	- Ease of access to documents. - Reduction of time for authentication and customs clearance.
General effects of implementation	- Automation of routine processes reduces transaction times. - Reduction of supply chain management costs. - Transparency and reliability of solutions increase customer trust.	- Increasing the company's competitiveness. - Increasing customer satisfaction.

Source: developed by the author

Thus, the integration of blockchain technologies is a strategically important step for FTP LLC in the direction of increasing the efficiency of international transportation management, ensuring process transparency and improving customer service.

For the effective implementation of blockchain technologies in the transport and logistics company FTP LLC, it is necessary to carefully plan all stages of the project, determine key tasks, deadlines and responsible persons. The use of a calendar plan allows you to visualize the project implementation process, ensure compliance with deadlines and rational use of resources. The calendar plan presented below in Table 3.15 is the basis for project management, which will contribute to achieving the set goals within the specified time frame.

Table 3.15. – Calendar plan of the project “Implementation of blockchain technologies in the transport and logistics company FTP LLC”

Project Stages	Tasks	Responsible persons
1. Preparation for Project Launch	Selecting a blockchain solution provider	IT department, project manager
	Agreement on terms of cooperation with the provider	Legal department, project manager
2. Business Process Analysis	Analysis of existing logistics processes and identification of blockchain integration points	Analyst, IT department
	Assessment of data security and transparency needs	Information security department, analyst
3. Technical Implementation	Development of a technical integration plan	IT department, solution provider
	Integration of blockchain with existing management systems	IT department, solution provider
4. Training and Testing	Training staff in working with the blockchain platform	HR department, IT department
	Testing the operation of the blockchain system	IT department, testing team
5. System Launch	Implementation of the blockchain system in real operations	IT department, logistics department
	Monitoring the system operation in the first month	Project manager, IT department
6. Performance Evaluation	Analysis of the impact of implementation on logistics processes	Analyst, project manager
	Assessment of economic benefits: cost reduction, increased security, transparency	Finance department, analyst
7. Strategy Adjustment	Correction of system settings and additional training of staff	IT department, HR department
8. Functionality Expansion	Additional integration of functions, such as smart contracts and IoT sensors	IT department, solution provider
9. Distribution Expansion	Attracting new partners and expanding the use of blockchain in international logistics	Sales team, business manager

Source: developed by the author

Please note that all stages are performed in accordance with the specified deadlines, which allows the project to complete each stage in a timely manner to achieve the best results. Each stage has its own responsible persons who ensure the completion of tasks within the established deadlines and control the quality of work. The project start date starts from 01.03.2025.

Preparation for the launch of the project includes detailed planning of all stages of the implementation of blockchain technologies in the transport and logistics company FTP LLC. This allows for optimal organization of processes, taking into account all necessary resources and reducing the risks associated with the implementation of innovations. Successful implementation of the project requires a clear distribution of tasks, determination of deadlines, involvement of key participants

and ensuring interaction between departments. To achieve these goals, a project calendar has been developed, which reflects all the main stages, their duration, responsible persons and deadlines. Below is a table with a detailed plan that allows you to monitor the progress of the project and effectively manage resources.

Thus, the calendar plan we have proposed is a strategic tool for planning and monitoring the implementation of the project.

To build a Gantt chart, present table 3.15 in the form of Table 3.16, which presents the operation code, duration of work and previous work.

Table 3.16 – Calendar work plan of the project for the implementation of blockchain technologies in the transport and logistics company FTP LLC

Operation code	Operation	Previous works	Duration, days
A	Assessment of the current state of logistics processes	-	5
B	Agreement on requirements for the implementation of blockchain technologies	A	10
C	Market research of blockchain solutions for logistics	B	10
D	Development of technical specifications for blockchain integration	B	15
E	Analysis of blockchain platform suppliers	D	7
F	Conclusion of contracts with suppliers	E	5
G	Development of system architecture	C	7
H	Testing the basic version of the blockchain system	G	22
I	Training personnel in the use of blockchain technologies	B	20
J	Integration of the blockchain system with existing logistics processes	D, I	5
K	Launch of the system in test mode	J	10
L	Analysis of the effectiveness of test use	K	5
M	Making necessary adjustments	L	5
N	Full-scale launch of the system	M	14

Source: developed by the author

In fig. 3.3 present a Gantt chart, which allows you to visualize the process of completing tasks, monitor deadlines and identify potential delays that may affect the overall progress of the project.

The critical path is a sequence of operations that determine the minimum time required to complete a project. If any of the stages of the critical path is delayed, the entire project will also be delayed. Therefore, it is important that all tasks on the critical path are completed on time.

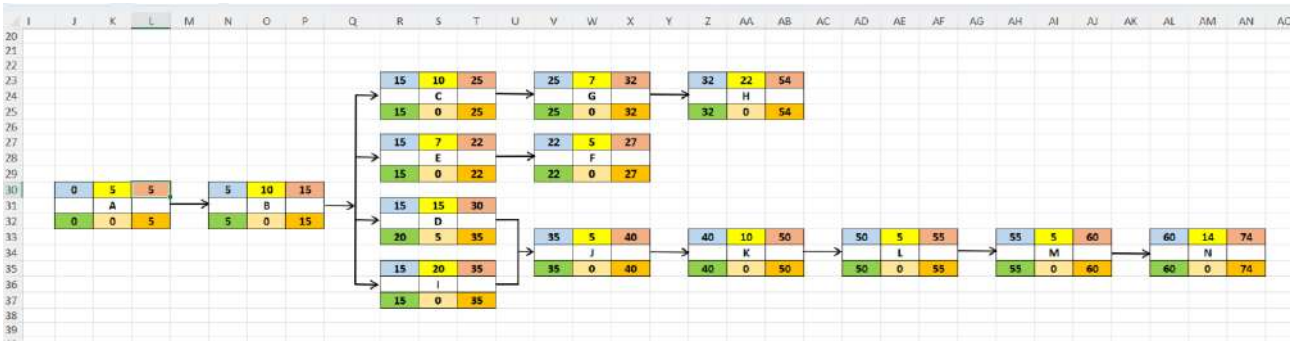

Figure 3.3. – Gantt chart of the blockchain technology implementation project in the transport and logistics company FTP LLC

Source: developed by the author

For our project of implementing blockchain technologies in the transport and logistics company FTP LLC, the critical path can be determined by analyzing the dependencies between operations and the duration of each of them. The operations that form the critical path must be completed without delay, since any delay in these stages will affect the total duration of the project.

Critical path: A-B-I-J-K-L-M-N=74 days.

A-B-C-G-H=54 days.

A-B-E-F=27 days.

Any delay in the stages of the critical path will increase the total duration of the project. Therefore, these stages must be performed clearly and on time in order for the project to be completed on schedule.

To implement blockchain technologies in the transport and logistics activities of FTP LLC, it is necessary to carefully select a platform that will provide the optimal combination of transparency, efficiency and economic feasibility. There are several popular blockchain platforms, each of which has its own unique characteristics that can affect the integration process and further operation. Below is a comparative table of the main platforms that are potentially suitable for use in the logistics sector. In Table. 3.17, present the justification for the choice based on the specifics of FTP LLC's logistics operations and the need to automate and ensure transparency of processes.

Table 3.17. – Comparison of blockchain platforms for implementation in FTP LLC

Platform	Producer	Features	Advantages	Disadvantages
IBM Blockchain Platform	IBM	Based on Hyperledger Fabric, smart contract support, ERP integration, high security.	Powerful IBM support, adapted for large corporations, reliable infrastructure.	High cost, difficult to implement for medium-sized companies.
Ethereum	Ethereum Foundation	Popular decentralized platform, smart contract support, large ecosystem of libraries and solutions.	Open source, wide selection of tools, popularity in many industries.	High transaction costs, limited scalability for large data volumes.
VeChain	VeChain Foundation	Specialization in logistics, Proof-of-Authority model, integration with IoT for cargo monitoring.	Low transaction costs, logistics solutions, transparency and process automation.	Less developed ecosystem compared to Ethereum, dependence on a limited number of authorized nodes.
Corda	R3	Corporate platform, emphasis on transaction confidentiality, integration with existing business systems.	Confidentiality of transactions, ease of integration with ERP systems.	Limited developer support, difficult to configure.

Source: developed by the author

The VeChain platform was chosen to implement blockchain technologies in the transport and logistics company FTP LLC. This choice is justified by several key reasons that ensure the efficiency and convenience of integration, as well as compliance with the specifics of the company's activities.

Firstly, VeChain specializes in logistics processes, including cargo monitoring, supply chain management and ensuring transparency in operations. This platform is ideal for optimizing complex logistics systems, which is a key task for FTP LLC.

Secondly, the low transaction costs of the platform are achieved through the use of the Proof-of-Authority model. This allows you to significantly reduce the financial costs of supporting and operating the system, which optimizes the project budget.

Thirdly, VeChain offers integration with IoT, which allows you to automatically track cargo and its transportation conditions, such as temperature, humidity or shocks, using special sensors. This functionality is especially relevant for the transportation of sensitive cargo, such as food or medical drugs.

Finally, the VeChain platform offers ready-made logistics solutions, which significantly reduces implementation time. This ensures a quick transition to using the technology, minimizing disruptions to the company's operations.

Thus, VeChain is the optimal choice for implementing blockchain technologies at FTP LLC, due to its specialization in logistics, economic model, possibility of integration with IoT and availability of ready-made solutions.

Fig. 3.4 depicts a logistics process integrated with blockchain technology for supply chain management. At each stage – from the manufacturer to the final recipient – data such as certificates, routes, cargo specifications, and delivery statuses are recorded in the blockchain to ensure transparency and security. Smart contracts automate transaction processing and enable real-time cargo monitoring.

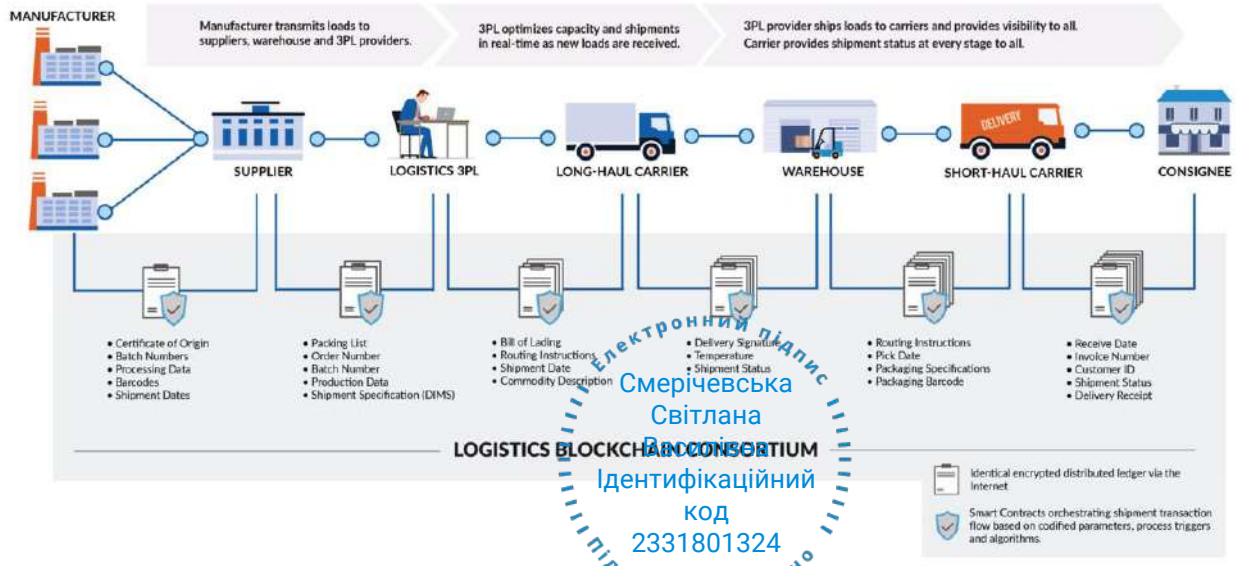

Figure 3.4. – Strategic management of logistics processes with the implementation of blockchain technologies

Source: [64]

To implement blockchain technologies in the transport and logistics company FTP LLC, the VeChain platform was considered, which specializes in supply chain management and integration with IoT technologies. Successful implementation of such a project requires not only technical preparation, but also the calculation of the

corresponding costs for implementation, configuration, maintenance and integration of the platform into the company's current business processes. Table 3.18 presents the costs that take into account the key categories associated with the implementation and support of VeChain blockchain solutions in the activities of FTP LLC.

Table 3.18. – Cost of implementing the VeChain blockchain platform for FTP LLC

Cost Category	Details	Estimated cost (USD)
VeChain ToolChain License	Basic solutions for small and medium-sized businesses.	20,000 per year
Development and Configuration	VeChain integration into the FTP LLC logistics system and adaptation to business processes.	40,000
Maintenance and Support	Annual maintenance and support of the blockchain system.	20,000 per year
IoT Integration	The cost of sensors for temperature, humidity, cargo tracking.	20,000
Total Implementation Cost	Including license, integration, configuration and IoT devices.	100,000
Annual Costs After Implementation	License, support, transactions.	15,000

Source: developed by the author

The implementation of blockchain technologies in the transport and logistics company FTP LLC will contribute to a significant increase in revenue due to process optimization, cost reduction and increased competitiveness. The company is expected to receive the following revenues in three years after implementation:

2025. In the first year after implementation, the company's revenues will amount to 42,000 Usd. The main sources of revenue will be:

– reduction of administration and document management costs (savings of about 2,000 Usd);

– increased customer trust, which will help attract new customers (additional revenue of about 10,000 Usd);

– optimization of logistics processes and accurate monitoring of cargo will avoid penalties for delays (savings of about 30,000 Usd).

2026. In the second year of implementation, revenues are expected to increase to 55,000 Usd, which is due to the following factors:

– expanding the customer base through increased transparency and efficiency (approximately 25,000 Usd in additional revenue);

– reducing the risk of fraud and documentation errors, saving the company up to 15,000 Usd;

– automating customs processes will allow the company to speed up cargo processing, increasing the volume of shipments (additional 15,000 Usd).

2027. In the third year, a significant increase in revenue to 65,000 Usd is expected due to:

– scaling solutions to new routes and expanding the partner network (additional revenue of about 40,000 Usd);

– savings on costs associated with manual document processing and supply chain management (approximately 20,000 Usd);

– using blockchain-based analytics to optimize logistics processes, which will help increase order volumes and revenue by another 5,000 Usd.

To evaluate the project for implementing blockchain technologies in the transport and logistics company FTP LLC calculate the following indicators:

1. NPV (Net Present Value);
2. IRR (The Internal Rate of Return);
3. BCR (Benefit-Cost Ratio);
4. PP (Payback Period).

1. Calculation of NPV (Net Present Value)

For NPV, we calculate the present value of each cash flow using the formula:

$$NPV = \sum_{t=1}^{n} \frac{Cash\ Flow_t}{(1+r)^t}, \quad (3.8)$$

where:

r – discount rate (10% or 0.10, 15%, 20%),

t – year (from 2025 to 2027).

Let us calculate the discounted cash flows for each year and present the results in Table 3.19.

Table 3.19. – NPV of the project at a discount rate of 10%, 15%, 20%

Project year	Costs,, Usd	Income, Usd	Net benefits	Discount rate, 10%	Discounted net benefits	Discount rate, 15%	Discounted net benefits	Discount rate, 20%	Discounted net benefits
2025	100000	42000	-58000	0,909	-52722	0,87	-50460	0,833	-48314
2026	15000	55000	40000	0,826	33040	0,756	30240	0,694	27760
2027	15000	65000	50000	0,751	37550	0,658	32900	0,579	28950
Total	130000	162000	32000		17868		12680		8396

Source: developed by the author

2. The Internal Rate of Return (IRR) is a financial measure utilized to assess the profitability of an investment. It is defined as the discount rate at which the present value of anticipated future cash flows matches the initial investment, making the Net Present Value (NPV) equal to zero.

$$IRR = NPV = \sum_{t=1}^{n} \frac{CF_t}{(1+r)^t} - C_0 = 0, \quad (3.9)$$

The results of IRR calculations are presented in fig. 3.5.

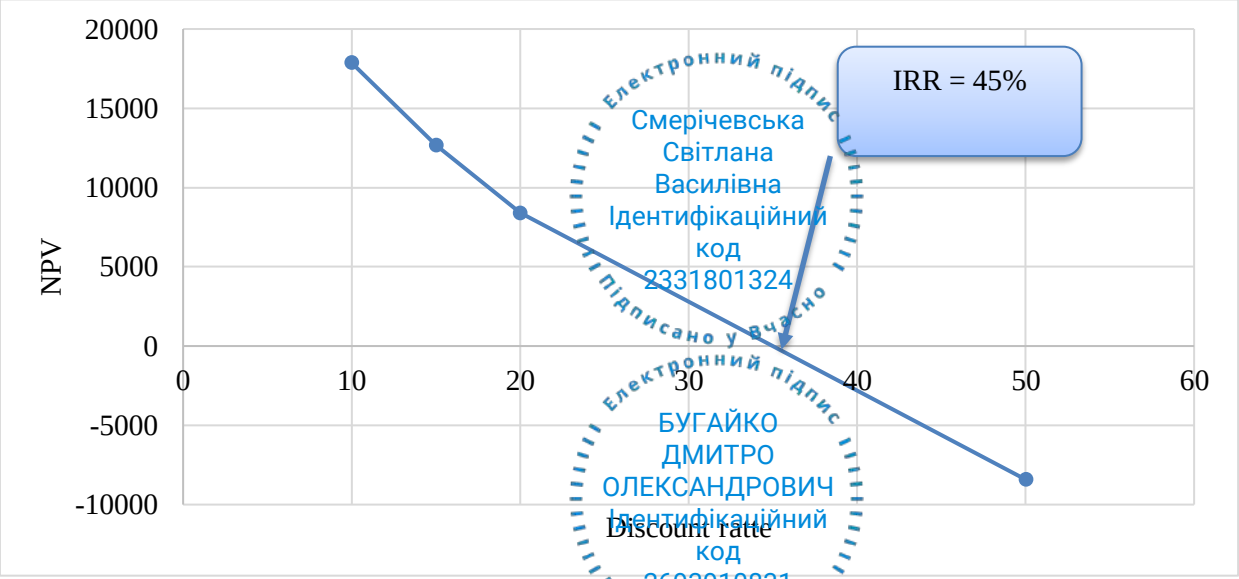

Figure 3.5. – NPV vs. Discount Rate: Evaluating Investment Viability

Source: developed by the author

3. Calculation of BCR (Benefit-Cost Ratio)

BCR is calculated as the ratio of discounted revenues to discounted costs, the results of which are presented in table 3.20:

$$BCR = \frac{Total\ discounted\ income}{Total\ discounted\ costs}, \quad (3.10)$$

Table 3.20 – Project BCR at discount rate of 10%, 15%,

Project year	Costs,, Usd	Income, Usd	Net benefits	Discount rate., 10%	Discounted costs	Discounted income	Discount rate., 15%	Discounted costs	Discounted income
2025	100000	42000	-58000	0,909	90900	38178	0,87	87000	36540
2026	15000	55000	40000	0,826	12390	45430	0,756	11340	41580
2027	15000	65000	50000	0,751	11265	48815	0,658	9870	42770
Total	130000	162000	32000		114555	132423		108210	120890
BCR						1,15			1,11

Source: developed by the author

The financial analysis of the blockchain implementation project in the transport and logistics company FTP LLC covers costs and revenues over three years (2025-2027). The total project costs amount to 130,000 UAH, while the expected revenues are 162,000 UAH, resulting in a net benefit of 32,000 UAH. The analysis was conducted considering discounting at rates of 10% and 15%. At a 10% discount rate, the discounted costs amount to 114,555 UAH, the discounted revenues to 132,423 UAH, and the benefit-cost ratio (BCR) is 1.156, indicating the financial viability of the project. At a 15% discount rate, the discounted costs amount to 108,210 UAH, the discounted revenues to 120,890 UAH, and the BCR is 1.117, which also confirms the profitability of the project, though with slightly reduced benefits due to the higher discount rate. The project is economically feasible, as the benefits exceed the costs even when considering the time value of money. The projected results show the highest growth in 2027, emphasizing the importance of successful implementation and achieving stable revenue generation.

4. Calculation of PP (Payback Period).

Since there is a negative result in the first year of the project, and a positive result at the beginning of 2026, the project's payback period is 1 year and 2 months. This means that the project will recover its costs by the middle of May 2027.

Thus, it was provides an economic evaluation and strategic justification for implementing blockchain technologies in the transport and logistics company FTP LLC. The analysis included selecting the VeChain platform, which aligns with the company's logistics processes due to its low transaction costs, IoT integration capabilities, and process automation.

Key financial indicators such as NPV, IRR, BCR, and PP were calculated, confirming the economic feasibility of the project. At a 10% discount rate, the project demonstrates positive NPV and a BCR greater than one, indicating financial viability.

A detailed project timeline was developed, identifying critical tasks and stages to ensure efficient resource management and timely execution. The results confirm that implementing blockchain will enhance process efficiency, reduce costs, and strengthen FTP LLC's competitive position in the international market.

Chapter summary

The project part of the qualification work is devoted to the economic assessment and strategic management of the implementation of blockchain technologies in the transport and logistics company FTP LLC. The calculations performed showed the feasibility of using the VeChain platform, which specializes in logistics processes, offering low transaction costs, integration with IoT and process automation.

Key financial indicators were selected for project evaluation, such as NPV (net present value), IRR (internal rate of return), BCR (benefit-cost ratio) and PP (payback period). The results confirmed the economic feasibility of the project: at a discount rate of 10%, the NPV of the project is positive, and the BCR exceeds one, which indicates its financial profitability. The payback period of the project is 1 year and 2 months.

A detailed implementation schedule was developed, including the definition of key stages, tasks and responsible persons. Using this plan allows for effective resource management and project implementation within the planned timeframe.

The results obtained confirm that the implementation of blockchain technologies will contribute to process optimization, cost reduction, data transparency, and increased competitiveness of FTP LLC in the international market.

CONCLUSIONS AND RECOMMENDATIONS

The topic of the qualification work is very relevant, because the modern realities of globalization and the rapid development of technologies require transport and logistics companies to adapt to new market challenges. International transportation is becoming a key element in ensuring the effective functioning of supply chains, which are the basis of economic stability and growth. Growing competition, the need to quickly respond to changing market conditions, reduce costs and improve the quality of service force companies to look for innovative approaches to transportation management.

Of particular importance is the implementation of strategic management, which allows the integration of the latest technologies, such as blockchain, IoT and automation, which helps to increase transparency, reduce fraud risks, minimize costs and improve customer service. In addition, effective strategic management allows companies to develop long-term competitiveness in the international market, adapt to rapidly changing regulatory requirements and growing customer expectations.

The choice of this topic is due to the need to develop practical recommendations for transport and logistics companies to improve the efficiency of international transportation management, which is extremely important in the context of modern economic and technological transformations.

The theoretical part of the qualification work examined the essence of strategic management in the transport and logistics industry, its main approaches and key elements. This allowed us to determine the role of strategic management in ensuring the competitiveness of companies and adapting to globalization challenges. The main aspects of strategic management in the context of globalization and international markets were analyzed, which showed the importance of integrating innovative technologies and methods to improve management efficiency.

Particular attention was paid to the methodological foundations of strategic planning, which includes the stages and methods of implementing strategies in the field

of international transportation. It was found that SWOT analysis, scenario planning, assessment of key performance indicators (KPI), benchmarking and digital technologies are the most important tools for adapting strategies to a dynamic external environment.

Research has confirmed that the introduction of innovations such as the Internet of Things (IoT), blockchain, artificial intelligence and digital platforms are decisive factors in ensuring the competitiveness of companies in the international environment. An important aspect is also the regulation of international transportation, which includes legislative norms, customs procedures and environmental standards.

Analysis of Ukrainian and foreign sources, in particular the works of Smerichevska S.V., Bugayko D.O., Bryson J., Olson E.M., and others, showed the multifaceted approaches to strategic management. Ukrainian authors emphasize adaptation to internal conditions and globalization changes, while foreign researchers are more focused on innovative technologies and universal approaches to strategic management.

Thus, research indicates the need to integrate modern strategic planning tools that allow companies to function effectively in a global environment, increase competitiveness and ensure the sustainability of business processes.

The analytical part of the qualification work was devoted to a detailed analysis of the strategic management of international transportation of FTP LLC in the transport and logistics services market. The study examined the company's operational and financial indicators, its service portfolio and key performance indicators, which allowed to identify strengths, weaknesses and possible areas for improvement.

The analysis showed that FTP LLC demonstrates significant growth in assets and revenues in the period from 2021 to 2023, which indicates the company's ability to expand its market presence and adapt to changes in the external environment. At the same time, a decrease in profitability indicators, such as EBIT and net profit, was found, especially in 2023, which indicates difficulties in cost management and operational efficiency.

In the context of the service portfolio, significant growth was noted in the air and sea transportation segments, while road transportation remained stable. At the same time, there was a significant reduction in rail transportation volumes and fluctuations in the outsourcing of foreign economic activities, which requires a strategic rethinking of these areas.

A positive trend was the decrease in logistics costs relative to revenues, which indicates improved cost management, although further optimization is still necessary to ensure stable profitability. Also, the reduction in delivery time and the increase in the level of vehicle utilization indicate improved operational efficiency.

The company's strategic competitiveness has increased significantly: the competitiveness index has increased from 70% to 85%, which indicates the strengthening of FTP LLC's positions in the competitive environment. Thanks to the introduction of innovative technologies and strategic partnerships, it was possible to improve the quality of services and adaptability to market changes.

Thus, FTP LLC demonstrates high growth dynamics and adaptability, however, to overcome the identified challenges, it is important to focus on increasing the efficiency of asset use, optimizing costs and diversifying revenues. Further improvement of financial strategies and increased operational efficiency will allow the company to strengthen its position in the international market of transport and logistics services and ensure long-term success.

The project part of the qualification work is devoted to the economic assessment and strategic management of the implementation of blockchain technologies in the transport and logistics company FTP LLC. The calculations performed showed the feasibility of using the VeChain platform, which specializes in logistics processes, offering low transaction costs, integration with IoT and process automation.

Key financial indicators were selected for project evaluation, such as NPV (net present value), IRR (internal rate of return), BCR (benefit-cost ratio) and PP (payback period). The results confirmed the economic feasibility of the project: at a discount rate of 10%, the NPV of the project is positive, and the BCR exceeds one, which indicates its financial profitability. The payback period of the project is 1 year and 2 months.

A detailed implementation schedule was developed, including the definition of key stages, tasks and responsible persons. Using this plan allows for effective resource management and project implementation within the planned timeframe.

The results obtained confirm that the implementation of blockchain technologies will contribute to process optimization, cost reduction, data transparency, and increased competitiveness of FTP LLC in the international market.

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APPENDICES

Appendix A – Consolidated financial report for FY2021

Додаток 1
до Національного положення (стандарту)
бухгалтерського обліку 25 "Спрощена фінансова
звітність"
(пункт 4 розділу I)

ДОКУМЕНТ ПРИЙНЯТО

Фінансова звітність малого підприємства

		Коди		
Підприємство	Дата(рік,місяць,число)	2022	01	01
Товариство з обмеженою відповідальністю "ФТП"	за ЄДРПОУ	37888626		
Територія Україна	за КАТОТТГ [1]	UA8000000001078669		
Організаційно-правова форма господарювання товариство з обмеженою відповідальністю	за КОПФГ	240		
Вид економічної діяльності Інша допоміжна діяльність у сфері транспорту	за КВЕД	52.29		
Середня кількість працівників, осіб 43				
Одиниця виміру: тис. грн. з одним десятковим знаком				
Адреса, телефон вулиця Сім"ї Хохлових, буд. 8, корпус 11, літера 7, м. Київ, ШЕВЧЕНКІВСЬКИЙ РАЙОН, 04119		0996558113		

1.Баланс на 31 грудня 2021 р.

Форма № 1-м Код за ДКУД 1801006

Актив	Код рядка	На початок звітного року	На кінець звітного періоду
1	2	3	4
I. Необоротні активи			
Нематеріальні активи	1000	25,5	23,3
Первісна вартість	1001	110,5	150,7
Накопичена амортизація	1002	(85,0)	(127,4)
Незавершені капітальні інвестиції	1005	9,4	7,7
Основні засоби :	1010	631,0	709,3
первісна вартість	1011	1 326,2	1 639,7
знос	1012	(695,2)	(930,4)
Довгострокові біологічні активи	1020	-	-
Довгострокові фінансові інвестиції	1030	-	-
Інші необоротні активи	1090	-	-
Усього за розділом I	**1095**	665,9	740,3
II. Оборотні активи			
Запаси :	1100	22,7	22,7
у тому числі готова продукція	1103	16,3	16,3
Поточні біологічні активи	1110	-	-
Дебіторська заборгованість за продукцію, товари, роботи, послуги	1125	11 738,3	15 316,6
Дебіторська заборгованість за розрахунками з бюджетом	1135	7,3	5,9
у тому числі з податку на прибуток	1136	-	-
Інша поточна дебіторська заборгованість	1155	3 576,7	11 068,2
Поточні фінансові інвестиції	1160	-	-
Гроші та їх еквіваленти	1165	4 414,5	7 793,9
Витрати майбутніх періодів	1170	8,1	8,1
Інші оборотні активи	1190	1 560,2	1 743,2
Усього за розділом II	**1195**	21 327,8	35 958,6
III. Необоротні активи, утримувані для продажу, та групи вибуття	**1200**	-	-
Баланс	**1300**	21 993,7	36 698,9

Електронний підпис
Смерічевська Світлана Василівна
Ідентифікаційний код 2331801324
підписано у Вчасно

Електронний підпис
БУГАЙКО ДМИТРО ОЛЕКСАНДРОВИЧ
Ідентифікаційний код 2693910831
підписано у Вчасно

Електронний підпис
Дерменжи Аліса Олександрівна
Ідентифікаційний код 3732104602
підписано у Вчасно

Пасив	Код рядка	На початок звітного року	На кінець звітного періоду
1	2	3	4
I. Власний капітал			
Зареєстрований (пайовий) капітал	1400	60,0	60,0
Додатковий капітал	1410	-	-
Резервний капітал	1415	-	-
Нерозподілений прибуток (непокритий збиток)	1420	1 645,7	2 650,9
Неоплачений капітал	1425	(-)	(-)
Усього за розділом I	**1495**	1 705,7	2 710,9
II. Довгострокові зобов'язання, цільове фінансування та забезпечення	1595	-	-
III. Поточні зобов'язання			
Короткострокові кредити банків	1600	-	-
Поточна кредиторська заборгованість за:			
довгостроковими зобов'язаннями	1610	-	-
товари, роботи, послуги	1615	16 127,9	27 284,4
розрахунками з бюджетом	1620	260,9	339,7
у тому числі з податку на прибуток	1621	70,4	165,0
розрахунками зі страхування	1625	0,1	0,3
розрахунками з оплати праці	1630	-7,9	-1,7
Доходи майбутніх періодів	1665	-	-
Інші поточні зобов'язання	1690	3 907,0	6 365,3
Усього за розділом III	**1695**	20 288,0	33 988,0
IV. Зобов'язання, пов'язані з необоротними активами, утримуваними для продажу, та групами вибуття	**1700**	-	-
Баланс	**1900**	21 993,7	36 698,9

2. Звіт про фінансові результати
за Рік 2021 р.

Форма № 2-м Код за ДКУД 1801007

Стаття	Код рядка	За звітний період	За аналогічний період попереднього року
1	2	3	4
Чистий дохід від реалізації продукції (товарів, робіт, послуг)	2000	7 260,8	5 864,6
Інші операційні доходи	2120	2 058,5	2 102,3
Інші доходи	2240	15,6	-
Разом доходи (2000 + 2120 + 2240)	2290	9 334,9	7 966,9
Собівартість реалізованої продукції (товарів, робіт, послуг)	2050	(-)	(-)
Інші операційні витрати	2180	(8 109,0)	(7 228,2)
Інші витрати	2270	(-)	(38,1)
Разом витрати (2050 + 2180 + 2270)	**2285**	(8 109,0)	(7 266,3)
Фінансовий результат до оподаткування (2280 – 2285)	2290	1 225,9	700,6
Податок на прибуток	2300	(220,7)	(126,5)
Чистий прибуток (збиток) (2290 – 2300)	**2350**	1 005,2	574,1

Керівник _____ (підпис) Окулов Євген Володимирович (ініціали, прізвище)

Головний бухгалтер _____ (підпис) Боброва Олена Олександрівна (ініціали, прізвище)

[1] Кодифікатор адміністративно-територіальних одиниць та територій територіальних громад

Електронний підпис
Смерічевська Світлана Василівна
Ідентифікаційний код 2331801324
ЕП Окулов Євген Володимирович
ЕП Боброва Олена Олександрівна
Підписано у Вчасно

Електронний підпис
БУГАЙКО ДМИТРО ОЛЕКСАНДРОВИЧ
Ідентифікаційний код 2693910831
Підписано у Вчасно

Електронний підпис
Дерменжи Аліса Олександрівна
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Appendix B – Consolidated financial report for FY2022

Додаток 1
до Національного положення (стандарту)
бухгалтерського обліку 25 "Спрощена фінансова звітність"
(пункт 4 розділу I)

ДОКУМЕНТ ПРИЙНЯТО

Фінансова звітність малого підприємства

		Коди		
Підприємство	Дата(рік,місяць,число)	2023	01	01
Товариство з обмеженою відповідальністю "ФТП"	за ЄДРПОУ	37888626		
Територія Київ	за КАТОТТГ [1]	UA80000000001078669		
Організаційно-правова форма господарювання товариство з обмеженою відповідальністю	за КОПФГ	240		
Вид економічної діяльності Інша допоміжна діяльність у сфері транспорту	за КВЕД	52.29		
Середня кількість працівників, осіб 56				
Одиниця виміру: тис. грн. з одним десятковим знаком				
Адреса, телефон вулиця Сім"ї Хохлових, буд. 8, корпус 11, літера 7, м. Київ, ШЕВЧЕНКІВСЬКИЙ РАЙОН, 04119		0996558113		

1.Баланс на 31 грудня 2022 р.

Форма № 1-м Код за ДКУД 1801006

Актив	Код рядка	На початок звітного року	На кінець звітного періоду
1	2	3	4
I. Необоротні активи			
Нематеріальні активи	1000	23,3	64,6
Первісна вартість	1001	150,7	263,8
Накопичена амортизація	1002	(127,4)	(199,2)
Незавершені капітальні інвестиції	1005	7,7	1 405,5
Основні засоби :	1010	709,3	837,3
первісна вартість	1011	1 639,7	1 973,0
знос	1012	(930,4)	(1 135,7)
Довгострокові біологічні активи	1020	-	-
Довгострокові фінансові інвестиції	1030	-	-
Інші необоротні активи	1090	-	-
Усього за розділом I	**1095**	740,3	2 307,4
II. Оборотні активи			
Запаси :	1100	22,7	0,7
у тому числі готова продукція	1103	16,3	-
Поточні біологічні активи	1110	-	-
Дебіторська заборгованість за продукцію, товари, роботи, послуги	1125	15 316,6	11 363,8
Дебіторська заборгованість за розрахунками з бюджетом	1135	5,9	9,0
у тому числі з податку на прибуток	1136	-	-
Інша поточна дебіторська заборгованість	1155	11 068,2	19 890,8
Поточні фінансові інвестиції	1160	-	-
Гроші та їх еквіваленти	1165	7 793,9	16 877,0
Витрати майбутніх періодів	1170	8,1	-
Інші оборотні активи	1190	1 743,2	201,6
Усього за розділом II	**1195**	35 958,6	48 342,9
III. Необоротні активи, утримувані для продажу, та групи вибуття	**1200**	-	-
Баланс	**1300**	36 698,9	50 650,3

Електронний підпис
Смерічевська Світлана Василівна
Ідентифікаційний код 2331801321
Підписано у Вчасно

Електронний підпис
БУГАЙКО ДМИТРО ОЛЕКСАНДРОВИЧ
Ідентифікаційний код 2693910831
Підписано у Вчасно

Електронний підпис
Дерменжи Аліса Олександрівна
Ідентифікаційний код 3732104602
Підписано у Вчасно

Пасив	Код рядка	На початок звітного року	На кінець звітного періоду
1	2	3	4
I. Власний капітал			
Зареєстрований (пайовий) капітал	1400	60,0	60,0
Додатковий капітал	1410	-	-
Резервний капітал	1415	-	-
Нерозподілений прибуток (непокритий збиток)	1420	2 650,9	4 456,8
Неоплачений капітал	1425	(-)	(-)
Усього за розділом I	**1495**	2 710,9	4 516,8
II. Довгострокові зобов'язання, цільове фінансування та забезпечення	1595	-	-
III. Поточні зобов'язання			
Короткострокові кредити банків	1600	-	-
Поточна кредиторська заборгованість за:			
довгостроковими зобов'язаннями	1610	-	-
товари, роботи, послуги	1615	27 284,4	36 711,2
розрахунками з бюджетом	1620	339,7	636,2
у тому числі з податку на прибуток	1621	165,0	341,7
розрахунками зі страхування	1625	0,3	-
розрахунками з оплати праці	1630	-1,7	-0,6
Доходи майбутніх періодів	1665	-	-
Інші поточні зобов'язання	1690	6 365,3	8 786,7
Усього за розділом III	**1695**	33 988,0	46 133,5
IV. Зобов'язання, пов'язані з необоротними активами, утримуваними для продажу, та групами вибуття	**1700**	-	-
Баланс	**1900**	36 698,9	50 650,3

2. Звіт про фінансові результати

за **Рік 2022** р.

Форма № 2-м Код за ДКУД 1801007

Стаття	Код рядка	За звітний період	За аналогічний період попереднього року
1	2	3	4
Чистий дохід від реалізації продукції (товарів, робіт, послуг)	2000	10 526,9	7 260,8
Інші операційні доходи	2120	8 267,0	2 058,5
Інші доходи	2240	-	15,6
Разом доходи (2000 + 2120 + 2240)	2280	18 793,9	9 334,9
Собівартість реалізованої продукції (товарів, робіт, послуг)	2050	(-)	(-)
Інші операційні витрати	2180	(16 585,7)	(8 109,0)
Інші витрати	2270	(-)	(-)
Разом витрати (2050 + 2180 + 2270)	**2285**	(16 585,7)	(8 109,0)
Фінансовий результат до оподаткування (2280 – 2285)	2290	2 208,2	1 225,9
Податок на прибуток	2300	(400,8)	(220,7)
Чистий прибуток (збиток) (2290 – 2300)	**2350**	1 807,4	1 005,2

Керівник _____ (підпис) Окулов Євген Володимирович (ініціали, прізвище)

Головний бухгалтер _____ (підпис) Боброва Олена Олександрівна (ініціали, прізвище)

[1] Кодифікатор адміністративно-територіальних одиниць та територій територіальних громад

Електронний підпис ЕП

Електронний підпис Смерічевська Світлана Василівна Ідентифікаційний код 2331801324 Підписано у Вчасно

Електронний підпис БУГАЙКО ДМИТРО ОЛЕКСАНДРОВИЧ Ідентифікаційний код 2693910831 Підписано у Вчасно

Електронний підпис Дерменжи Аліса Олександрівна Ідентифікаційний код 3732104602 Підписано у Вчасно

Appendix C – Consolidated financial report for FY2023

Додаток 1
до Національного положення (стандарту)
бухгалтерського обліку 25 "Спрощена фінансова звітність"
(пункт 4 розділу I)

ДОКУМЕНТ ПРИЙНЯТО

Фінансова звітність малого підприємства

		Коди		
Підприємство	Дата(рік,місяць,число)	2024	01	01
Товариство з обмеженою відповідальністю "ФТП"	за ЄДРПОУ	37888626		
Територія Україна	за КАТОТТГ [1]	UA8000000001078669		
Організаційно-правова форма господарювання Товариство з обмеженою відповідальністю	за КОПФГ	240		
Вид економічної діяльності Інша допоміжна діяльність у сфері транспорту	за КВЕД	52.29		
Середня кількість працівників, осіб 62				
Одиниця виміру: тис. грн. з одним десятковим знаком				
Адреса, телефон вулиця Сім"ї Хохлових, буд. 8, корпус 11, літера 7, м. Київ, ШЕВЧЕНКІВСЬКИЙ РАЙОН, 04119	5946955			

1.Баланс на 31 грудня 2023 р.

Форма № 1-м Код за ДКУД 1801006

Актив	Код рядка	На початок звітного року	На кінець звітного періоду
1	2	3	4
I. Необоротні активи			
Нематеріальні активи	1000	64,6	87,9
Первісна вартість	1001	263,8	397,0
Накопичена амортизація	1002	(199,2)	(309,1)
Незавершені капітальні інвестиції	1005	1 405,5	58,6
Основні засоби :	1010	837,3	2 052,7
первісна вартість	1011	1 973,0	3 684,4
знос	1012	(1 135,7)	(1 631,7)
Довгострокові біологічні активи	1020	-	-
Довгострокові фінансові інвестиції	1030	-	-
Інші необоротні активи	1090	-	-
Усього за розділом I	**1095**	2 307,4	2 199,2
II. Оборотні активи			
Запаси :	1100	0,7	-
у тому числі готова продукція	1103	-	-
Поточні біологічні активи	1110	-	-
Дебіторська заборгованість за продукцію, товари, роботи, послуги	1125	11 363,8	14 689,2
Дебіторська заборгованість за розрахунками з бюджетом	1135	9,0	268,3
у тому числі з податку на прибуток	1136	-	-
Інша поточна дебіторська заборгованість	1155	19 067,7	35 488,0
Поточні фінансові інвестиції	1160	-	-
Гроші та їх еквіваленти	1165	16 877,0	21 739,8
Витрати майбутніх періодів	1170	-	138,7
Інші оборотні активи	1190	201,5	163,9
Усього за розділом II	**1195**	47 519,7	72 487,9
III. Необоротні активи, утримувані для продажу, та групи вибуття	**1200**	-	-
Баланс	**1300**	49 827,1	74 687,1

Електронний підпис підписано у Вчасно
Смерічевська Світлана Василівна
Ідентифікаційний код 2331801324

Електронний підпис підписано у Вчасно
БУГАЙКО ДМИТРО ОЛЕКСАНДРОВИЧ
Ідентифікаційний код 2693910831

Електронний підпис підписано у Вчасно
Дерменжи Аліса Олександрівна
Ідентифікаційний код 3709104628

Документ підписано у сервісі Вчасно (початок)
ФТМЛ_2024_073_Дерменжи А.О..pdf

Документ підписано у сервісі Вчасно (продовження)
ФТМЛ_2024_073_Дерменжи А.О..pdf

Документ відправлено: 20:52 21.11.2024
Документ отримано: 20:49 21.11.2024

Відправник документу

Отримувач документу

Електронний підпис
20:52 21.11.2024
Ідентифікаційний код: 3732104602
Дерменжи Аліса Олександрівна
Власник ключа: Дерменжи Аліса Олександрівна
Час перевірки КЕП/ЕЦП: 20:52 21.11.2024
Статус перевірки сертифікату: Сертифікат діє
Серійний номер: 382367105294AF970400000098AA2E00F99E2003
Тип підпису: кваліфікований

Електронний підпис
11:23 22.11.2024
Ідентифікаційний код: 2693910831
БУГАЙКО ДМИТРО ОЛЕКСАНДРОВИЧ
Власник ключа: БУГАЙКО ДМИТРО ОЛЕКСАНДРОВИЧ
Час перевірки КЕП/ЕЦП: 11:23 22.11.2024
Статус перевірки сертифікату: Сертифікат діє
Серійний номер: 5E984D526F82F38F040000008C07660190E71E05
Тип підпису: удосконалений

Електронний підпис
21:46 22.11.2024
Ідентифікаційний код: 2331801324
Смерічевська Світлана Василівна
Власник ключа: Смерічевська Світлана Василівна
Час перевірки КЕП/ЕЦП: 21:46 22.11.2024
Статус перевірки сертифікату: Сертифікат діє
Серійний номер: 382367105294AF97040000002F7F1100B35EDB01
Тип підпису: кваліфікований