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QUALIFICATION WORK

(EXPLANATORY NOTES)

OF GRADUATE OF ACADEMIC DEGREE

«BACHELOR»

THEME: **«Organising the implementation of corporate booking and tracking systems»**

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I certify that in this master thesis
there are no borrowings from the works of other authors
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МІНІСТЕРСТВО ОСВІТИ І НАУКИ УКРАЇНИ
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ТЕМА: **«Організація впровадження корпоративних систем бронювання та відстеження»**

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Засвідчую, що у цій кваліфікаційній роботі
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Київ 2024

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TASK

FOR COMPLETION THE QUALIFICATION WORK OF GRADUATE
Pavlo Vilchynskyi
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1. Theme of the qualification work: «Organising the implementation of corporate booking and tracking systems» was approved by the Rector Directive №624/ст. of April 24, 2024.

2. Term performance of the work: from May 13, 2024 to June 16, 2024.

3. Date of submission work to graduation department: June 03, 2024.

4. Initial data required for writing the work: general information about corporate booking and tracking systems, the statute of the LLC "Center Trans Service" information of the LLC "Anvit Trans", production and financial indicators of the company LLC "Anvit Trans", literary sources on tracking systems and corporate booking systems, Internet source.

5. Content of the explanatory notes: introduction, the essence and functionality of corporate booking systems4 classification, advantages, disadvantages of implementation of corporate booking systems; methods of project management4 employee training; implementation of corporate booking systems4 implementation of cargo tracking systems4 risk management in the implementation project; effect of implementation of corporate booking and tracking systems; conclusions.

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	13.05.24-16.05.24	Done
2.	Collection of statistical data, timing, detection of weaknesses, preparation of the first version of the analytical chapter	17.05.24-20.05.24	Done
3.	Development of project proposals and their organizational and economic substantiation, preparation of the first version of the project chapter and conclusions	21.05.24-26.05.24	Done
4.	Editing the first versions and preparing the final version of the qualification work, checking by standards inspector	27.05.24-29.05.24	Done
5.	Approval for a work with supervisor, getting of the report of the supervisor, getting internal and external reviews, transcript of academic record	30.05.24-02.06.24	Done
6.	Submission work to Logistics Department	03.06.24	Done

Graduate_____
(signature)
Supervisor of the qualification work _____
(signature)

8. Consultants of difference chapters of work:

Chapter	Consultant (position, surname and name)	Date, signature	
		The task was given	The task was accepted
Chapter 1	Associate Professor, Pichugina M.A.	13.05.24	13.05.24
Chapter 2	Associate Professor, Pichugina M.A.	17.05.24	17.05.24
Chapter 3	Associate Professor, Pichugina M.A.	21.05.24	21.05.24

9. Given date of the task May 13, 2024.

Supervisor of the qualification work: _____ Marina PICHUGINA_____
(signature of supervisor)   (surname and name)
Task accepted for completion: _____ Pavlo VICHYNSKYI_____
(signature of graduate)   (surname and name)

ABSTRACT

The explanatory notes to the qualification paper «Organization of logistics customer service in the company» comprises of 81 pages, 8 figures, 12 tables, 50 references.

KEY WORDS: CARGO TRACKING, CORPORATE BOOKING SYSTEM; PROCESS ANALYSIS; CORPORATE SYSTEMS; IMPLEMENTATION; RISK MANAGEMENT; ECONOMIC IMPACT; EMPLOYEE TRAINING.

The basic principles of the implementation of corporate booking and cargo tracking systems are considered in the qualification paper.

The theoretical part covers the essence and functionality of corporate booking and tracking systems, existing approaches for their implementation. The analytical part is devoted to the analysis of financial and economic activity of LLC "Anvit Trans" identifying problems in the implementation process..

The subject of the investigation is implementation of corporate booking and tracking systems at LLC "Anvit Trans"

The object of the research is the process of corporate booking and cargo tracking systems implementation.

Methods of research are general scientific and special methods of scientific knowledge: dialectical analysis and synthesis (for comparing different approaches of scientists to the interpretation of the essence of concepts), abstract and logical analysis, as well as grouping, generalization, comparison, classification, methods of financial and economic analysis.

Materials of qualification paper are recommended to be used during scientific research, in the educational process and in the practice of specialists of logistics departments.

CONTENTS

INTRODUCTION

In the context of globalisation and rapid technological development, logistics is becoming a key element in the successful operation of a business. Effective management of logistics processes allows companies to reduce costs, improve customer service and ensure market competitiveness. Implementation of corporate booking and cargo tracking systems is one of the most important aspects of this process, which allows to optimise logistics operations, ensure transparency of processes and increase the overall efficiency of companies.

The rapid development of information technology opens up new opportunities for automating and optimising logistics processes. However, along with these opportunities come new challenges related to the need to ensure information security, risk management, staff motivation and change management in the organisation.

The main objective of the study is to develop recommendations for improving the organisation of the implementation of corporate booking and cargo tracking systems. To achieve this goal, the following tasks were set:

– To study the existing methods of risk management during the implementation of information systems.

– Investigate information security measures during the implementation of new systems.

– Develop strategies to motivate and engage staff in the implementation process.

– Identify effective approaches to change management in an organisation during the implementation of new systems implementation projects.

The object of the study is the process of implementing corporate booking and cargo tracking systems in companies.

The subject of the study is the methods and tools used to manage risks, ensure information security, motivate staff and manage changes in organisations during the implementation of new systems.

The relevance of the study is due to the growing demands on the efficiency of logistics processes and the need to introduce modern information technologies to ensure the competitiveness of companies. In today's environment, when technological changes are occurring rapidly and the market is becoming increasingly competitive, companies must actively innovate to maintain their positions.

The methodological basis of the study is a systematic approach that allows for a comprehensive analysis of the processes of implementing corporate booking and cargo tracking systems. The study uses the methods of analysis, synthesis, comparison, modelling and expert evaluation, which allows for a deep and comprehensive study of the issues under investigation.

The scientific novelty of the study lies in the development of an integrated approach to managing the implementation of corporate booking and cargo tracking systems, including risk management, information security, staff motivation and change management in the organisation. The practical significance of the work is to develop specific recommendations for companies to optimise the process of implementing new systems, which will increase the efficiency of logistics operations and ensure sustainable business development.

Thus, this thesis is aimed at solving urgent problems related to the implementation of corporate booking and cargo tracking systems and aims to contribute to the efficiency of logistics management in modern conditions.

CHAPTER 1

THEORETICAL PRINCIPLES OF ORGANISING THE IMPLEMENTATION OF CORPORATE BOOKING AND CARGO TRACKING SYSTEMS

1.1. The essence and functionality of corporate booking and cargo tracking systems

Enterprise freight booking and tracking systems are important tools in logistics and supply chain management. These systems are designed to optimise the booking, management and tracking of freight transport, ensuring efficiency, transparency and accuracy throughout the entire transport lifecycle. The nature and functionality of these systems cover various aspects, from initial booking to final delivery, each tailored to meet the specific needs of businesses involved in global trade.

The essence of enterprise reservation systems lies in their ability to facilitate the planning and management of freight transport. These systems allow companies to book seats on ships, trucks, planes or trains, depending on the mode of transport required. Booking systems provide a centralised platform where all the necessary details can be entered and managed, such as shipment dates, cargo dimensions, weight and special handling requirements [6, p. 14]. This centralised approach reduces the likelihood of errors and ensures that all parties involved have access to accurate and up-to-date information.

One of the key functionalities of enterprise booking systems is their integration with various supply chain participants, including carriers, freight forwarders and customs authorities. This integration enables real-time communication and coordination, which is crucial for managing complex logistics operations. For example, when a booking is made, the system can automatically notify the carrier, allocate space and generate the necessary documentation such as bills of lading and shipping

instructions. This automation not only speeds up the process but also reduces the administrative burden on logistics staff.

Cargo tracking systems, on the other hand, focus on the visibility and monitoring of shipments from origin to destination. The essence of these systems is to provide updated information on the status and location of cargo in real time, ensuring that shippers and consignees are informed of any delays, disruptions or problems that may occur during transit [9, p. 21]. Tracking systems use a variety of technologies, including GPS, RFID and IoT sensors, to collect and transmit data on the location of cargo.

One of the main functionalities of cargo tracking systems is the ability to provide end-to-end visibility. This means that from the moment a shipment is picked up until it is delivered to its final destination, the system can track its movements and provide updated information. This transparency is crucial for managing expectations, planning further logistics operations, and proactively addressing any potential issues. For example, if a shipment is delayed due to unforeseen circumstances, the tracking system can alert the relevant parties, allowing them to make alternative arrangements or inform customers of the delay.

Several researchers have delved into the study of corporate booking and tracking systems, examining their impact on supply chain efficiency and business performance [3, p. 29]. One of the most prominent studies by Christopher Tang and Howe Lee, published in the Journal of Supply Chain Management, examined how real-time tracking systems increase the transparency and responsiveness of the supply chain. They concluded that companies using advanced tracking systems have significantly improved delivery accuracy and customer satisfaction, as well as reduced inventory holding costs.

Another study by Yossi Sheffi, detailed in his book The Power of Resilience: How the Best Companies Handle the Unexpected", highlights the importance of integrating booking and tracking systems with broader supply chain risk management strategies. Sheffey's research highlights that such integration not only increases

operational efficiency, but also improves a company's ability to respond to disruptions, thereby enhancing overall supply chain resilience.

The functionality of these systems also extends to data analytics and reporting. Corporate cargo booking and tracking systems are often equipped with advanced analytical tools that can process huge amounts of data to generate information and forecasts [5, p. 87]. These tools help logistics managers identify patterns, predict potential problems, and optimise routes and schedules. For example, by analysing historical data, a company can determine the most efficient delivery routes, avoid congestion and reduce transit time.

In addition, these systems support regulatory compliance by ensuring that all required documentation and information is accurately recorded and easily accessible. For international transport, compliance with customs regulations is crucial. Booking systems can automatically generate customs documentation, and tracking systems can provide the necessary proof of compliance by showing the history of a shipment's movement and handling.

The search for innovative solutions to optimise the transport process is relevant and timely, given the challenges faced by the logistics industry in recent years. The introduction of the latest technologies creates new opportunities for the development of freight transport and the growth of economic efficiency of transport companies. However, assessing the prospects for introducing new technologies, such as blockchain, into the work of logistics businesses requires addressing the challenges and threats that accompany their introduction.

Thus, the UNCTAD study notes that blockchain technologies have not yet become widespread in the logistics industry. Some logistics companies use services that provide the necessary digital processes and functions for booking, tracking cargo and documentation, and allow customers to communicate with carriers [12, p. 98]. However, paper documents are still used in the organisation of the transport process in the process of cargo delivery. This leads to time loss and generally increases the total cost of transportation. According to experts, it is the use of blockchain technology that

will contribute to the development of freight transport and the improvement of logistics.

The ports of Antwerp and Rotterdam are pioneers in the implementation of blockchain technology to optimise port logistics. Since 2016, the Port of Rotterdam has been testing blockchain technology, and since 2017, a blockchain research lab has been operating. The Port of Singapore Authority and Samsung Heavy Industries are also exploring the use of blockchain within the supply chain. A test cargo shipment using a distributed ledger by the British company Marine Transport International (MTI) showed that real-time information exchange in a closed system allowed for a 90% reduction in accounting costs and significant optimisation of communications between participants in the container delivery process.

The implementation of pilot projects to use blockchain technology to organise a logistics network in ports has proven that suppliers, shippers, port operators, and customs authorities can receive all delivery data in real time through a functioning blockchain platform. Logistics companies are also interested in using the benefits of this technology in their operations. The largest container carrier Maersk Line, together with IBM, is exploring the possibilities of using blockchain in logistics. In 2017, the first test trials of the new technology were carried out, which showed the efficiency and positive impact on the organisation of information exchange between participants in the transportation process [3, p. 29]. In early 2018. Maersk, together with IBM, announced the creation of a company aimed at developing and implementing a global trading platform using blockchain technology that will offer digital products and integration services that will ensure transparency of information on the movement of goods along the supply chain, simplify document flow and related processes.

The major container carrier Hyundai Merchant Marine (HMM) is a participant in a pilot blockchain project with SDS (a subsidiary of Samsung IT), IBM, the customs service and the Ministry of Oceans and Fisheries of the Republic of Korea. Adoption of blockchain technology, such as smart contracts, can create the following benefits for the logistics industry: fast processing time and real-time updates of information; high accuracy due to the automation of contract execution and processes; full transparency

of information for market participants, as information is stored in a place that anyone can access, provided they have the necessary access key; increased security due to the encryption of information and the inability of users to interfere with the system and change

Despite the benefits of this technology for the logistics industry, there are several challenges that may slow down the pace of adoption of this technology in logistics. Firstly, the specificity and uniqueness of the contractual terms of chartering, selling and purchasing goods. Secondly, the parties involved in the transport process have their own contractual terms, which are usually subject to negotiation and make it difficult to apply in a universal system. Hence, blockchain technology must be configured to incorporate special terms and conditions. Thirdly, blockchain is not adapted or yet permitted by all jurisdictions. A common, universal platform needs to be created for use in the global transport process, where different governments and agencies are involved. In addition, some experts are cautious about the prospects for widespread implementation of the system in logistics, as only large companies can provide the necessary level of technological expertise required to support blockchain [19, p. 67]. In the process of consolidation of supply chain participants, it may turn out that many logistics companies have fragmented systems, many of which are outdated and unable to support a complex blockchain system. Also, the cost of implementing blockchain may be high for smaller companies. Thus, blockchain technology may act as a catalyst for greater consolidation of the logistics industry or the creation of a two-tier system in which some companies will remain outside the virtual world.

Thus, blockchain technology has prospects for use in the logistics industry. Despite these shortcomings, the adaptation of the technology will create new incentives for the development of global logistics. The advantages of using blockchain technology in logistics include the speed of data processing, real-time data updates, high level of accuracy and transparency of operations. As a result, it will improve the interaction between participants in the transport process, reduce the cost of transporting goods, increase the efficiency of carriers and contribute to the development of global trade in general.

1.2. Classification of corporate booking and cargo tracking systems

The concept of customer relationship management, also known as CRM, has grown in popularity over the past few years around the world. The concept itself is extremely simple: taking care of every customer [68]. Information about the customer, including their purchase history, tastes, needs and preferences, is used to more accurately specify offers that the customer is more likely to accept. With an ever-increasing number of such customers, it is clear that the effective use of modern information technology is the only way to succeed.

Most corporate departments, such as marketing, production planning, customer support, regional sales and service departments, should be involved in implementing the CRM concept. The existence of a constant direct or indirect connection with the customer is mandatory. In the CRM concept, there is a special concept known as a "touch point" to show how customers interact with each other. A booking and cargo tracking management system is a subsystem of an ERP system that serves as a targeted CRM information system for a business. Its purpose is to improve customer service by storing information about customers, their interaction histories, creating and improving business procedures, controlling cargo and its transportation based on this information, and then evaluating their effectiveness. This includes such basic principles as:

– a single information repository where all information about all customer interactions is available at any time;

– synchronising the management of multiple channels of interaction;

– continuous analysis of the collected customer information and making appropriate organisational decisions, such as "sorting" customers based on their importance to the company;

– tracking bookings and cargo movement.

Thus, this approach implies that in any interaction with a client, an employee of the organisation has full information about all previous contacts with the client and

makes a decision based on it, and information about the new decision, in turn, is also stored and available in all subsequent interactions.

Classify the capabilities (modules) of CRM systems by functionality and level of information processing. By functionality, you can group blocks of processes: marketing, processing of applications and requests, sales, and service. The following are usually distinguished as separate components:

– call centres - centres for processing incoming calls. Initially, these were phone calls, but recently they have begun to include all channels of interaction;

– information processing functions (modules).

At the same time, information processing functions can be divided into the following types:

– *operational function* - registration and quick access to primary information by database sections: Events, Companies, Projects, Contacts, Documents, etc;

– *analytical function* - reporting based on primary data and, most importantly, a deeper analysis of information in various sections;

– *cooperative function* - organising close interaction with end users and customers up to the customer's influence on the company's internal processes (surveys to change product characteristics or service procedures, web pages for customers to track order status, etc.)

According to the classification of the Centre for the Study of Information Technology and Organisations at the University of California, CRM systems can include a set of functions shown in Fig. 1.1.
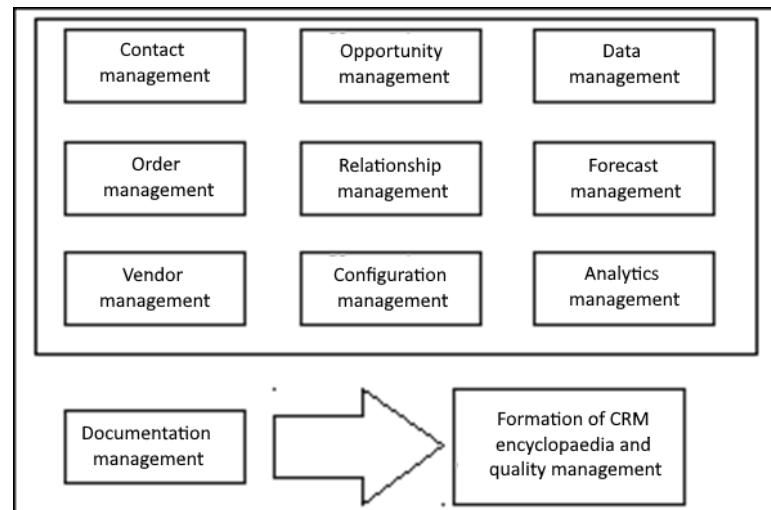
Fig. 1.1 - Typical functionality of CRM systems

Source: [42]

Let's take a closer look at these functions:

– ***contact management*** - maintaining information about customers and their contact history; may include information about the points of cyclic sales or the frequency of replenishment of customer stocks with your products;

– ***activity management*** - provides a calendar and business diary for sales representatives working in the field;

– ***communication management*** - expressed in an independent software module responsible for the transmission of information using telecommunications, its storage and replication;

– ***forecasting*** - provides information on future sales plans, as well as forecasts from research organisations or market research data from the company's divisions;

– ***opportunity management*** - managing the factors that attract potential customers;

– ***order management*** - obtaining information about the availability of goods in the warehouse and placing orders for delivery or production online;

– ***documentation management*** - development and implementation of standards, reports and information and advertising materials;

– ***sales analysis*** - providing analytical capabilities for processing sales data;

– ***product configuration*** - storing information about alternative products and their price characteristics;

– ***marketing encyclopaedia*** - provides up-to-date information on products, prices, promotional activities, research results (e.g., factors influencing the purchase decision) and information on competitors.

Modern CRM systems include all tools related to customer contacts and are supported by information technology: a marketing and sales management system; and a contact and activity management system.

Programmes aimed at improving management processes to implement the CRM concept usually include the following modules:

– CRM subsystems of separate territorial divisions of a distributed company that interact with each other;

– analytical and marketing software modules;

– electronic catalogues and their management;

– an online ordering system using the relevant Web services, online invoicing and the ability to pay with credit cards.

Problems with the efficiency and effectiveness of such a complex and expensive information system arise because these software solutions are embedded in an ERP system In response to this question, experts argue that the customer is at the centre of the CRM concept. The basis of the market is now the struggle for the customer, and it will exist as long as market relations exist. It is economically much cheaper to keep in touch with regular customers than to attract a few new ones. Table 1.1 shows the characteristics of CRM systems of different formats.

According to the formula of competition, manufacturers had to focus on improving product quality and reducing its cost. In the 1990s, the main topic of competition was production without defects and just-in-time deliveries. The rise of this theme forced manufacturers to look for ways to improve and speed up their production processes. They focused their resources on creating better, cheaper, faster products and improving production efficiency [70]. Now that things have changed, this requires a careful study of customer needs and preferences.

Table 1.1 - Types of CRM system formats

CRM system format	Cost	Disadvantages.	Advantages.	User profile
1	2	3	4	5
Boxed solution	up to $500 per workplace	Poor integration with other applications, poorly customisable, the need for "add-ons"	Low cost of ownership, easy implementation and training	A small business company. Number of managers - no more than 5-10, small amounts of information, no need to integrate with other systems
An integrated solution	from $500 to $2000 per workplace	Poor presence in the Ukrainian market	Integrated into the entire IT infrastructure of the company, good functionality, flexible settings for business processes	A medium-sized business. Number of managers - 10-500, significant information flows, integrated IT infrastructure
Module in the ERP system	from $2000 per workplace and more	High cost and time to implement the system, of which the CRM module is a part	No need to integrate with other applications, a single information environment for all company divisions	Large manufacturing companies and holdings. The number of managers is in the thousands. Automation of all processes and transparency of the entire enterprise are required

Source: [8]

The most successful manufacturers of the past ten years have found that aggregating data on specific customers and market realities was not as simple or as easy to use to improve their companies' performance. The main difficulty appeared to be that production efficiency could be defined, modelled, measured and achieved. In addition, market trends are extremely complex and variable, which are extremely

challenging to measure and adequately predict. Business management theory, practice, and the practice of business management in the last ten years have led to the production of efficiency. The fastest and most predictable way to improve production performance is to increase the value of the product to the consumer by using new science and technology capabilities, and to reduce the cost of the product by cutting costs or improving production by creating new product value through new resource-saving technologies and information technology.

In most cases, the use of ERP is based on internal processes. Enterprise management, order intake, production planning, procurement of raw materials and components, production, delivery and other internal operations can be optimised using ERP technologies. An existing ERP model is not enough if competitive advantage depends on the dynamic creation and delivery of customer value. Throughout the product lifecycle, manufacturers must change the rules of the game to attract a new player - the customer.

Currently, the most important production management systems are based on ERP cores, but they need to be integrated with buyers. Production efficiency and the creation of new value for customers are the two main goals of an effective production planning system. To achieve this value, the CSRP methodology covers the entire product lifecycle, from defining the required functionality and planning the future product to meet customer requirements, to warranty and after-sales service. The CSRP methodology redirects production planning from production to the customer, using the proven, integrated functionality of ERP systems. CSRP offers effective methods and resources to create products that deliver increased value to the customer.

The CSRP concept establishes a business methodology based on current information about the customer (requirements) and forecasts of customer activity (expectations). CSRP shifts the focus of the enterprise from planning based on production needs to planning based on customer orders.

Production planning activities are not just expanded, but reorganised to include customer requests from customer-facing parts of the organisation. For example, the order processing process is redefined. Order processing is expanded to include

marketing and sales functions instead of just order entry. The order generation process no longer starts with the order itself - it starts with the sales prospect.

1.3. Advantages and disadvantages of implementing corporate booking and cargo tracking systems

Enterprise booking and tracking systems are essential tools in modern logistics, offering numerous benefits that significantly increase operational efficiency, transparency and customer satisfaction. However, their implementation also comes with a number of challenges that organisations must consider. A detailed analysis of the advantages and disadvantages of these systems provides a comprehensive understanding of their impact on the logistics industry.

One of the main benefits of enterprise booking systems is the automation and streamlining of the freight booking process. These systems allow companies to efficiently manage and plan transport by providing a centralised platform for all booking-related operations. This reduces the administrative burden and minimises human errors, resulting in more accurate and reliable booking processes [6, p. 14]. Automated booking also contributes to better resource management, as it allows the allocation of cargo space and resources in real time, thereby optimising logistics operations.

Another significant benefit is the enhanced visibility and tracking capabilities provided by cargo tracking systems. These systems use technologies such as GPS, RFID and IoT sensors to provide real-time information about the status and location of a shipment. This level of transparency allows companies to track their shipments throughout the supply chain, ensuring on-time delivery and proactive management of any issues that may arise during transit. Improved transparency not only increases operational efficiency, but also builds customer trust and satisfaction by providing accurate delivery times and status updates.

Enterprise booking and tracking systems also help to reduce costs and increase profitability. By automating and streamlining various logistics processes, these systems reduce the need for manual intervention, thereby lowering labour costs. In addition, real-time tracking helps to prevent delays and disruptions that can be costly for businesses [4, p. 56]. The ability to monitor cargo in transit allows for better route planning and inventory management, which leads to reduced fuel consumption and storage costs. Thus, companies can achieve significant cost savings and improve their financial performance.

Despite these advantages, implementing enterprise booking and tracking systems is not without its challenges. One of the main disadvantages is the significant upfront investment required for these technologies. The cost of purchasing, installing and maintaining these systems can be prohibitive, especially for small and medium-sized enterprises (SMEs). In addition, the integration of these systems with existing logistics infrastructure and processes can be complex and time-consuming, often requiring significant technical expertise and support.

Another concern is the potential threat to data security and privacy. Cargo tracking systems generate and transmit huge amounts of sensitive data, including shipment, location and customer information. Ensuring the security of this data is of paramount importance, as any breach or unauthorised access can lead to significant financial and reputational damage [13, p. 99]. Companies must invest in robust cybersecurity measures and protocols to protect their data, which may further increase the cost and complexity of implementing these systems.

In addition, reliance on technology increases the risk of system failures and technical issues. Any malfunction or downtime in corporate booking or tracking systems can disrupt logistics operations, resulting in delays, lost shipments and dissatisfied customers. Businesses should have contingency plans and support mechanisms in place to quickly resolve such technical issues. Regular maintenance and upgrades are essential to ensure the reliability and performance of systems, which increases ongoing operating costs.

In addition, there are problems related to the standardisation and interoperability of these systems. There are many stakeholders involved in the logistics industry, including carriers, freight forwarders and customs authorities, each of which uses different systems and standards [17, p. 61]. Ensuring smooth communication and data exchange between these different systems can be challenging, potentially leading to inefficiencies and delays. The development of industry standards and protocols is crucial to maximise the benefits of enterprise booking and tracking systems.

Chapter 1 summary

Enterprise booking and tracking systems are key tools in modern logistics that deliver significant improvements in operational efficiency, transparency and customer satisfaction. They automate booking and tracking processes, reduce administrative burdens and minimise the risk of human error, which contributes to more accurate and reliable management of logistics operations. These systems provide companies with the ability to plan and manage resources in real time, which optimises logistics processes and increases their efficiency.

The introduction of corporate cargo booking and tracking systems also helps to improve the visibility and transparency of the supply chain. The use of GPS, RFID and IoT technologies allows for real-time updates on the status and location of cargo. Such transparency allows companies to ensure on-time delivery and respond quickly to any problems that may arise during transport, which significantly increases customer trust and satisfaction.

However, implementing enterprise booking and tracking systems does not come without its challenges. The significant upfront investment required to purchase, install and maintain these systems can be prohibitive for small and medium-sized enterprises. Integration with existing logistics infrastructures and processes can also be complex and time-consuming, requiring significant technical expertise and support. In addition,

ensuring data security and confidentiality is critical, as any breach can lead to significant financial and reputational losses.

An additional challenge is the dependence on technology, which increases the risk of system failures and technical issues. Any malfunction can disrupt logistics operations, resulting in delays and losses. Therefore, companies should have contingency plans and support mechanisms in place to deal with such issues quickly. In addition, there is a need for standardisation and interoperability of systems, as different stakeholders in the logistics industry use different systems and standards, which can lead to inefficiencies and delays.

In summary, enterprise booking and tracking systems offer significant benefits that improve operational efficiency and customer satisfaction, but their implementation requires significant investment, technical support and adequate data security. Addressing these challenges is key to successfully integrating these systems into logistics operations and ensuring their effective operation.

CHAPTER 2
ANALYSIS OF THE IMPLEMENTATION OF CORPORATE BOOKING AND CARGO TRACKING SYSTEMS

2.1. Analysis of financial and economic activities of DANN LLC

In today's world, automation of logistics processes such as booking and tracking shipments is becoming increasingly important for effective supply chain management. Increasing competition in the market requires companies to increase productivity, reduce costs and provide a high level of customer service. The use of advanced information technology in logistics allows businesses to automate routine operations, minimise human error and ensure transparency and control over all stages of cargo transportation. This, in turn, helps to improve business efficiency and meet customer requirements.

DONE LLC specialises in the implementation of complex automation systems for various industries, including logistics, which allows their clients to achieve high results in their operations. Automation of cargo booking and tracking not only improves the management of logistics processes, but also helps to optimise costs and increase the company's competitiveness in the market. Table 2.1 shows the basic information about the company.

DONE LLC is a young and fast-growing company founded on 1 November 2016 in Kyiv, Ukraine. The company's principal activity is to provide consulting services in the field of commercial activities and management (KVED 70.22), in particular, automation of accounting systems, implementation of ERP and CRM systems, as well as financial management and budgeting methods.

Table 2.1 - Legal information about DANN LLC

1	2
Full name of the legal entity	DANN LIMITED LIABILITY COMPANY
Short name	DANN LLC
Name in English	DANN LIMITED LIABILITY COMPANY (DANN LLC)
EDRPOU code	40929000
Date of registration	01.11.2016 (7 years 6 months)
Authorised persons	Anton Skorobogatov
The amount of the authorised capital	UAH 4,250,000.00.
Organisational and legal form	LIMITED LIABILITY COMPANY
Types of activities	Main: 70.22 Business and management consultancy activities. Others: 46.19 Activities of intermediaries in the sale of general merchandise 46.47 Wholesale of furniture, carpets and lighting equipment 46.49 Wholesale of other household goods 46.52 Wholesale of electronic and telecommunication equipment and parts for it 46.69 Wholesale of other machinery and equipment 46.73 Wholesale of wood, building materials and sanitary equipment 46.74 Wholesale of ironmongery, plumbing and heating equipment and accessories 46.90 Non-specialised wholesale trade 46.11 Activities of intermediaries in trade in agricultural raw materials, live animals, textile raw materials and semi-finished products 46.21 Wholesale of grain, unprocessed tobacco, seeds and animal feed 49.20 Freight rail transport 49.41 Freight road transport 50.20 Sea freight transport 51.21 Air freight transport 52.10 Warehousing 52.24 Transport handling of goods

Continuation of Table 2.1

1	2
	52.29 Other transport support activities 63.99 Provision of other information services, n.e.c. 69.10 Activities in the field of law 69.20 Accounting and auditing activities; taxation consultancy 62.01 Computer programming 68.20 Leasing and operation of own or leased real estate 68.32 Management of real estate for a fee or on a contractual basis
Legal address	11 Solomianska Street, Kyiv, 03110, Ukraine

Source: [23]

The company specialises in the implementation of integrated enterprise automation systems using products from such well-known brands as HansaWorld (HansaWorld Enterprise, HansaWorld CRM, HansaWorld FirstOffice) and Microsoft Dynamics (Microsoft Dynamics AX, Microsoft Dynamics NAV, Microsoft Dynamics CRM). DONE LLC provides solutions for the automation of accounting and tax accounting, distribution of auto parts, wholesale and retail trade, transport and logistics, hotel and restaurant business, etc.

The DONE LLC team consists of highly qualified consultants and technical specialists with more than 8 years of experience in the market of integrated business management systems. Consultants undergo annual training and certification at the Microsoft Certification Centre, as well as regular training on HansaWorld systems. The high level of qualification is maintained by constant monitoring of legislation and solving real business problems of clients.

DONE LLC uses a holistic approach to implementing its solutions, which includes identifying problem areas in customers' business processes, optimising and standardising these processes, and launching control systems. This approach ensures high efficiency and real benefits for customers.

The main advantage of DONE LLC is the ability to offer the most optimal solutions for the organisation and automation of production processes, based on the

experience of leading companies in the relevant industry. The company maintains the principle of fairness in its interaction with clients, evenly distributing risks, which helps to avoid many problems during project implementation.

The company's clients are listed in Table 2.2

Table 2.2 - Clients of DANN LLC

Title.	Description.
1	2
GFK Ukraine	The largest company specialising in marketing and social research in Ukraine. GFK Ukraine is part of the international research network GFK Group, one of the largest research groups in the world. Our goal is to provide our clients, who represent almost all sectors of the economy, with the necessary knowledge to make strategic decisions.
Metabo	The company creates power tools and machines that professionals can rely on tomorrow. This has made the Metabo name a household name worldwide. Metabo is active in more than 100 countries around the world - with its own sales and service centres and in close partnership with specialist trade organisations.
AIS	The leader of the Ukrainian car sales market. It has been operating in the Ukrainian market since 1992. At present, AIS Corporation cooperates with such global car manufacturers as AUDI (Germany), CITROËN (France), SsangYong (Korea), GEELY (China). In addition, AIS Corporation includes 34 service stations, 40 spare parts stores (AIS - Auto Parts), AIS TRANS AUTO, AIS-Policy Insurance Company, Eurocapital Financial Company, Regional Customs and Licensing Warehouse, Distribution Centre - a logistics centre for receiving, warehousing, storing and distributing automotive spare parts.
"Ferrero	Today, the Ferrero Group, headquartered in Luxembourg, owns 31 trading companies around the world with a turnover of more than €5 billion. It also owns 3 research and development centres and 15 factories that produce 700 thousand tonnes of product annually. The number of

Continuation of Table 2.2

1	2
	employees exceeds 20 thousand people. The company's products are successfully sold in 50 countries.
"Deloitte	A brand that brings together tens of thousands of professionals from independent firms around the world to provide audit, advisory, corporate finance, risk management, tax and legal services. These firms are part of the Deloitte Touche Tohmatsu ("DTT") group "Deloitte CIS is one of the leading national audit and consulting firms providing audit, tax, advisory and corporate finance services, drawing on the expertise of around 3,000 people in 14 offices in 9 countries across the region. Having gained a reputation as one of the best employers for implementing innovative programmes in the field of human resources development, Deloitte CIS is committed to contributing to the success of its clients and employees.
Astra Zeneca	Astra Zeneca was formed on 6 April 1999 through the merger of Swedish Astra AB and UK-based Zeneca Group PLC. AstraZeneca is one of the five leading ethical pharmaceutical companies in the world and produces innovative and effective medicines designed to combat serious diseases in important areas of medical activity. The company is headquartered in London (UK). The company sells its products in more than a hundred countries, manufactures them in twenty, and employs 60,000 people worldwide.
"Zepelin Ukraine	Leading domestic dealer of construction, agricultural and industrial machinery, the official exclusive dealer of American Caterpillar machinery in Ukraine. Zeppelin Ukraine has been operating in the Ukrainian market since 1998 and is part of the global Zeppelin GmbH network headquartered in Garching (near Munich, Germany). Today, Zeppelin Ukraine supplies the Ukrainian market with machinery from leading global brands such as Caterpillar, Terex O&K, JLG, Metso, Olympian, Challenger, Bourgault, Gregoire Besson, and CLAAS.
Handler TL	Handler TL was founded in 1995 and is focused on the sale of food additives to food manufacturers. The firm is currently headquartered in Tallinn, the capital of Estonia.

Continuation of Table 2.2

1	2
.	The portfolio of products offered by Handler TL includes more than 30 groups of various food additives for dairy, meat, confectionery, ice cream, beverages, sauces and many other food industries.
Johnson & Johnson	Johnson & Johnson is one of the largest multidisciplinary companies producing pharmaceutical products, medical equipment, and medical consumables for the diagnosis and treatment of patients.

Source: [15]

The study of the state of property is an important part of financial analysis [24]. As shown in Table 2.3, we can summarise:

Intangible assets remained almost unchanged during the 2021-2023 study, with the only decreases being 0.09% in 2017 and 0.49% in 2018.

Table 2.3 - Analytical analysis of property dynamics for the period 2021-2023

Indicator (thousand UAH)	2021	2022	2023	Growth rate, %.	
				2022/2021	2023/2022
1	2	3	4	5	6
Intangible assets	3251	3248	3232	99,91	99,51
Property, plant and equipment	77150	58793	55180	76,21	93,85
Non-current assets	194687	179201	208633	92,05	116,42
Inventory	1758	3389	4725	192,78	139,42
Trade and other receivables	5315	29314	36461	551,53	124,38
Cash and cash equivalents	618	1261	2558	204,05	202,85
Current assets	29301	34425	43608	117,49	126,68
Balance sheet	223995	213632	252248	95,37	118,08

Source: OpenDataBot website on DANN LLC activity

To better understand the changes in property dynamics over the period 2021-2023, it is proposed to draw up a graph that visually depicts the changes (Figure 2.1).

In 2023, fixed assets decreased by 6.15% compared to 2021; in 2022, the dynamics also decreased by 23.79% compared to 2021. Depreciation of property, plant and equipment and the lack of improvement in the production capacity of DANN LLC led to a decrease in the company's property, plant and equipment. In 2023, non-current assets increased by 16.42% compared to 2022, mainly due to an increase in capital investments in progress. In 2022, compared to 2021, there was already a decrease of 7.95%, which indicates that there was an ambiguous movement in the volume of non-current assets between 2021 and 2023.
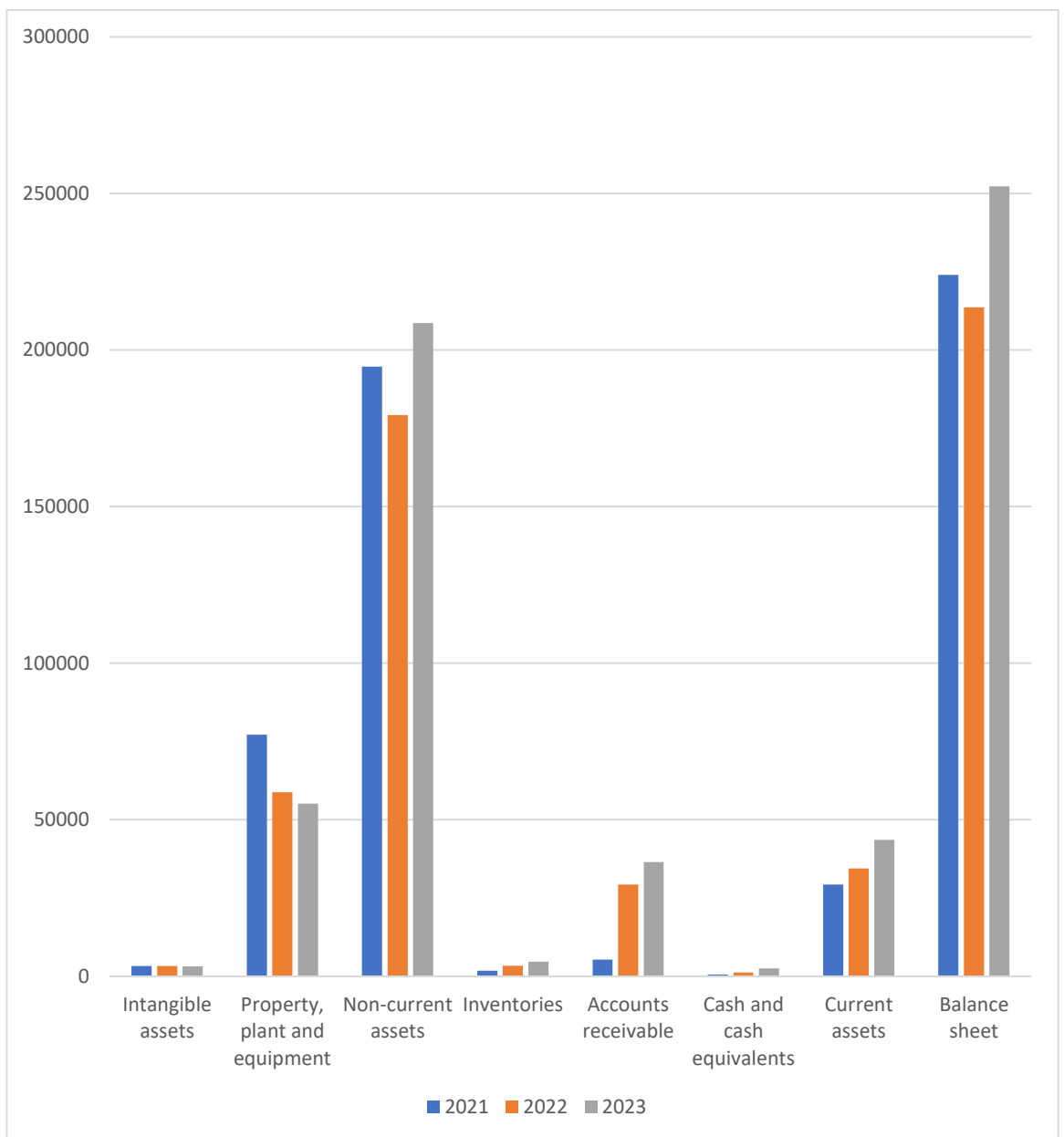

Fig. 2.1 - Changes in the property of DANN LLC in 2021-2023

Intangible assets in 2023 decreased by 0.51% compared to 2022; in 2022, the dynamics also decreased by 0.09% compared to 2021. This shows a slight decrease in the value of intangible assets over the past two years, which may indicate a stable but slightly declining trend.

In 2023, property, plant and equipment decreased by 6.15% compared to 2022; in 2022, the dynamics also decreased by 23.79% compared to 2021. The decline in the value of property, plant and equipment over two years may be due to depreciation of property, plant and equipment or the lack of new investments in production capacity.

In 2023, non-current assets increased by 16.42% compared to 2022, mainly due to an increase in capital investments in progress. There was already a 7.95% decrease in 2022 compared to 2021, indicating that there was a significant increase in non-current assets between 2022 and 2023.

Inventories in 2023 increased by 39.42% compared to 2022; in 2022, the dynamics also increased by 92.78% compared to 2021. A significant increase in inventories may indicate an accumulation of materials or goods in the warehouse, which may be due to preparations for the upcoming production cycle or increased demand.

Accounts receivable in 2023 increased by 24.38% compared to 2022; in 2022, the dynamics also increased by 451.53% compared to 2021. The large increase in accounts receivable indicates that the company has significantly increased its credit sales or deferred payment for its customers.

In 2023, cash and cash equivalents increased by 102.85% compared to 2022; in 2022, the dynamics also increased by 104.05% compared to 2021. A significant increase in cash indicates an improvement in the company's liquidity, which may be due to sales growth or new investments.

Current assets in 2023 increased by 26.68% compared to 2022; in 2022, the dynamics also increased by 17.49% compared to 2021. The growth of current assets may indicate the expansion of the company's operations.

The balance sheet in 2023 increased by 18.08% compared to 2022; in 2022, the dynamics decreased by 4.63% compared to 2021. The overall growth of the company's

assets in 2023 indicates an improvement in its financial position, despite the previous decline in 2022.

Table 2.4 - Analytical analysis of the property structure for the period 2021-2023

	Structure, %.			Growth rate of share, %.	
	2021	2022	2023	2022/2021	2023/2022
Intangible assets	1,45	1,52	1,28	104,75	84,27
Property, plant and equipment	34,44	27,52	21,88	79,90	79,49
Non-current assets	86,92	83,89	82,71	96,51	98,60
Inventory	0,78	1,59	1,87	202,13	118,08
Trade and other receivables	2,37	13,72	14,45	578,29	105,34
Cash and cash equivalents	0,28	0,59	1,01	213,94	171,80
Current assets	13,08	16,11	17,29	123,19	107,28
Balance sheet	100	100	100	-	-

Source: compiled by the author on the basis of the company's balance sheet

Based on Table 2.4, we will summarise the analysis of the property structure of the enterprise under study for 2021-2023:

–   In 2023, compared to 2022, the share of non-current assets decreased by 0.82%, while the share of current assets increased by 0.82%.

–   In 2022, compared to 2021, the share of non-current assets decreased by 2.36%, while the share of current assets increased by 2.36%.

–   The asset structure as of 2021 was dominated by non-current assets; during the analysed period, the asset structure was characterised by a slight increase in the share of current assets over non-current assets, with non-current assets significantly prevailing: in 2021, current assets accounted for 13.08%, while non-current assets accounted for 86.92%; in 2022, current assets accounted for 16.11%, while non-current

assets accounted for 83.89%; in 2023, current assets accounted for 17.29%, while non-current assets accounted for 82.71%.

That is, we can conclude that during the entire analysed period, non-current assets accounted for the lion's share of the company's assets, which is due to the peculiarity of its functioning and is a positive characteristic of DANN LLC [6].

Another source of enterprise analysis is the analysis of the dynamics of capital sources. This analysis will help the company to determine the cost of each source of capital, both equity and debt, and to choose the optimal structure that minimises the total cost of capital. Nevertheless, given the unstable economic situation in Ukraine and globally, it is worth conducting this type of analysis to assess the ability of DANN LLC to meet its obligations in a timely manner, which is important for maintaining the confidence of creditors and investors. Although long-term planning and forecasting can be very risky, this analysis still helps to outline the future financing needs of DANN LLC and will allow us to identify the optimal sources of capital that can provide the necessary support for the business in these difficult economic times

Table 2.5 - Analytical analysis of the dynamics of capital sources formation for the period 2021-2023

	2021	2022	2023	Growth rate, %.	
				2022/2021	2023/2022
1	2	3	4	5	6
Equity capital	56766	42336	59204	74,58	139,84
Long-term liabilities	107840	107840	102922	100,00	95,44
Short-term loans	0	0	0	0,00	0,00
Current accounts payable	38905	40625	34498	104,42	84,92
Other current liabilities	2109	2457	2211	116,50	89,99
Current liabilities and provisions	223995	213632	252248	95,37	118,08
Balance sheet	56766	42336	59204	74,58	139,84

Source: calculated by the author based on the company's balance sheet

In order to better illustrate the changes in the sources of capital of DANN LLC, it is proposed to depict this in the form of a diagram (Figure 2.2).

It can be seen that in 2022, the company's equity decreased to 74.58% of the previous year. This may indicate the company's unsuccessful investments and operating losses incurred due to the full-scale invasion of Ukraine. However, already in 2023, equity increased by 39.84% year-on-year. This indicates that the company has successfully overcome the crisis and made the right decisions in emergency situations.
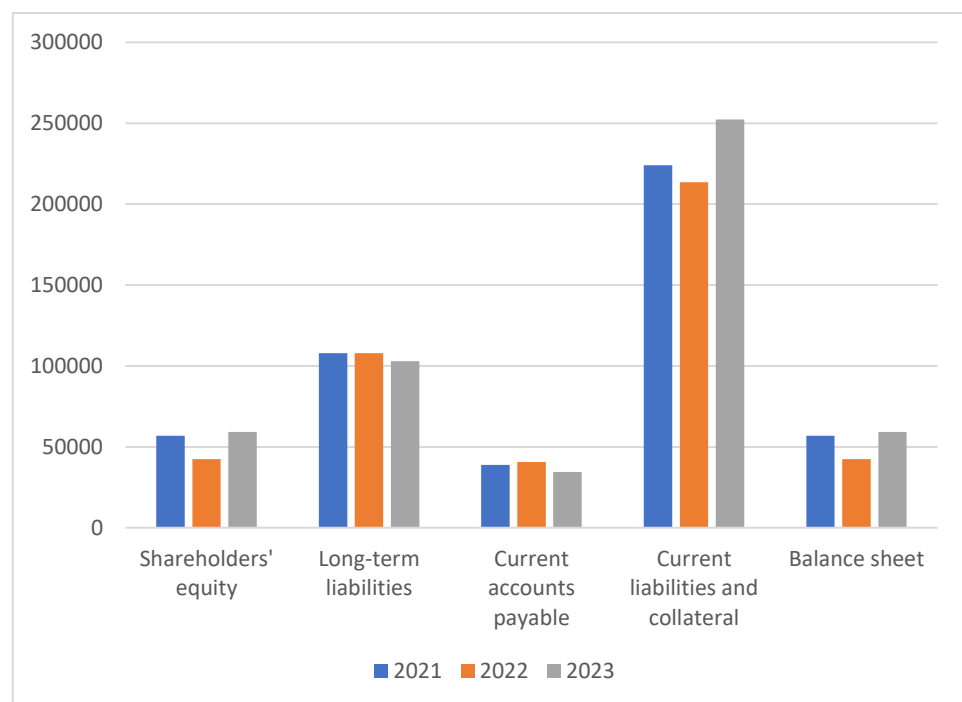

Fig. 2.2 - Dynamics of capital sources in 2021-2023

Long-term liabilities remained unchanged in 2021 and 2022, but may see a slight decrease in 2023. This is due to the conversion of long-term liabilities into shares, which helped to reduce the debt burden and increase equity. Despite the fact that current payables showed an upward trend in 2022, in 2023 we may see a significant decline in this indicator, which is likely to be attributed to improved payment discipline by timely payment of invoices from suppliers and other creditors. Current liabilities and collateral in 2023 show a rapid increase. We believe this is due to business expansion and increased purchases.

We also propose to analyse the liquidity of DANN LLC (Table 2.6). This will make it possible to see the company's ability or inability to meet its short-term obligations with available assets that can be quickly converted into cash. This is a key indicator of the company's financial strength and its ability to maintain a going concern.

Table 2.6 - Analysis of liquidity indicators of DANN LLC for the period 2021-2023

Indicator.	Definition formula	2021	2022	2023	Growth rate, %.	
					2022/2021	2023/2022
Coefficient absolute liquidity	Ka = A1/P2	0,01	0,02	0,03	190,97	142,83
Quick ratio liquidity	Kp = A2/P2	0,46	0,49	0,43	105,46	88,21
Total liquidity ratio	Kz = A3/P2	0,49	0,54	0,48	109,96	89,19

Source: Author's calculations based on available assets

Based on Table 2.6, we can indicate a low level of solvency of the enterprise under study, since:

– The absolute liquidity ratio was significantly lower than its regulatory value of 0.25-0.35 throughout the study period;

– The quick liquidity ratio showed a trend consistent with the absolute liquidity ratio - it was below the regulatory limit of > 0.6 throughout the entire period of study;

– The total liquidity ratio was very low, as it not only did not exceed the regulatory limit of >1, but was also significantly below the threshold value.

This situation as of 2023 is due to a significant increase in current accounts payable; one of the main ways to level this situation is to reduce the amount of accounts payable through factoring operations.

In terms of absolute liquidity, it is necessary to ensure the growth of cash and cash equivalents by collecting receivables in the context of services rendered.

In order to study the level of financial stability of the enterprise under study, we will analyse the main indicators in Table 2.7.

Table 2.7 - Analysis of financial stability indicators of DANN LLC for the period 2021-2023

Indicator.	Definition formula	2021	2022	2023	Growth rate, %.	
					2022/2021	2023/2022
The financial resilience	Kfa = VC/A	0,25	0,20	0,23	78,20	118,43
Coefficient financial dependence	Kfs = PC/A	0,75	0,80	0,77	107,40	95,44
Funding ratio	Kc = PC/vC	2,95	4,05	3,26	137,35	80,59
Manoeuvrability factor equity capital	Km = OA/BC	0,52	0,81	0,74	157,53	90,58

Source: calculated by the author on the basis of available data

Thus, DANN LLC can be characterised as an enterprise with stable positive dynamics of the level of successful functioning with a fairly wide list of problems, the solution of which will lead to a high level of success of the studied business entity in 2023.

First of all, we propose to include insolvency, illiquidity and high financial dependence of the analysed business. Elimination of the data that are problematic for the functioning of DANN LLC may lead to bankruptcy and liquidation of the company under study.

2.2. Tools for implementing a logistics management and cargo booking system

Today, the role of logistics globally, and especially in Ukraine, is changing dramatically and gaining new importance for all business entities. It is very difficult to overestimate the role of logistics today, given that it is the basis for transporting everything in the world. Whether it is a customer's online order from an online store or the delivery of weapons and humanitarian aid, it all depends on efficient supply chains that operate effectively and provide all parties with the desired outcome: customers receive their goods on time, in the right place, at the best price, regardless of the type of goods transported, while logistics companies receive satisfied customers, which in turn provide a stable income for the company.

Given how much the role of logistics in the economy has increased and how much everyone depends on it, companies are starting to pay more attention to new technologies that can help them offer more efficient services at lower costs that will appeal to customers even more than the existing range of services.

This can be attributed to several factors. Firstly, only two years ago, the world faced one of the most paralysing problems of our time, namely the COVID-19 pandemic. This forced not only ordinary people to follow the rules of self-isolation, but as a result, many businesses had to go online if it was possible in terms of their business activity. This event was one of the biggest shocks for society, both for individuals and businesses, which were mostly unprepared for such a drastic change. In this case, businesses fell mainly into three categories: those who remained in their field of activity without any major changes, but in an online mode, those who completely or significantly changed their field of activity to remain competitive, and those who failed to withstand the challenge of going online and had to close their companies due to the inability to generate any income.

Another factor is the transition to a more environmentally friendly approach to doing business. More and more consumers prefer businesses that show themselves to

be responsible business entities that care about the environment and try to minimise their impact on climate change, pollution and other environmental issues. Many leading corporations and international organisations in various sectors of economic activity have started to introduce programmes that try to involve as many participants as possible to popularise the idea. The experience of many successful international organisations shows that the sooner a company joins an initiative that has a significant impact on society, the more successful the result will be and the more consumers it will attract.

Both factors are united by one solution - digitalisation. Despite the fact that this is a rather weighty and voluminous term, it still has many types. One of the types that can arouse great interest and resonance among transport companies is corporate cargo booking and tracking systems

As mentioned earlier, such systems are one of the keys to the further development of logistics. The introduction of these systems will significantly increase the efficiency of operations, such as process automation and route optimisation. This will greatly help companies reduce costs and become more efficient. Nevertheless, many customers are now more demanding of constant updates on their product data, especially in Ukraine. The introduction of these systems will increase the accuracy and reliability of the company offering its services. Features and services such as real-time tracking and error reduction in documentation, inventory management and booking will be freely available. With the previous two factors in mind, it is possible to separate the third, which has a significant impact on the functioning of the enterprise - customer service. Customers are the backbone of every business, and improving customer service is an ongoing process that all businesses that want to remain competitive and profitable must follow. By introducing such enterprise booking and tracking systems, it will be possible to increase the level of transparency and responsiveness from the company. This technology allows customers to track the status of their shipments on their own, which increases satisfaction and reduces the number of customer service requests, while the information provided and analysed quickly gives the company a faster response time to adjust to changing conditions or resolve issues quickly.

However, there are also many implementation tools for such enterprise systems. On the one hand, this is an advantage, as more businesses have access to different types of implementation tools, so more businesses will be able to implement it. On the other hand, there may be problems with ensuring a common framework and legal regulations for this issue, as also mentioned.

First, it is worth noting the main types of tools for implementing a logistics management system. Firstly, transport management systems (TMS) are one of the basic tools aimed at optimising the logistics costs of an enterprise. This software makes management processes almost completely automated, ensures the selection of the optimal resource based on the counterparty's requirements, while taking into account the minimum estimates. With the implementation of this system software, an enterprise can see a reduction in costs, an increase in revenue, and an increase in the number of satisfied customers due to fast and reliable delivery.

One of the advantages of TMS is that it can solve a number of problems at once. For example, transport automation simultaneously solves the use of additional human resources, high transportation costs, and low vehicle efficiency. Automation also helps with route optimisation, an ongoing process that takes place during transport planning. It is now possible to change the route via the Internet. It also makes it possible to use the dimensions of the vehicle more accurately. The cargo in the vehicle must be positioned correctly to maximise the use of space. Moving a half-empty vehicle entails additional costs. The vehicle's movement is monitored online, and its direction can be adjusted by adding new loading and unloading points.

The next implementation tool proposed for consideration is a warehouse management system (WMS). A warehouse management system is software that automates various logistics operations, such as receiving goods, packaging, storage, and inventory. Although this system has many advantages, especially if it is used in large and complex warehouses, the company's management should also understand that this type of system requires additional infrastructure: data collection terminals, means for placing identifiers, barcode scanners, various types of servers, and others.

The main task of a warehouse management system is to automate warehouses to speed up logistics processes and minimise errors caused by human error. It also helps to optimise employees' work schedules and control inventory. Typically, these systems are best used by fairly large companies that have one or more warehouses of 1000m2 and want to reduce the number of staff by up to 30%, thereby reducing costs.

Despite the fact that there are quite a few tools for implementing a logistics management system, I would like to pay special attention to the ERP system (Enterprise Resource Planning). In recent years, the popularity of such systems has grown significantly, making it one of the main options for implementing a control system. An ERP system itself is also an enterprise resource planning software aimed at controlling internal processes and making important decisions about business development in real time. One of the main principles of this software is the centralised collection of information and data. When using this system, all data is stored in a single repository, which allows users, whether it is a company director or an accounting employee, to store, create and use the only up-to-date data of the enterprise.

ERP systems bring together many business components that determine results, forecasts and planning (Figure).

ERP systems primarily help automate financial accounting in accordance with international and national standards. The system is used to plan budgets, monitor their implementation, and generate statutory and financial reporting.

This system also allows you to build a sales process, starting with price and product management and ending with the formation of sales documents and shipment from the warehouse.

As for the procurement process, an important emphasis is that the system allows you to plan the supply of goods in accordance with production needs and customer demand.
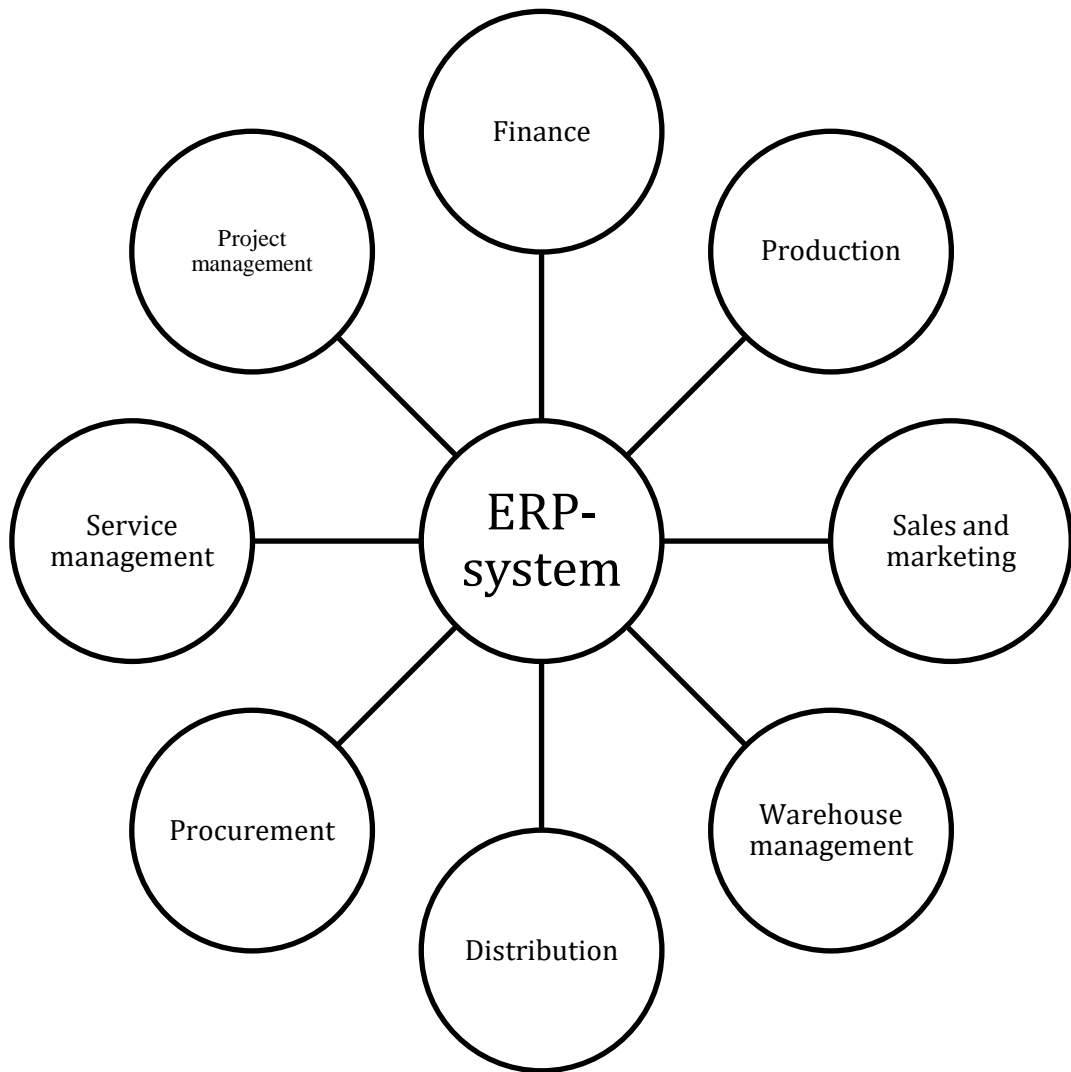
Fig. 2.3 - Business components consolidated in the ERP system

Source: [4]

The ERP system also offers functionality for planning routes and delivery times based on an analysis of production needs, own consumption and sales forecasts.

The project management module plans and records project implementation, plans resources for the project, while the service management module manages service requests, scheduled maintenance, and organises the work of field staff.

Warehouse management is a module for optimising and automating warehouse management. The complex chain of goods movement in the warehouse is divided into smaller operations and tasks performed by specific users with control over the execution of these operations.

The last module in the system is production. The main tasks of ERP in the production process are reasonable resource planning to meet current demand, control of the production process, quality management, optimisation of production costs, etc. As well as the formation and calculation of the end-to-end cost of a product or service.

As a business grows, so do its needs and the challenges of managing it. The amount of information that is the basis for decision-making is growing, and business processes that used to take a minimum of time require more attention and new advanced solutions. There are three reasons for implementing an ERP system:

– Lack of data to make informed management decisions;

– The need to standardise production processes;

– The existing systems are outdated and need to be updated.

As we have already mentioned, as the market becomes more dynamic and flexible, it is imperative for a company to have secure software that allows it to make quick and necessary decisions based on detailed analytics in order to stand out from the competition.

Therefore, Dann offers the following range of services:

– Implementation of enterprise resource planning (ERP) systems

– Building a financial management system

– Training

– Comprehensive support for Microsoft Dynamics products

– Business analysis

Among the services offered, DANN also offers the implementation of enterprise management systems.

Moreover, DANN offers a wide range of ERP systems to meet the needs of different industries and business sizes. The main offer includes the following systems:

– **SAP Business One,** which is aimed at small and medium-sized enterprises. It enables business process automation, inventory, financial, sales and customer relationship management. SAP Business One also integrates with other SAP products, providing scalability and advanced capabilities.

– **Microsoft Dynamics 365** is another ERP system offered by DANN. This system combines ERP and CRM functionality, providing integrated management of finance, operations, sales, marketing and service. Dynamics 365 uses cloud technologies, which ensures mobility and availability of data in real time.

– **Oracle NetSuite**, a cloud-based ERP system suitable for fast-growing companies. NetSuite provides automation of core business processes, financial, order, inventory, production, project and HR management. It also supports multicurrency and multilingualism, which is important for international companies.

– **Odoo** offers a wide range of functions for managing finance, sales, projects, production, marketing and other aspects of business, allowing customers to choose only those modules that meet their needs.

It can be noted that the enterprise management systems offered by DANN LLC to its clients are designed for different types of businesses and different sizes, which allows us to cover a wider range of consumers in the market.

Despite the fact that there are several systems to choose from, Odoo is the most popular due to its universal functionality and selective use (Figure 2.4). The client can choose only those modules that are necessary for his business, depending on the growth rate, number of customers, and financial indicators.
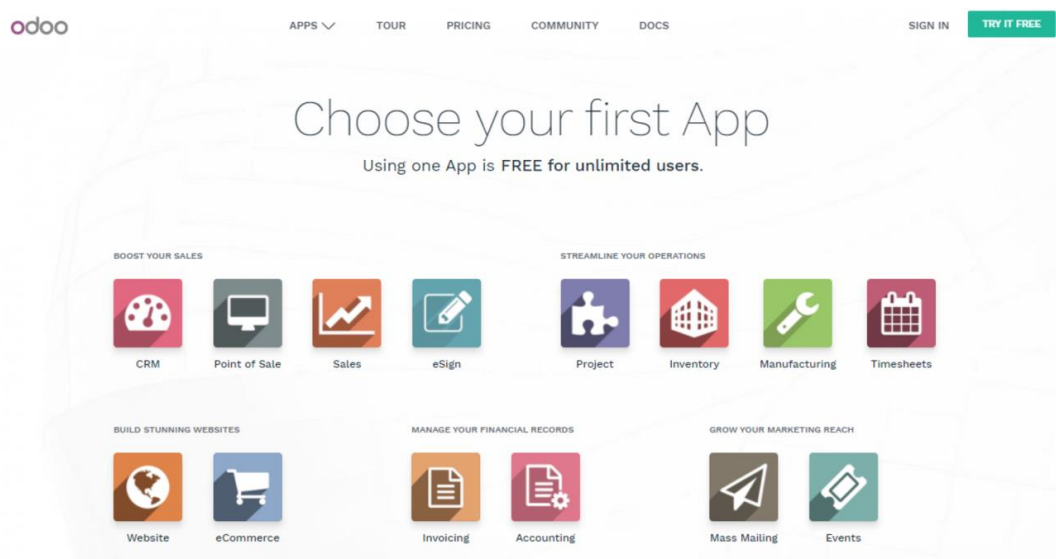

Fig. 2.4 - Functionality of the Odoo system

Source: odoo.com

The system itself was developed in Belgium and is rapidly gaining popularity among transport companies.

There are several significant advantages to choosing Odoo for managing your company's finances and other business processes compared to other ERP systems:

– Modularity: - Odoo offers a modular approach that allows businesses to choose only the modules they really need and expand the system's functionality as their needs grow. This provides flexibility and scalability.

– Open source: - Odoo is an open source system, which allows developers to customise and adapt the system to the specific needs of the enterprise without significant financial costs. It also reduces dependence on a software vendor.

– User interface: - Odoo has a modern and intuitive interface that simplifies staff training and increases productivity. Ease of use makes the system accessible even to users without special training.

– Integration: - The Odoo system can be easily integrated with other business applications and services via API, which ensures uninterrupted data exchange and increases the efficiency of business processes. This allows you to create a single information space for the entire enterprise.

– Cost: - Odoo is more cost-effective than many other ERP systems such as SAP or Oracle. The availability of an open source version and different pricing plans allows companies to choose the best solution depending on their budget.

– Cloud and on-premises solutions: - Odoo offers both cloud and on-premises solutions, allowing businesses to choose the most convenient way to deploy the system. The cloud version provides mobility and real-time data accessibility, while the on-premises version gives you more control over your data.

– Community and support: - Odoo's large and active community of users and developers facilitates quick problem solving, sharing of experiences and continuous improvement. In addition, Odoo provides professional technical support and advice.

– Functionality: - Odoo offers a wide range of features covering all aspects of business, from accounting and finance to inventory, sales, project, HR and marketing

management. This allows you to use one system to manage all your core business processes.

Given these advantages, Odoo is an attractive option when looking for a flexible, scalable, and cost-effective ERP solution (Figure 2.5).
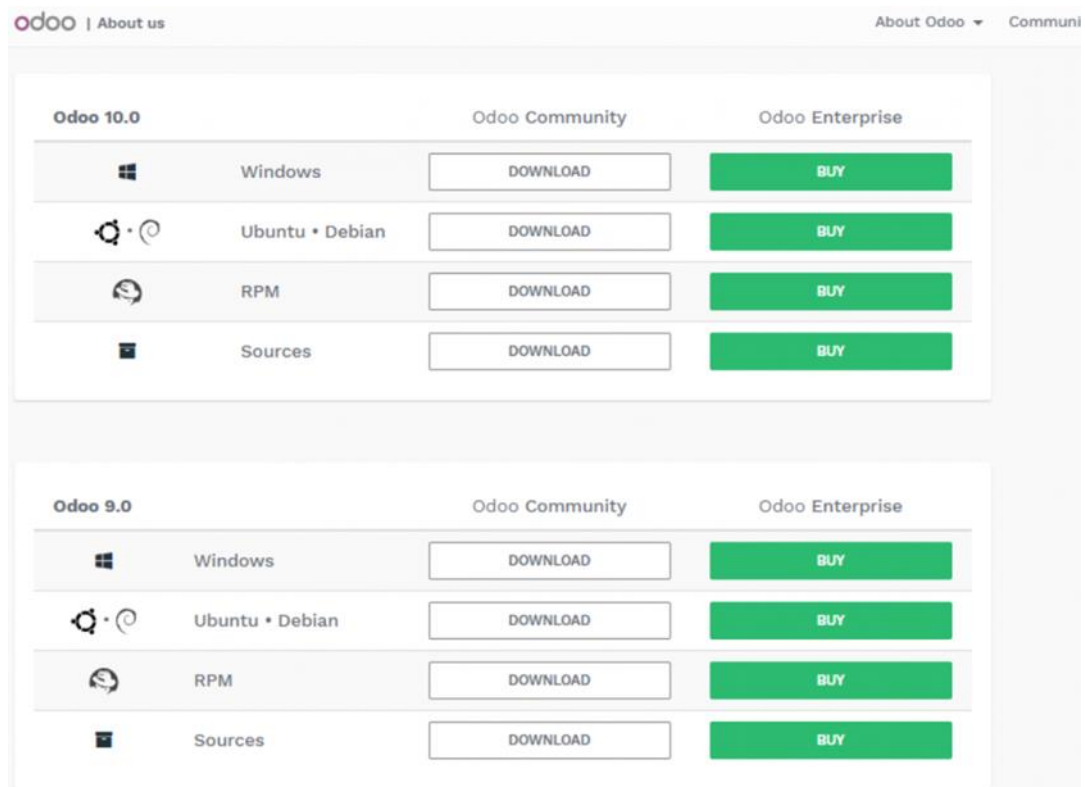

Fig. 2.5 - System interface

Source: odoo.com

2.3. Analysis of a potential client for the project of implementing a corporate booking and cargo tracking system

One of the potential clients of DANN LLC may be Anvit Trans (Fig. 2.6).

Anvit Trans is actively operating in the Ukrainian market, offering its freight transport and logistics services throughout Europe and beyond, and has a huge customer base in many countries.

For almost 30 years, Anvit Trans has been doing everything possible to ensure that international transport requires minimum effort from customers and contributes to maximum results. Anvit Trans is a registered trademark, which can be checked by following the link on the official website.

Together with Anvit Trans, customers can free up their time to address the priority tasks of their companies' development. The company's specialists are ready to organise the transport of any cargo over any distance using air, sea, rail or road transport. We offer the most optimal logistics schemes that help to significantly reduce the cost of logistics services.
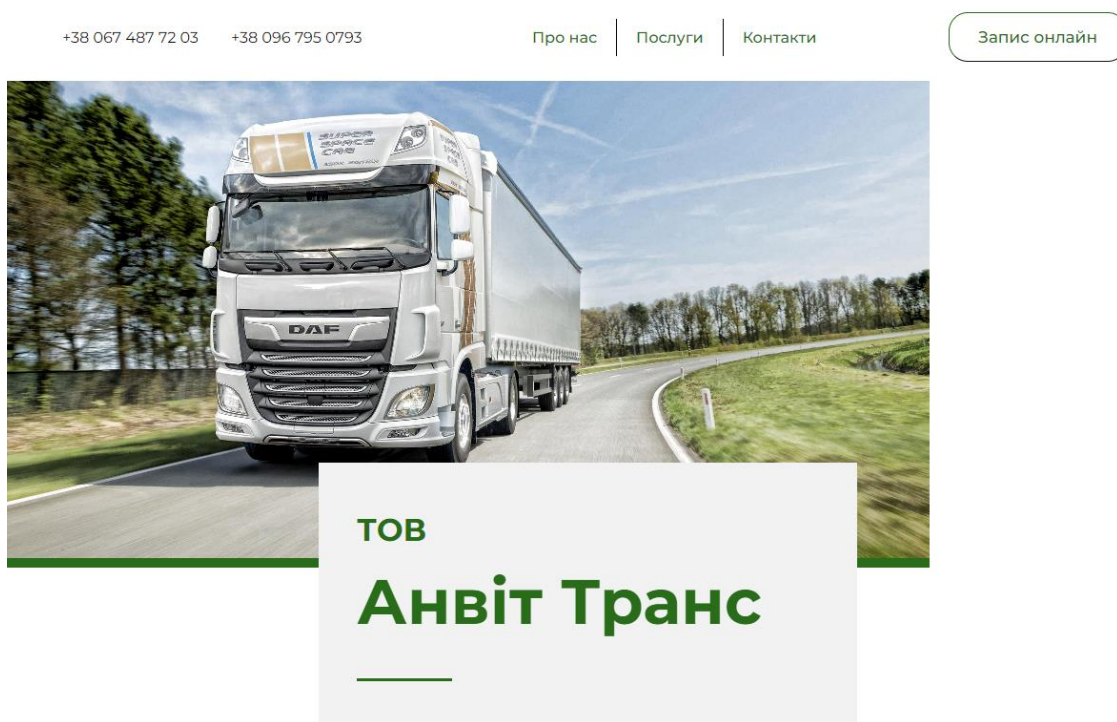

Fig. 2.6 - Website of Anvit Trans

Source: Anvit Trans website

Anvit Trans has been present on the market since 1995, has its own fleet of vehicles and reliable partnerships with the largest international operators. In addition to organising transportation, the company provides a full range of services to ensure the success of the transport.

Anvit Trans is an international company, so it is necessary to separate the types of activities that the company is engaged in in Ukraine:

–   Domestic transport - organisation of freight transport within Ukraine, ensuring fast and reliable delivery of goods to any part of the country.

–   International transport - Anvit Trans helps Ukrainian companies to carry out export and import operations, ensuring the delivery of goods to Europe, Asia, America and other regions.

–   Integrated logistics solutions - the company offers comprehensive solutions, including supply chain management, optimisation of transport routes and inventory management.

–   Information technology - the use of modern IT solutions to manage logistics processes, which ensures high efficiency and accuracy in the delivery of goods.

In addition to the types of activities, it is possible to describe the services provided by Anvit Trans to its clients, namely

–   Organisation of freight transport - Anvit Trans provides transportation of various types of cargo, including general, oversized, dangerous and perishable cargo. The company uses various modes of transport, such as road, rail, air and sea, to ensure fast and reliable delivery.

–   Logistics services - The company provides comprehensive logistics solutions, including warehousing, inventory management, cargo handling and customs brokerage services. Anvit Trans helps optimise supply chains and minimise logistics costs.

–   Customs brokerage services - Anvit Trans offers customs clearance services, including preparation of all necessary documents for export and import of goods, as well as advice on customs legislation.

–   Information support - The company provides its customers with access to modern information systems that allow them to track the movement of goods in real time. This ensures transparency of the transportation process and allows customers to control their cargo.

–   Logistics consulting - Anvit Trans provides consulting services to improve its clients' logistics processes. This includes analysis and optimisation of transport routes, inventory management and implementation of new technologies in logistics processes.

Anvit Trans also does not focus on just one region to provide services. The company's management tries to cover as wide a geographical range as possible. That is why the company's transport routes include:

–   Domestic transportations in Ukraine: Anvit Trans organises the transport of goods throughout Ukraine. This includes the delivery of goods to any region of the country, ensuring high speed and reliability of transportation.

–   International transport: The company transports goods to Europe, Asia, America and other regions of the world. Anvit Trans offers both export and import transportation, helping Ukrainian businesses enter international markets.

–   Transit transportations: Anvit Trans also provides transit services through the territory of Ukraine. This allows customers to efficiently transport goods between different countries using the logistics capabilities of Ukraine as a transit hub.

–   Regional transport: The company organises cargo transportation within certain regions of Ukraine, providing efficient logistics for local businesses and manufacturers.

ANVIT TRANS, Kyiv, offers its customers a full range of services for the clearance, support and delivery of various types of cargo. This includes consulting services in the preparation of foreign trade contracts, accreditation and customs clearance of goods, including electronic declaration.

ANVIT TRANS is ready to organise the transport of any cargo over any distance using air, sea, rail or road transport. We offer the most optimal logistics schemes that help to significantly reduce the cost of logistics services.

The company has its own fleet of vehicles and reliable partnerships with the largest international operators. Thanks to this, customers can free up their time to address the priority tasks of their companies' development by entrusting the process of cargo transportation to ANVIT TRANS professionals.

It is possible to describe the freight forwarding services provided by a company. As a rule, they include the following stages:

– development of the optimal route, taking into account the client's wishes and the specifics of the transported cargo, as well as the selection of transport;

– preparation of the necessary supporting documents;

– cargo insurance;

– packaging and labelling (if necessary), as well as loading and unloading of goods;

– control over the safety of the cargo and its constant tracking along the entire route.

International forwarding services at a high professional level are provided by ANVIT TRANS, Kyiv. For more than 20 years of work in the Ukrainian market, the company has developed a system whereby the transport of various cargoes requires minimum effort from customers, while giving maximum results.

ANVIT TRANS, Kyiv, offers its customers a full range of services for the clearance, support and delivery of various types of cargo. This includes consulting services in the preparation of foreign trade contracts, accreditation and customs clearance of goods, including electronic declaration.

The company's advantages include prompt response to customer requests, accurate assessment and forecasting of the situation to choose the best solution. Over the years, the company has established cooperation with the largest international operators.

ANVIT TRANS is ready to organise the transport of any cargo over any distance using air, sea, rail or road transport. We offer the most optimal logistics schemes that help to significantly reduce the cost of logistics services.

By ordering the services of an international freight forwarder from ANVIT TRANS, Kyiv, you can be sure that the delivery of your cargo will be carried out on time, in compliance with all the necessary rules and regulations.

Maritime freight forwarding services are very popular. Cargo transportation by water is the safest and most cost-effective way of transporting bulky goods and

containers over long distances. However, due to the need to draw up a large number of documents and undergo various types of control, many customers prefer to seek professional help.

ANVIT TRANS offers turnkey sea freight forwarding services and ensures that the cargo will be delivered to its destination on time and in compliance with all the necessary rules and regulations. Our specialists provide a full range of services for the clearance, tracking and delivery of cargo, including consulting services, customs clearance and electronic declaration.

ANVIT TRANS guarantees prompt response to customer requests, accurate assessment and forecasting of the situation to choose the best solution. Established cooperation with the largest international operators allows us to provide high quality services and timely delivery of goods.

Air freight forwarding services are also in demand today. Cargo delivery by air has an undeniable advantage over other modes of transport - speed and convenience. At the same time, air delivery and forwarding services have their own peculiarities related to both the transportation of goods and packaging, labelling, and filling out the necessary documentation.

The price of freight forwarding services may vary depending on the specifics of cargo transportation. It depends on the transport used, the specifics of the cargo and many other factors. The cost of the entire range of services is calculated individually for each client.

It is worth noting that ANVIT TRANS has a staff of highly qualified employees, its own fleet of vehicles, and has been cooperating with the largest international road, air, rail and sea transport operators for a long time. Thus, ANVIT TRANS can offer customers from Ukraine, Europe and Asia the most favourable prices for high-quality freight forwarding services.

Thanks to our professional approach and established partnerships, our customers can be sure that their cargo will be delivered on time and in compliance with all the necessary rules and regulations. For detailed advice, to calculate the cost of forwarding services or to answer any questions, please call the number listed on our website.

Therefore, it is quite reasonable to assume that such a large business needs to constantly think about improving the quality of its services. And the implementation of a corporate booking and cargo tracking system can be an effective tool in achieving this goal. In this case, DANN LLC can offer the following system - Odoo. This is the latest CRM system with a new and modern interface, which differs from other systems by its wide functionality and flexibility.

Chapter 2 summary

The analysis of the financial and economic activities of Dann LLC showed that the company is actively developing and using advanced information technologies to automate logistics processes. The company's key performance indicators demonstrate stable growth, which indicates effective resource management and a high level of professionalism of the team. However, some financial aspects require further optimisation, including improving liquidity and reducing accounts payable. This will allow the company to ensure stable operations and improve its financial performance.

Logistics management system implementation tools, such as TMS, WMS and ERP systems, are key to improving the efficiency of logistics operations and automating business processes. In particular, ERP systems such as Odoo, SAP Business One, and Microsoft Dynamics 365 provide centralised data collection and automation of management processes, allowing businesses to respond quickly to market changes and make informed decisions. The implementation of such systems helps to reduce costs, increase productivity and improve customer service.

The analysis of the potential client for the implementation of the corporate cargo booking and tracking system showed that Anvit Trans is a promising partner for Dann. "Anvit Trans has considerable experience in international freight transport and logistics, which makes it an ideal candidate for implementing the latest logistics management technologies. The implementation of the Odoo system will allow Anvit

Trans to optimise its logistics processes, increase transparency and control, and ensure better customer interaction.

Thus, the use of advanced information technologies in logistics is an important factor in increasing the competitiveness and efficiency of business. Dann has all the necessary resources and expertise to successfully implement corporate logistics management systems, which will allow them to strengthen their market position and provide high quality services to their customers.

CHAPTER 3
RECOMMENDATIONS ON ORGANISING THE IMPLEMENTATION OF CORPORATE BOOKING AND CARGO TRACKING SYSTEMS

3.1. Implementation of a corporate cargo booking and tracking system

Modern businesses and organisations face the need to effectively manage resources and optimise their booking processes. The system is designed to simplify this process, providing convenience and flexibility in use for customers, administrators and managers alike. Implementing such a system can significantly increase the efficiency of resource use and ensure transparency and control over all operations.

The Terms of Reference for the development of the system are aimed at detailing the functional requirements, describing the capabilities and responsibilities of each of the key roles in the system. The main purpose of this statement of work is to provide DANN developers with clear instructions and requirements for creating a system that will be convenient and intuitive for users, while meeting the highest standards of security and reliability. The functional requirements and processes described in the terms of reference should ensure efficient resource management, reduce time spent on organisational issues and improve the overall productivity of the organisation.

The functionality table describes in detail the key features and actions available for the three main user roles: clients, administrators and managers (Table 3.1). It covers all the main aspects of working with the system, from registration and login to calendar, resource booking, notifications, integration with other modules, search and filtering, reports and analytics, and technical support. Such a detailed description of the functionality provides a clear understanding of the responsibilities and capabilities of each role, which contributes to effective interaction with the system and optimal use of resources.

Table 3.1 - Functionality of the Odoo system

Functionality	Client.	Administrator	Manager
1	2	3	4
Registration and login	- Create a new account - Log in	- Manage user accounts - Set access rights - Monitor activity	- Access your account - Log in
Home screen	- View available resources - View your booking calendar	- View all bookings - Resource usage statistics	- View booking requests - Manage your appointment schedule
Resource booking	- Selecting a resource, date and time - Filling in the booking form - Confirming the booking	- Setting up available resources - Setting up booking rules	- Confirm or reject requests - Edit booking details
Calendar	- View your booking calendar - Ability to edit and cancel bookings	- View the calendar of all bookings - Manage conflicts and duplicates	- View your work calendar - Schedule appointments
Notifications and reminders	- Receive confirmation, reminder and cancellation notifications	- Set up notification templates - Send reminders to users	- Receive notifications of new requests - Send confirmations and reminders
Integration with other modules	- Ability to create reservations from other modules (for example, projects, tasks)	- Setting up integrations with other Odoo modules	- Use data from other modules to plan appointments
Search and filter	- Search for available resources by various criteria (date, time, resource type)	- Setting up search and filtering options for users	- Search for booking requests by various criteria
Reports and analytics	- View your booking history	- Generating reports on resource usage - System performance analytics	- Create reports on your appointments - Analyse your workload
Technical support	- Possibility to contact technical support through the system	- Responding to user requests - Managing issues and concerns	- Contact technical support in case of problems

Source: [29]

The system requirements describes the basic needs for creating a user-friendly and efficient system (Table 3.2).

Table 3.2. System requirements

Requirements.	Description.
User interface	- Intuitive and user-friendly interface for all users - Multilingual support - Mobile version for easy use on different devices
Security.	- Reliable protection of user data and reservations - Role-based access control - Regular updates of security protocols
Integration	- Ability to integrate with other Odoo modules - API support for interacting with external systems
Reports and analytics	- Advanced reporting and analytics capabilities - Data visualisation for easy analysis
Support	- Access to technical support for all system users - Online documentation and training materials

Source: [50]

The selected Odoo system offers the following options:

– Web version. The web version of the Tracking System operates according to one parameter: search by container number. Automatic shipping line detection works by container numbers, identifying both carriers and leasing companies.

– Web integration. It is possible to get a separate widget of the toolTracking System for your website. Web integration is based on one parameter: search by container number. Integration takes a few hours, and the use is simple: enter the container number and click on search.

– API integration. API integration allows you to create any interface for tracking shipments online or link it to any ERP/CRM/TMS system. Track a shipment by container number, bill of lading, or booking.

Estimating the cost of a system implementation project depends on a number of factors. Below are the main components that affect the total project cost.
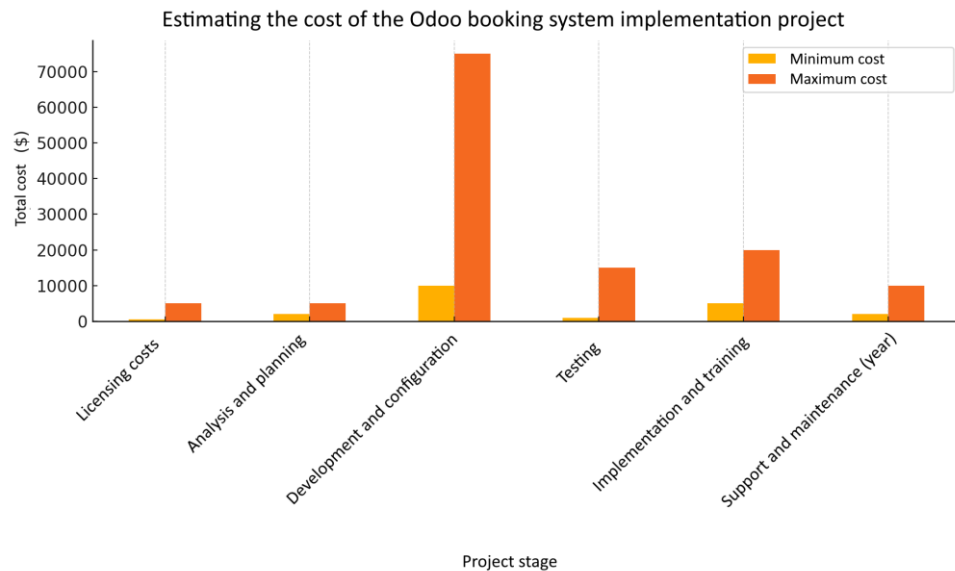
Fig. 3.1 - Key components and impact on project cost

Notes. The price is in UAH

– Licensing costs. The system offers different licence plans that depend on the number of users and modules. A booking system may require a licence for the core platform and additional modules. Licences can cost from a few hundred to several thousand dollars per year depending on the plan chosen.

– Analysis and Planning. Before starting development, it is necessary to conduct a detailed requirements analysis and project planning. This stage includes meetings with the customer, collecting requirements, developing a technical specification and project plan. The cost of analysis and planning can vary from $2,000 to $5,000.

– Development and Customisation The bulk of the costs are incurred in the development and customisation of the system. This includes developing a user interface, setting up a calendar, booking resources, notifications, integrating with other modules, implementing search and filtering functions, creating reports and analytics, and ensuring security. The average rate of a developer can range from $50 to $150 per hour. An average project may require 200 to 500 hours, which is between $10,000 and $75,000.

– Testing. After development, it is necessary to conduct thorough testing of the system to identify and correct possible errors. The cost of testing depends on the

complexity of the system and the number of testers. Usually, 10-20% of the total development cost is spent on testing, i.e. from $1,000 to $15,000.

    –   Implementation and Training. Implementation includes installation, server configuration, data migration and integration with other enterprise systems. It also involves training staff to use the new system. The cost of this stage can range from $5,000 to $20,000, depending on the scale of the implementation.

    –   Support and Maintenance. Once the system is up and running, it is necessary to ensure that it is supported and maintained. This includes system updates, bug fixes, new features, and user support. Annual support costs can range from 10% to 20% of the initial project cost, i.e. from $2,000 to $15,000 per year.

Taking into account all components, the total cost of a system implementation project can range from $20,000 to $130,000.

The approximate cost of the Odoo ERP system implementation project for Anvit Trans includes several main components. First of all, it is necessary to take into account licensing costs. The company will need 20 licences for the basic platform and additional modules, with an average cost of $500 per licence per year. The total cost of licences will be $10,000 per year.

Before development can begin, a detailed requirements analysis and project planning is required. The cost of analysis and planning can vary from $3,000 to $7,000, and for this project it was estimated at $5,000. The bulk of the cost is for the development and configuration of the system. Let's assume that the average developer rate is $150 per hour and that 500 hours are spent on the project. Thus, the total development cost will be $75,000.

After the development, it is necessary to test the system, which usually accounts for 10% of the total development cost. For this project, the cost of testing will be $7,500. Implementation of the system includes installation, server setup, data migration and integration with other enterprise systems, as well as staff training. The cost of this stage is estimated at $20,000.

Annual maintenance costs can range from 10% to 20% of the initial project cost. Let's assume that these costs are 15%, which equates to $11,250 per year. Thus, the

total initial cost of the Odoo implementation project for Anvit Trans will be approximately $130,000, with further annual support and licence costs of approximately $21,250.

The economic feasibility of implementing a corporate cargo booking and tracking system in a freight forwarding company is to increase the efficiency of logistics management, reduce costs and improve the quality of customer service. One of the main arguments in favour of implementing such a system is the optimisation of workflows and increased employee productivity. The use of automated booking systems reduces the time spent on processing requests and avoids errors that can occur when entering data manually. This, in turn, reduces the number of customer requests for order adjustments and shortens the time to fulfil orders.

Another important advantage of implementing a corporate cargo booking and tracking system is improved control over the condition of cargo at all stages of its transportation. Such a system provides the ability to track the location of cargo in real time, which allows for a timely response to possible problems such as delays, damage or loss of cargo. As a result, the company can promptly inform customers about the status of their cargo, which increases the level of trust and customer satisfaction with the company's services.

To assess the potential effect of implementing a cargo tracking and booking system, we will use the following indicators:

1. Inventory.

Reserves in 2022 (R_2022): UAH 3389 thousand

Reserves in 2023 (R_2023): 4725 thousand UAH

Inventory growth (ΔI):

$$\Delta 3 = \frac{3_{2023}}{3_{2022}}$$

Perrcentage of inventory growth:

$$\Delta 3\% = \left(\frac{3_{2023}}{3_{2022}} - 1\right) * 100$$

$$\Delta 3\% = (1.392 - 1) * 100 = 39.2\%$$

The effect of implementing the system (assuming a 15% reduction in inventory):

Decrease in inventories (D_decrease):

$$3_{\text{зменш}} = 3_{2023} - 0.15$$

$$3_{\text{зменш}} = 4725 - 0.15 = 708.75 \text{ тис. грн}$$

New inventory volume (V_new):

$$3_{\text{нов}} = 3_{2023} - 3_{\text{зменш}}$$

$$3_{\text{нов}} = 4725 - 708.75 = 4016.25 \text{ тис. грн}$$

2. Accounts receivable

Accounts receivable in 2022 (AR_2022): UAH 29314 thousand

Accounts receivable in 2023 (AR_2023): UAH 36461 thousand

Increase in accounts receivable (ΔRA):

$$\Delta Д3 = \frac{Д3_{2023}}{Д3_{2022}}$$

Percentage growth in accounts receivable:

$$\Delta Д3\% = \left(\frac{Д3_{2023}}{Д3_{2022}} - 1\right) * 100$$

$$\Delta Д3 = (1.244 - 1) * 100 = 24.4\%$$

The effect of implementing the system (assuming a 10% reduction in receivables):

Decrease in accounts receivable (AR_decrease):

$$Д3_{\text{зменш}} = Д3_{2023} * 0.10$$

$$\text{ДЗ}_{\text{зменш}} = 36461 * 0.10 = 3646.1 \text{ тис. грн}$$

New accounts receivable (AR_new):

$$\text{ДЗ}_{\text{нов}} = \text{ДЗ}_{2023} - \text{ДЗ}_{\text{зменш}}$$

$$\text{ДЗ}_{\text{нов}} = 36461 - 3646.1 = 32814.9 \text{ тис. грн}$$

3. Current assets

Current assets in 2022 (CA_2022): UAH 34425 thousand

Current assets in 2023 (CA_2023): UAH 43608 thousand

Growth of current assets (ΔCoA):

$$\Delta\text{OA} = \frac{\text{OA}_{2023}}{\text{OA}_{2022}}$$

Percentage growth in current assets:

$$\Delta\text{OA}\% = \left(\frac{\text{OA}_{2023}}{\text{OA}_{2022}} - 1\right) * 100$$

$$\Delta\text{OA}\% = (1.267 - 1) * 100 = 26.7\%$$

Effect of the system implementation (assuming an 8% reduction in current assets):

Decrease in current assets (CA_decrease):

$$\text{OA}_{\text{зменш}} = \text{OA}_{2023} * 0.08$$

$$\text{OA}_{\text{зменш}} = 43608 * 0.08 = 3488.64 \text{ тис. грн}$$

New amount of current assets (CA_new):

$$\text{OA0}_{\text{нов}} = \text{OA}_{2023} - \text{OA}_{\text{зменш}}$$

$$\text{OB}_{\text{нов}} = 43608 - 3488.64 = 40119.36 \text{ тис. грн}$$

The introduction of a cargo tracking and booking system at Anvit Trans LLC will have a significant positive impact on the company's financial performance. It will reduce inventories by 15%, which will result in a new inventory volume of UAH 4016.25 thousand. A 10% reduction in accounts receivable will reduce it to UAH 32814.9 thousand. A decrease in current assets by 8% will reduce their volume to UAH 40119.36 thousand. These changes will help to increase the company's efficiency, reduce costs and improve financial stability.

The economic benefits of implementing an enterprise booking and tracking system are also reflected in reduced transport costs. Thanks to more accurate route planning and optimised vehicle loading, fuel and vehicle maintenance costs can be significantly reduced. In addition, the number of empty flights is reduced, which also has a positive impact on the company's economic performance. Optimisation of logistics processes helps to reduce the cost of warehousing and storage of goods, as the system allows for better planning and control of the movement of goods.

Implementation of the cargo tracking system has a significant economic benefit for Anvit Trans LLC. The system allows to reduce the time of cargo handling. The current processing time for one cargo is 35 minutes, and after implementation it will be reduced to 17.5 minutes. This will result in monthly time savings of 945.29 hours, which is equivalent to UAH 189,058 per month or UAH 2,268,696 per year.

The system also reduces the number of errors in cargo handling. The current number of errors is 45 per month, and after implementation it will be reduced to 13.5, which will save UAH 11,025 per month or UAH 132,300 per year.

A 30% increase in customer satisfaction leads to a 10% increase in revenue, which for a company with a current annual revenue of UAH 10,000,000 will yield an additional UAH 1,000,000 per year.

The total annual benefits of the system implementation include time savings (UAH 2,268,696), error savings (UAH 132,300) and increased revenue (UAH 1,000,000), totalling UAH 3,400,996 per year.

Calculation of NPV (Net Present Value)

$$NPV = \sum_{t=1}^{n} \frac{CF_t}{(1+r)^t} - C_0$$

Where:

- CF_t - Annual cash flows (UAH 3,400,996)
- r - discount rate (10%)
- C_0 - Initial investment (UAH 5,200,000)

$$NPV = \sum_{t=1}^{5} \frac{3\,400\,996}{(1+0.10)^t} - 5\,200\,000 \approx 7\,692\,450 \text{ грн}$$

For calculations in Excel: IRR=IRR(*B1:B6*)

Input data:

- Year 0: -5,200,000 UAH
- Years 1-5: UAH 3,400,996

$$IRR \approx 59\%.$$

Calculating the payback period (Payback Period)

$$Payback\ Period = \frac{C_0}{CF_{average\ annual}}$$

Input data:

- Initial investment: UAH 5,200,000
- Average annual cash flow: UAH 3,400,996

$$Payback\ Period = \frac{5\,200\,000}{3\,400\,996} \approx 1 \text{ рік}$$

Calculations show that the implementation of a cargo tracking system for DANN LLC is economically feasible and profitable. The expected NPV is approximately UAH 7,692,450, the IRR is approximately 59%, and the payback period is approximately 1 year. This demonstrates the high efficiency of the investment in the cargo tracking system, which will significantly improve the company's efficiency, reduce errors and increase customer satisfaction.

Investments in the system are justified, as they provide a significant increase in the efficiency of resource management and optimisation of work processes. The right approach to planning and implementing the project will help to achieve maximum results and ensure the convenience and reliability of the system for all users.

3.2. Programme of staff involvement in the implementation project

The successful implementation of corporate booking and cargo tracking systems depends to a large extent on staff motivation and engagement. Although Anvit Trans employees are showing positive results even at this stage, engaged and motivated employees are more likely to accept the new systems and contribute positively to the implementation process. This sub-section describes strategies to increase motivation and engagement, including clear communication, training, recognition and a supportive work environment at Anvit Trans.

First of all, clear communication is the key to the success of any project. The management of Anvit Trans needs to explain to employees clearly and concisely what goals the company is trying to achieve. Employees will get a clear idea of why new systems are being implemented and how these changes will affect the organisation and their daily work. Clear communication of the goals and benefits of Odoo will help employees understand how their efforts contribute to the overall goals of the company. This will align individual goals with project goals, increasing employee motivation and engagement. They will be more aware of the expected results, which will increase their

confidence and effectiveness in performing their duties. This approach also helps to create a more transparent and open working environment where employees feel an important part of the organisation.

Employees of any company need regular updates on the implementation of a new project. The company's top management needs to regularly inform employees about the progress of the project through updates. This can be done through newsletters, meetings, or a dedicated project communication platform. Regular updates will help maintain transparency and ensure that employees feel engaged in the process.

It is necessary to maintain two-way contact within the company, where employees can express their concerns, ask questions and provide feedback [33, p. 24]. Creating channels for open dialogue helps to solve problems at an early stage and promotes a sense of involvement and participation among employees.

Above all, special attention should be paid to staff training. Despite the fact that these systems are already quite popular and can be found in other companies, you need to be sure that employees will be able to use the software correctly, which can lead to positive financial growth of the company. To do this, the company's management should implement, if not all, then some of the points suggested by the author to motivate and train employees.

First of all, any project starts with basic training in new skills and new knowledge related to innovations. The company's management should consider organising comprehensive initial training for all employees who will be using the new systems. This training should cover system functionality, best practices and any changes to existing processes. Effective training will ensure that employees are confident and competent in using the new systems.

After the initial training is organised, it is important to ensure that there is ongoing access to training resources and opportunities to expand knowledge. This requires ongoing training programmes to address any issues that arise after the initial training.

Regular refresher courses, trainings and access to online resources also help employees stay up-to-date and highly skilled.

Role-based learning is of particular importance nowadays. It is worth trying to customise training programmes in accordance with the roles and responsibilities of different employees in the company [28, p. 29]. Individual training ensures that each employee receives relevant and practical knowledge that is directly related to their tasks.

One of the most effective methods of motivating employees is recognition and rewards. The majority of employees in any company want to know that they are valued and that they are valuable personnel in their workplace. You should consider introducing an incentive programme and a corporate tradition of recognising employees' efforts. Public recognition at meetings, in newsletters or on the company intranet can motivate employees and reinforce positive behaviour, while a well-designed reward programme can include bonuses, gift cards, extra days off or other rewards that employees value.

A special place is occupied by the possibility of career development. It has been proven that career development can be used as a form of recognition. By offering promotions, managerial positions or professional development courses to employees who have succeeded in the implementation process, the organisation will be able to demonstrate interest in their growth and success [39, p. 83].

Also, company employees need to see that all parts of the company implementing the new project are working in the same direction and that everyone supports the innovation. You need to make sure that leaders and managers visibly support the implementation project. When employees see that management is committed to the project, they are more likely to follow suit.

In addition, mentoring programmes can be implemented, where experienced employees or managers guide and support their colleagues through the transition. Mentoring fosters a sense of community and provides personalised support. Just as a simple example from a leader can motivate employees to learn new things and participate in a new software implementation project.

However, one thing that must be present is feedback mechanisms: The company should establish mechanisms for ongoing employee feedback on the new systems.

Regular surveys, suggestion boxes, and feedback sessions will help identify areas for improvement and engage employees in the optimisation process. It will also help employees to see mistakes as learning opportunities rather than failures [35, p. 75]. Analysing what went wrong and how it can be improved contributes to the development of thinking and continuous improvement.

At DANN, motivating and engaging staff in the implementation of corporate booking and cargo tracking systems is a priority through a structured and comprehensive approach.

DANN also provides extensive initial training, followed by ongoing support and professional development. Role-playing training is tailored to the specific needs of different departments and job functions, ensuring that all employees receive relevant, practical instruction.

In addition, employees who demonstrate exceptional dedication and efficiency during project implementation are recognised in company newsletters and meetings [30, p. 31]. The company also offers incentive programmes, including bonuses and career development opportunities, to reward and motivate employees.

DANN empowers its employees by involving them in decision-making processes related to implementation. Support systems, such as help desks and online forums, are set up to help employees resolve technical issues and provide guidance. Team-building events are organised to promote collaboration and strengthen relationships.

The management of DANN LLC has been very supportive of the implementation project. They participate in trainings, use new systems and follow new processes, setting a positive example for all employees [45, p. 97]. Mentoring programmes are also in place to provide individual support and guidance.

The company has also established feedback mechanisms to continuously gather information from employees about the new systems. Regular surveys and feedback sessions help identify areas for improvement. Celebrating achievements and successes keeps morale high, and a culture of learning from mistakes encourages continuous improvement.

By implementing these strategies, DANN ensures that its employees are motivated, engaged and actively involved in the successful implementation of corporate booking and cargo tracking systems. This integrated approach not only increases employee satisfaction and productivity, but also contributes to the overall success of the project and the organisation.

Odoo training for company personnel should be carefully planned and structured to ensure maximum efficiency and quick adaptation of users to the new system.

First of all, training should start with an introductory course that covers the basic concepts and functionality of the Odoo system. This course should include a general overview of the interface, navigation, and the main modules that will be used in the company. This approach will help employees understand how the system integrates into their daily workflows.

The next component is specialised training for different functional areas of the company. This includes separate courses for accounting, sales, marketing, inventory management, HR and other departments. Each course should be focused on the specific tasks and processes of the respective department to ensure a deep understanding and ability to use specific Odoo modules.

Training should also include practical exercises and real-life cases that allow employees to apply new knowledge in practice. These can include simulations of real business processes, solving problems that arise in daily work, and working with company data in a test environment. This approach helps to consolidate theoretical knowledge.

Another important component is ongoing support and advice after the initial training is complete. This can include regular webinars, access to the knowledge base, user forums, and support from the company's IT department or the Odoo system provider. Such support will help employees solve current problems and issues that arise in the course of working with the system.

Training should also include a component on data security and privacy. Users need to know how to protect sensitive information, follow company security policies,

and understand the basics of cybersecurity in the context of working with Odoo.

In addition, it is important to organise a feedback process to receive feedback from users about the effectiveness of the training and possible problems.

By taking these components into account, Odoo training for staff will be comprehensive, effective and ensure that the system is successfully integrated into the company's daily operations. By investing in these comprehensive training methods, Anvit Trans ensures that its employees are well prepared to handle the complexities of enterprise booking and cargo tracking systems. This not only increases operational efficiency and customer satisfaction

In general, the programme activities are presented in Table 3.3. They include clear communication with employees, initial and ongoing training, role-playing training for specialised departments, recognition of employee efforts, incentive programmes, mentoring programmes, feedback mechanisms and celebration of successes. These measures are aimed at increasing employee motivation and involvement in the Odoo implementation process, which will ensure the successful integration of the new system into Anvit Trans' operations.

Table 3.3: Programme of staff involvement in the project to implement corporate booking and cargo tracking systems

Name of the event	Employees involved, number of people	Departments involved	Cost, UAH.
1	2	3	4
Clear communication	20	All departments	5,000
Initial training	20	All departments	10,000
Continuous training	20	All departments	5,000
Role-playing training	10	Accounting, Logistics	7,500
Recognition of efforts	20	All departments	2,000
Incentive programmes	20	All departments	7,000

Continuation of Table 3.3

1	2	3	4
Team building events	20	All departments	5,000
Support systems	20	All departments	3,000
Mentoring programmes	10	All departments	5,000
Feedback mechanisms	20	All departments	2,000
Celebrating successes	20	All departments	5,000

Source: compiled by the author

The successful implementation of the Odoo ERP system at Anvit Trans requires a comprehensive approach that includes clear communication, comprehensive training programmes, recognition and rewards, a supportive working environment, leadership and management support, and a culture of continuous improvement. The employee engagement programme described above will help to increase employee motivation and engagement, which are key factors for the successful implementation of the new system. As a result, the company will not only be able to integrate new technologies into its daily operations, but also ensure high efficiency, employee satisfaction and market competitiveness.

3.3. Risk management in the implementation project

The first step in risk management is to identify potential risks that could affect the project. These risks can be divided into technical, operational, financial and external.

Technical risks include potential problems associated with the technology being implemented. These include software bugs, hardware failures, integration and data

migration issues. Technical risks are critical because they can directly affect the functionality and performance of new systems.

Operational risks relate to day-to-day operations and include risks such as insufficient staff training, resistance to change, and operational failures [41, p. 95]. Operational risks can lead to inefficiencies and delays in a project if not managed properly.

Financial risks are associated with budget overruns, unexpected costs and funding shortfalls. These risks can derail a project if they are not anticipated and managed through careful financial planning and monitoring.

External risks include factors beyond the control of the organisation, such as changes in legislation, market volatility and the reliability of suppliers. External risks can have a significant impact on project timing and cost.

Once the risks have been identified, they need to be assessed in terms of probability and potential impact. This involves qualitative and quantitative analysis to prioritise risks and focus on those that pose the greatest threat to the project. A common tool for risk assessment is a risk matrix, which shows the likelihood of each risk and its impact.

Continuous monitoring and analysis is crucial for effective risk management. This involves tracking identified risks, reassessing their status and identifying new risks as the project progresses. Tools such as risk registers and risk management software can facilitate this process. Regular risk audits should also be conducted to ensure that risk management practices are followed and are effective [45, p. 88]. Audits can identify gaps and areas for improvement in the risk management process.

Key risk indicators (KRIs) can also help identify problem areas. KPIs should be developed and monitored to provide early warning signals of potential risks. These indicators help in proactive risk management and timely intervention.

Communication and reporting is still one of the most basic methods of risk control. To ensure a positive outcome from the project, it is necessary to inform project stakeholders about the status of risks, mitigation measures and any changes in the risk profile. Clear communication promotes transparency and builds trust.

Ensuring commitment and support for risk management initiatives from senior management is the basis for implementing new projects [46, p. 114]. Managers should be actively involved in risk management activities and promote a culture of risk awareness.

Teamwork tends to show positive results when employees communicate with each other, sharing experiences and opinions. Forums can be created to share risk information and best practices across departments and teams.

At ANVIT TRANS, the implementation of corporate booking and cargo tracking systems is backed by a robust risk management system. The company follows a structured approach to risk management, ensuring that risks are identified, assessed, mitigated and monitored throughout the project lifecycle.

Identification and assessment of risks: ANVIT TRANS begins by conducting a comprehensive risk assessment to identify potential risks. This involves engagement with project stakeholders, workshops and the use of risk assessment tools to create a detailed risk profile. Each risk is assessed based on its likelihood and impact, and a risk matrix is used to prioritise them.

Mitigation strategies: The company develops specific mitigation plans for high-priority risks. For example, technical risks are mitigated through rigorous testing protocols and phased implementation strategies. Operational risks are addressed through extensive training programmes and change management initiatives. Financial risks are managed by maintaining a contingency budget and implementing strict cost monitoring practices [35, p. 75]. External risks are mitigated by ensuring compliance with regulatory requirements and establishing strong relationships with suppliers.

Monitoring and analysis: ANVIT TRANS implements continuous risk monitoring and analysis processes. Regular risk analysis meetings are held to assess the status of identified risks and the effectiveness of mitigation strategies. Risk audits and key performance indicators are used to provide early warning signals and ensure proactive management.

Effective communication channels have also been established to inform all stakeholders of risk management activities. The Company develops a risk management

culture by conducting trainings and education on risk management principles, as well as rewarding employees who contribute to successful risk management.

Table 3.4 - Risk assessment for ANVIT TRANS before and after Odoo implementation:

Risk	Before implementing Odoo	After implementing Odoo
1	2	3
Loss of cargo		
Incorrect labelling/errors	5-10%	1-2% (reduction by 80-90%)
Theft or damage	3-5%	1-2% (reduction by 60-70%)
Total level of losses	8-15%	2-4%
Delays in delivery		
Inaccurate route planning/inefficient route management	10-15%	2-3% (reduction by 80-85%)
Problems with documentation/customs clearance	5-8%	1-2% (reduction by 60-75%)
Overall latency level	-	3-5%
Loss of documentation		
Human error/incorrect storage	4-6%	0.5-1% (reduction by 80-90%)
Problems with access/duplication	3-5%	0.5-1% (reduction by 80-90%)
Overall level of documentation loss	-	1-2%
Damage to the goods		
Incorrect loading/unloading	5-7%	1-2% (decrease by 70-80%)
Improper transport conditions	3-5%	1-2% (reduction by 60-70%)
The overall level of damage to the goods	-	2-4%

Source: approximate values provided by the author based on the values of other companies

This table shows the risk assessment for ANVIT TRANS before and after the implementation of Odoo, with a focus on reducing risks through automation and process optimisation.
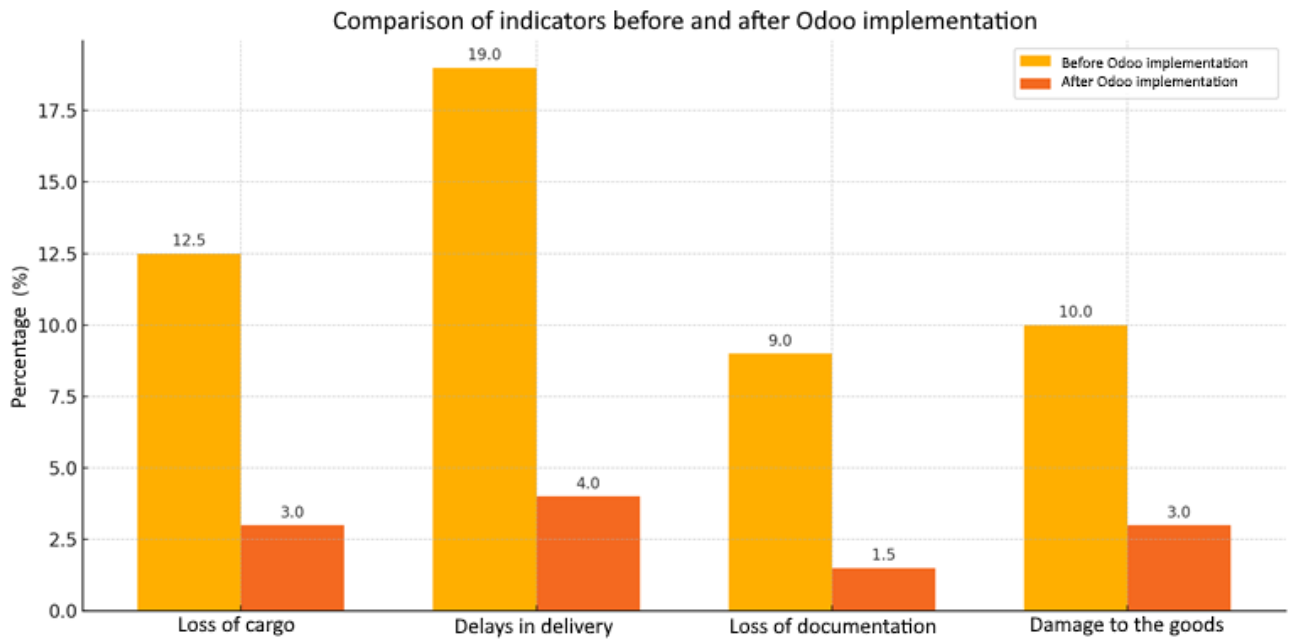
Fig. 3.1 Risk assessment before and after Odoo implementation

Source: compiled on the basis of Table 3.4

The implementation of the Odoo ERP system at Anvit Trans can significantly reduce the risks of cargo loss, delivery delays, loss of documentation and damage to goods. Based on generally accepted indicators, the company can expect a reduction in cargo loss from 8-15% to 2-4%, delivery delays from 15-23% to 3-5%, loss of documentation from 7-11% to 1-2%, and damage to goods from 8-12% to 2-4%. This will increase the efficiency of logistics operations, improve the quality of customer service and save the company's resources.

By implementing these comprehensive risk management practices, DANN ensures the successful implementation of enterprise booking and cargo tracking systems, increasing operational efficiency, customer satisfaction and overall project success.

Chapter 3 summary

The implementation of a corporate cargo booking and tracking system at Anvit Trans is a strategic step that helps to increase the efficiency of resource management and optimise logistics processes. The proposed measures for the implementation of the Odoo system provide an integrated approach that includes technical, operational, financial and external risk management components. Thanks to the detailed terms of reference, the systems will provide convenience and transparency for customers, administrators and managers.

The employee engagement programme for the corporate systems implementation project emphasises the importance of employee motivation and active participation in the change process. Clear communication, initial and ongoing training, role-playing training for specialised departments, recognition of efforts and incentive programmes create a favourable working environment that promotes productivity and employee satisfaction. These measures help to align individual employee goals with the overall project goals, which increases the effectiveness of the new systems implementation.

Risk management in an implementation project is an important element in ensuring a successful system implementation. Identifying, assessing and managing risks helps to minimise potential problems and ensure a proactive approach to their resolution. Implementation of a risk monitoring system, regular audits and the use of key risk indicators help to identify and resolve problems arising during the project in a timely manner.

The proposed risk management measures and strategies demonstrate significant potential to reduce the risks of cargo loss, delivery delays, loss of documentation and damage to goods. The implementation of the Odoo system will increase the efficiency of logistics operations, improve the quality of customer service and save the company's resources. An integrated approach to implementation and risk management will ensure

the successful integration of new technologies into the daily operations of Anvit Trans, increasing its competitiveness and stability in the market.

CONCLUSIONS AND RECOMMENDATIONS

Corporate booking and tracking systems are main trends in modern logistics that deliver significant improvements in operational efficiency, transparency and customer satisfaction. They make such process as booking and tracking fully automated, decrease administrative burdens and minimise the risk of human error, which contributes to more accurate and reliable management of logistics operations. These systems provide companies with the ability to plan and manage resources in real time, which optimises logistics processes and increases their efficiency.

The introduction of corporate cargo booking and tracking systems also helps to improve the visibility and transparency of the supply chain. The use of GPS, RFID and IoT technologies allows for real-time updates on the status and location of cargo. Such transparency allows companies to ensure on-time delivery and respond quickly to any problems that may arise during transport, which significantly increases customer trust and satisfaction.

However, there are flaws such as high implementation and maintenance costs as well as high dependency on technology. Despite this, company's task is to find a way to decrease these risks in order to improve overall performance and follow the industry's trends.

The chosen enterprise for the analysis – LLC "DANN" showed that the company is actively developing and using advanced information technologies to automate logistics processes. The company's key performance indicators demonstrate stable growth, which indicates effective resource management and a high level of professionalism of the team. However, some financial aspects require further optimisation, including improving liquidity and reducing accounts payable. This will allow the company to ensure stable operations and improve its financial performance.

Logistics management system implementation tools, such as TMS, WMS and ERP systems, are key to improving the efficiency of logistics operations and automating business processes. In particular, ERP systems such as Odoo, SAP

Business One, and Microsoft Dynamics 365 provide centralised data collection and automation of management processes, allowing businesses to respond quickly to market changes and make informed decisions. The implementation of such systems helps to reduce costs, increase productivity and improve customer service.

The analysis of the potential client for the implementation of the corporate cargo booking and tracking system showed that Anvit Trans is a promising partner for Dann. "Anvit Trans has considerable experience in international freight transport and logistics, which makes it an ideal candidate for implementing the latest logistics management technologies. The implementation of the Odoo system will allow Anvit Trans to optimise its logistics processes, increase transparency and control, and ensure better customer interaction.

Thus, the use of advanced information technologies in logistics is an important factor in increasing the competitiveness and efficiency of business. Dann has all the necessary resources and expertise to successfully implement corporate logistics management systems, which will allow them to strengthen their market position and provide high quality services to their customers.

The implementation of a corporate cargo booking and tracking system at Anvit Trans is a strategic step that helps to increase the efficiency of resource management and optimise logistics processes. The proposed measures for the implementation of the Odoo system provide an integrated approach that includes technical, operational, financial and external risk management components. Thanks to the detailed terms of reference, the systems will provide convenience and transparency for customers, administrators and managers.

The payback period ratio shows that the company will need about 1 year 1 month to fully recover from implementing the projects

The employee engagement programme for the corporate systems implementation project emphasises the importance of employee motivation and active participation in the change process. Clear communication, initial and ongoing training, role-playing training for specialised departments, recognition of efforts and incentive programmes create a favourable working environment that promotes productivity and

employee satisfaction. These measures help to align individual employee goals with the overall project goals, which increases the effectiveness of the new systems implementation.

Risk management in an implementation project is an important element in ensuring a successful system implementation. Identifying, assessing and managing risks helps to minimise potential problems and ensure a proactive approach to their resolution. Implementation of a risk monitoring system, regular audits and the use of key risk indicators help to identify and resolve problems arising during the project in a timely manner.

LIST OF REFERENCES

1.   Boyko I.S., Babin B.V. Comparative Jurisprudence: a textbook. Odesa, 2011. 152 p.

2.   Vashchenko MM Management of information systems. Odesa: ONU, 2020. 280 p.

3.   Logistics and supply chain management. Kyiv: Znannya, 2019. 290 p.

4.   Horbachenko IO, Savchenko VV Modern methods of project management: a textbook. Dnipro: DNU, 2020. 200 p.

5.   Didenko S.S. Information security: a textbook. Kharkiv: KNEU, 2018. 310 p.

6.   Dolinsky A.A Organisation of project management. Kharkiv: KNEU, 2019. 270 p.

7.   Effective project management / edited by A. I. Kovalchuk. Kyiv: Logos, 2019. 320 p.

8.   Change management in the organisation. Lviv: LNU, 2020. 270 p.

9.   Cargo tracking systems. Kyiv: KNTEU, 2020. 290 p.

10.   Logistics: modern approaches. Kyiv: NAU, 2018. 275 p.

11.   Information technologies in logistics. Kyiv: Logos, 2018. 275 p.

12.   Ihnatenko I.V. Project management: methodological recommendations. Odesa: ONU, 2019. 240 c.

13.   Kanarsky V.M. Information technologies in project management. Kharkiv: KHNTU, 2020. 290 p.

14.   Kovalenko V. M. Project management: modern approaches. Odesa: ONU, 2018. 250 p.

15.   Security of information systems: a monograph. Lviv: LNU, 2019. 320 p.

16.   Management of logistics processes. Kyiv: Znannya, 2019. 280 p.

17.   Kropyvko M.M. Economics of development of peasant farms in Ukraine: a monograph. Kyiv: NSC "IAE", 2016. 382 p.

18.   Information technologies in management. Lviv: LNU, 2018. 265 p.

19.   Lazarenko M.M. Efficiency of project management: a monograph. Kharkiv: KNEU, 2017. 310 p.

20.   Lysenko I.V. Project management: a textbook. Kyiv: KNU, 2019. 240 p.

21.   Fundamentals of information security. Kyiv: Logos, 2019. 310 p.

22.   Marchenko S. G. Change management in the organisation. Kyiv: Znannya, 2020. 290 p.

23.   Melnyk V.V. Risk management in projects. Kharkiv: KHNTU, 2020. 230 p.

24.   Miroshnychenko OI Motivation of personnel: a textbook. Dnipro: DNU, 2019. 240 p.

25.   Logistics and transport. Kyiv: NAU, 2018. 295 p.

26.   Pavlenko O. V. Project management: a textbook. Lviv: LNU, 2020. 270p.

27.   Logistics: theory and practice. Kyiv: KNTEU, 2018. 296 p.

28.   Information systems in logistics. Kyiv: KNEU, 2019. 300 p.

29.   Popovich VM Fundamentals of risk management: a textbook. Odesa: ONU, 2018. 180 p.

30.   Project management: theory and practice / edited by I. V. Lysenko. Kyiv: KNEU, 2018. 320 p.

31.   Romanenko I.A. Fundamentals of change management. Odesa: ONU, 2018. 250 p.

32.   Savchuk O.V. Staff motivation: modern approaches. Kyiv: Lira-K, 2017. 230p.

33.   Security of information technologies. Kharkiv: KNEU, 2019. 320 p.

34.   Logistics systems: theory and practice. Kharkiv: KHNTU, 2018. 265 p.

35.   Project management: modern technologies. Kyiv: Logos, 2020. 280 p.

36.   Tkachenko L.M. Project management: a textbook. Kyiv: KNEU, 2019. 255 p.

37.   Udovychenko A. P. E-commerce and information systems. Lviv: LNU, 2020. 295 p.

38.   Logistics systems and their management. Lviv: LNU, 2019. 270 p.

39.   Information systems in project management. Kyiv: KNTEU, 2020. 290 p.

40.   Fedorov S.G. Information security: a textbook. Dnipro: DNU, 2019. 220 p.

41.   Project management systems. Kyiv: NAU, 2018. 310 p.

42.   Project management in logistics. Odesa: ONU, 2019. 260 p.

43.   Tsvirkun V.V. Personnel management: theory and practice. Odesa: ONU, 2019. 260 p.

44.   Modern methods of risk management. Kharkiv: KHNTU, 2018. 230 p.

45.   Logistics: theoretical and practical aspects. Kyiv: KNEU, 2019. 280 p.

46.   Strategic change management. Kyiv: KNEU, 2020. 280 p.

47.   Shevchuk O. M. Project management: a textbook. Lviv: LNU, 2020. 270 p.

48.   Information systems and technologies. Kyiv: Logos, 2019. 310 p.

49.   Logistics: a textbook. Lviv: LNU, 2018. 275 p.

50.   Corporate Booking and Cargo Tracking Systems: Implementation Best Practices / Edited by J. Smith. New York: Wiley, 2018. 400 p.