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Faculty of Transport, Management and Logistics
Logistics Department

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DIPLOMA THESIS

(EXPLANATORY NOTES)

OF GRADUATE OF ACADEMIC DEGREE

«MASTER»

THEME: **«Formation of a logistics customers service system of a brokerage company»**

Speciality 073 «Management»

Educational and Professional Program « Logistics »

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Kyiv 2022

МІНІСТЕРСТВО ОСВІТИ І НАУКИ УКРАЇНИ
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Київ 2022

NATIONAL AVIATION UNIVERSITY
Faculty of Transport, Management and Logistics
Logistics Department

Academic degree Master

Speciality 073 «Management»

Educational and Professional Program « Logistics »

APPROVED
Head of the Department

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«05» September 2022

TASK

FOR COMPLETION THE MASTER THESIS OF GRADUATE

Viktoriia V. Radchenko
(surname and name)

1. Theme of the master thesis: «Formation of a logistics customer service system of a brokerage company» was approved by the Rector Directive №1225/ст. of September 05, 2022.
2. Term performance of thesis: from September 05, 2022 to November 30, 2022.
3. Date of submission work to graduation department: November 07, 2022.
4. Initial data required for writing the thesis: general and statistical information about broker company in United States, information of the company Total Quality Logistics, services and financial indicators of the company Total Quality Logistics, literary sources on logistics customer service system of a brokerage company, Internet source.
5. Content of the explanatory notes: introduction; theoretical bases of formation of logistics customers service system for a brokerage company; analysis of the market of brokerage services in Ukraine; research of Total Quality Logistics Company's activities on the market of brokerage services; identification of problem areas in the customer service process; recommendations about formation of logistics customers service system of a brokerage company; economic effect of practical implementation of the proposed recommendation; conclusions and appendix.
6. List of obligatory graphic matters: tables, charts, graphs, diagrams illustrating the current state of problems and methods of their solution.

7. Calendar schedule:

№	Assignment	Deadline for completion	Mark on completion
1	2	3	4
1.	Study and analysis of scientific articles, literary sources, normative legal documents, preparation of the first version of the introduction and the theoretical chapter	05.09.22-28.09.22	Done
2.	Collection of statistical data, timing, detection of weaknesses, preparation of the first version of the analytical chapter	29.09.22-10.10.22	Done
3.	Development of project proposals and their organizational and economic substantiation, preparation of the first version of the project chapter and conclusions. Editing the first versions of maser thesis	11.10.22-28.10.22	Done
4.	Preparing the final version of the master thesis, checking by standards inspector	29.10.22-02.11.22	Done
5.	Approval for a work with supervisor, getting of the report of the supervisor, getting internal and external reviews, transcript of academic record	03.11.22-06.11.22	Done
6.	Submission work to Logistics Department	07.11.22	Done

Graduate_____
(signature)

Supervisor of the master thesis _____
(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, Karpun O.V.	05.09.22	05.09.22
Chapter 2	Associate Professor, Karpun O.V.	29.09.22	29.09.22
Chapter 3	Associate Professor, Karpun O.V.	11.10.22	11.10.22

9. Given date of the task September 05, 2022.

Supervisor of the master thesis: _____ Karpun O.V.
(signature of supervisor) (surname and name)

Task accepted for completion: _____ Radchenko V. V.
(signature of graduate) (surname and name)

ABSTRACT

The explanatory notes to the master thesis «Formation of a logistics customer service system of a brokerage company» comprises of 121 pages, 20 figures, 10 tables, 85 references.

KEY WORDS: BROKERAGE COMPANY, FREIGHT BROKER, SERVICE, LOGISTICS CUSTOMERS SERVICE, LOGISTICS CUSTOMERS SERVICE SYSTEM, QUALITY, LOGISTICS PROCESSES, CRM SYSTEM.

The basic principles of broker company and its service and processes are considered in the bachelor thesis.

The theoretical part covers the bases of logistics service management of a broker company. The analytical part is devoted to the research of activity of the Total Quality Logistics.

The subject of the study is a set of theoretical, methodological provisions and practical tools that make up the organizational and methodological support for the formation of a system of logistics service for customers of a brokerage company.

The object of the research is the customer service system of the brokerage company.

Methods of research are analysis, synthesis, induction, deduction, modeling, generalization.

Materials of the thesis are recommended for use during scientific research, in the educational process and in the practical work of specialists of logistics departments.

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NOTATION

3PL – Third Party Logistics;

CRM – Customer Relationship Management;

FTL – Full Truckload;

KPI – Key Performance Indicators;

LMS – Learning Management System;

LTL – Less then Truckload;

NPV – Net Present Value;

SEO – Search Engine Optimization;

SMM – Social Media Marketing;

SCM – Supply Chain Management;

TQL – Total Quality Logistics.

INTRODUCTION

Logistics management involves a lot of planning: the more steps, the better. By considering every stage of the product, its distribution and the return of materials and supplies, you're more likely to increase efficiencies and increase revenues.

The larger the operation, the more complex and difficult the logistics management. Therefore, the more you need a strong logistics management plan. In order to be prepared and have the best plan possible, the following are some tips to follow [46].

Logistics Management can be reduced to the fundamentals of the most efficient and effective ways to move resources and products to the customer. This ultimately provides the best service to customers who are ever demanding faster and more efficient services.

An important concept within logistics transportation systems operations is logistics customer service. This concept is based on the overall scope of the supply chain. Traditionally it has been difficult for components of the supply chain to define their role in the overall customer service delivered to end-users. However, the growing trend is for a larger awareness of "their role not only with reference to trading partners but also to the end customer and at the point to the fact that logistics customer service in the supply chain functions as communicating vessels". This is difficult when you consider that companies within the supply chain serve a dual role. They function as customers of the preceding entity within the supply chain then in turn serve as suppliers for the next link in the supply chain. This has resulted in companies planning strategically with the end-user in mind. "It is the end customer who decides whether the creation and functioning of the entire supply chain are justified". The design of the supply chain is justified by customer sales [1].

Customer service in logistics is the activities, service actions are provided, acting as added value. The aim is to bring more value than the core service that customers need and bring the most satisfaction to customers. For businesses or

business organizations today offer more services to customers besides their main products.

Customer service in this sector implies the creation of a client-centric work culture where your clients are the nucleus of your company's activities. A client-centric work culture enables every member of the team to work according to their responsibilities the ultimate objective of which is to meet the client's needs and expectations. Putting it simply, each part of your team needs to work on keeping the customers satisfied throughout every step of the project. Client servicing is a very important factor that gives a logistics company a considerable advantage over its competitors.

With a plethora of logistics companies in every city around the world, this industry is witnessing stiff competition in the post-pandemic months. In this scenario, enhancing your customer service can be a fool proof way to retain your old clients and gain new ones. For example, some of the essential aspects of good client service are providing transparency, timely updates about shipment status, regular communication, and immediate response. Additionally, the logistics companies also need to come up with proactive solutions, make good on their commitments, and optimize their operations by means of digitization [11].

Technology and innovation has changed customer expectations and the way that companies communicate. While businesses have become more accessible by having a digital presence, the need is to successfully communicate with customers to meet their needs.

A freight broker is an intermediary between a shipper and freight service provider. Freight brokers can specialize in certain types of freight, such as equipment hauling on lowboys, oversize, bulk tanker, auto, or other types of freight transportation.

Freight Management is then a subset of Logistics Management. It is in no way diminished in terms of importance however. Without Freight Management, and all of the people who make it happen, there is no ability for Logistics Management to function and fulfill its objectives [47].

Depending upon your long-term interests, using an agent or distributor is an excellent way to learn about the Ukrainian market, gauge market potential, establish connections, develop a customer base, establish a foundation for future expansion into new product lines, introduce new-to-market technologies, and develop product recognition in the market. To find a qualified potential partner, the Commercial Service recommends using one of our services, such as the Gold Key Service, to conduct initial screening and meet with potential partners, agents, or representatives. Attending or participating in Ukrainian trade exhibitions is another way to identify and gauge the qualifications of prospective partners. For more details on the trade exhibitions taking place in Ukraine, please refer to the U.S. Commercial Service in Ukraine.

The Commercial Service strongly advises against covering the Ukrainian market from regional offices in Europe, particularly from Russia. Ukrainians prefer to deal directly with local agents or representatives and subsequently an on-the-ground presence is crucial to successful business development in Ukraine. In addition, your Ukrainian partner can help you explore markets beyond Ukraine. Finally, given the ongoing war between Ukraine and Russia, several companies have reported that commercial relationships managed by regional offices in Russia have become very politicized and that information to U.S. headquarters companies regarding the Ukrainian market may be distorted as a result [20].

Brokers provide an important and valuable service to both motor carriers and shippers. They help carriers fill their trucks and earn a commission for their efforts. They help shippers find reliable motor carriers that they might not have otherwise known about. In fact, some companies use brokers as their traffic department, allowing the broker to coordinate all of their shipping and transportation management needs.

Brokers aren't new to the trucking industry; they've been around since the industry itself began in the early part of the 20th century. Prior to the 1970's, however, regulations governing brokers were so restrictive that few firms were willing to even try to gain entry into the industry. But with dramatic changes in federal transportation policy during the 1970's, regulatory restrictions have eased, creating new entrepreneurial opportunities in the third party logistics provider arena.

An industry so huge and diverse requires a wide range of participants to thrive. Some of these participants' titles may be a bit confusing, and some of their responsibilities may overlap.

A foreign company interested in starting a business in Ukraine has the option of forming a joint stock company, a limited liability company, a wholly-owned subsidiary, or a representative office. It is also possible to work in Ukraine through joint venture/cooperation agreements and investment funds/mutual funds. For regulatory and taxation purposes, representative offices are considered to be independent legal entities, with some exceptions. A representative office can carry out marketing, promotional, and other auxiliary functions, but it cannot sell goods or services. The Commercial Service recommends establishing a wholly-owned company in Ukraine if you intend to carry out manufacturing or other significant local commercial activities. A foreign legal entity may have both a representative office and a wholly-owned subsidiary. A limited liability company is the most popular form of a legal entity in Ukraine as it can conduct a broad range of business activities [21].

The relevance of this topic is that freight brokers provide an important and valuable service to both carriers and shippers. They facilitate carriers filling the trucks and earn a commission for their efforts. They assist shippers in finding reliable motor carriers that they might not have otherwise known about. As a matter fact, some companies use brokers as their traffic department, allowing the broker to completely coordinate all their shipping needs.

The purpose of the diploma thesis is the generalization of theoretical, practical analysis and development of scientific and methodical recommendations for the formation of a system of logistics service for customers based on the example of a brokerage company.

The object of the research is the customer service system of the brokerage company.

The subject of the study is a set of theoretical, methodological provisions and practical tools that make up the organizational and methodological support for the formation of a system of logistics service for customers of a brokerage company.

To achieve the goal, the following tasks were set:

– to investigate the essence of the concept of logistics system;

– to consider the problems of logistical customer service;

– to determine the principles of formation of the logistics service system for clients of the brokerage company;

– to analyze the market of brokerage services in Ukraine;

– analyze the activities of the Total Quality Logistics company and the market of brokerage services;

– introduce logistics customer service into the activity of the brokerage company;

– to propose the conceptual principles of forming a system of logistics service for clients of a brokerage company;

– develop recommendations for information support for the operation of the logistics service system for clients of the brokerage company;

– calculate the economic effect of the proposed solutions.

The scientific novelty of the obtained research results lies in the deepening of the theoretical provisions and the development of the conceptual foundations of the formation of the logistics service system for the clients of the brokerage company, the implementation of which will increase the effectiveness of the brokerage company's functioning.

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

In the process of writing the thesis was used materials of internal reporting of the enterprise, data from statistical directories and materials of practicing specialists in the field of logistics and management, published in periodicals, monographs, textbooks and electronic sources.

CHAPTER 1
THEORETICAL BASES OF FORMATION OF LOGISTICS CUSTOMERS SERVICE SYSTEM OF A BROKERAGE COMPANY

1.1 The essence of logistics customers service system

Customer service in logistics is the activities, service actions are provided, acting as added value. The aim is to bring more value than the core service that customers need and bring the most satisfaction to customers. For businesses or business organizations today offer more services to customers besides their main products.

Logistics customer service is a part of a firm's overall customer service offering, customer service elements that are specific to logistics operations including fulfilment, speed, quality, and cost. The term fulfilment process has been described as the entire process of filling the customer's order. The process includes the receipt of the order, managing the payment, picking and packing the goods, shipping the package, delivering the package, providing customer service for the end-user, and handling the possible return of the goods.

The term "customer service" needs clear explanation in order to relate with logistics. For example, manufacturers' first concern always is with how efficiently the cargo reaches its destination without any delay or any sort of complication. This is important because of the reputation of the company, which solely depends on customer perception. Businesses flourish based on the manufacturer's capability of meeting these customer expectations. One approach to maintaining good logistical support and cutting costs is to concentrate on communication solutions such as tracking shipment, status update, and accommodating last minute change request. With the advancement of technology, many services are available to the customer by limiting confusion, ambiguity, and inefficiency.

As a result, these services such as shipment tracking helps not only pushes away unnecessary expenses out of the manufacturer's existing operational exercises, but also increase the overall customer experience and helps improve financial aspects. Some technology driven service goals are described as follows:

– automate timing/location updates, rate quotes, pick-up scheduling, current transit times, or proof of delivery with interactive voice response (IVR) self-service;

– provide inquiries about updates regarding service and measures the needs of service calls within the system;

– generate and deliver notifications, such as weather alerts, changes in schedules, and more with campaign management tools to alert the respective personnel;

– provide security of overall customer information and payment transactions and minimize fraud;

– empower customers by providing information regarding the purchased products so that they can express and communicate better their expectations;

– identify and predict customer interest to make every smooth interaction between the customer service provider and the customer;

– show efficiency with shorter response time by improving contact centre visibility to the customer;

– meet and interact with clients and employees on mobile devices;

– continuously enhance policies and approaches through gathered customer feedback data and analyse and make reports for executing better business strategies;

– ensure customer reliability and a consistent experience for clients by avoiding unnecessary costs and improving workforce development [1].

It will be apparent from the previous comments that the mission of logistics management is to plan and co-ordinate all those activities necessary to achieve desired levels of delivered service and quality at the lowest possible cost. Logistics must therefore be seen as the link between the marketplace and the supply base. The scope of logistics spans the organisation, from the management of raw materials

through to the delivery of the final product. Fig. 1.1 illustrates this total systems concept.

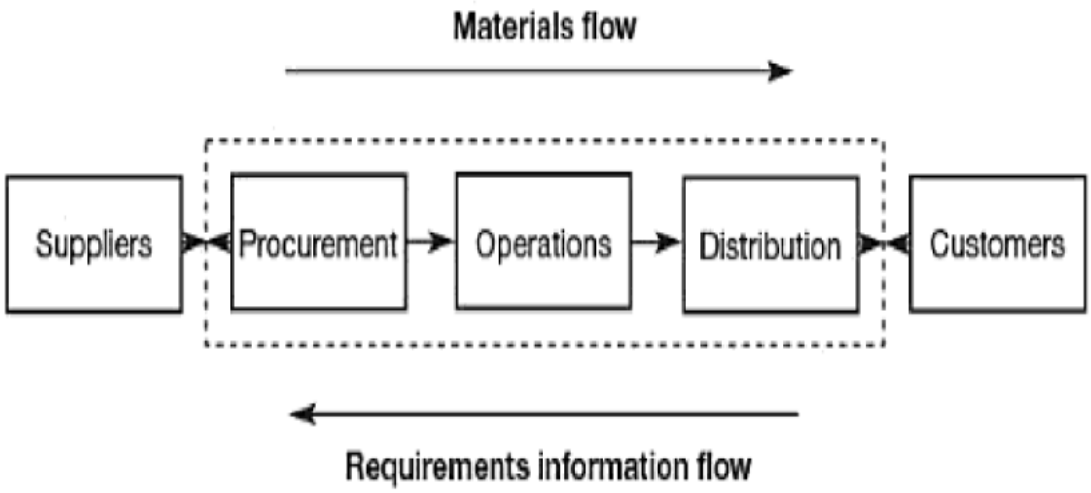

Figure 1.1 – Logistics management process

Logistics management, from this total systems viewpoint, is the means whereby the needs of customers are satisfied through the coordination of the materials and information flows that extend from the marketplace, through the firm and its operations and beyond that to suppliers. To achieve this company-wide integration requires a quite different orientation than typically encountered in the conventional organisation [29].

A global economy has inherently a very complex logistical system. Getting a raw material from China to a US manufacturer and then the final product back to Japan can have many factors that can cause a system breakdown. Weather, a natural disaster, an economic upheaval, or even political changes can affect the supply chain in many drastic ways. For instance, COVID-19 and its associated impacts paralyzed the health system deliveries in many places including in the U.S. Many hospitals were out of ventilators and other personal protective equipment during this pandemic. Inventory is the attribute of a supply chain or logistical system that will allow them to strive in one of these dramatic events. Inventory will allow the system the time it needs to recover to prevent performance levels [1].

In the literature, there are various methods of evaluating the performance of suppliers, developed assessment scale [12], which can be conventionally used to measure the level of customer service of any company. To select the parameters, you can use surveys of consumers. After that service standards need to bring to the customer, it is an important tool of competition. Possible market segmentation and providing different levels of service for different market segments.

To manage the logistics activities of industrial enterprises needed to measure the quality of logistics services. For this purpose, defined (criteria) parameters of quality of service and management of these parameters is performed so that the discrepancy between the expected and actual levels of selected criteria (parameters) were minimal. For this there are different methods of assessment: questionnaires to customers and potential customers, expert opinions, statistical methods, etc.

The difficulty lies in the fact that most of the parameters of quality of service cannot be measured quantitatively, i.e., receive a formal evaluation. In most cases we must use qualitative descriptions like above, below better – worse reliably – is not reliable, less likely – more likely, more affordable – less available, etc.

The following analysis of the literature showed that there are currently no methods of evaluating the level of customer service that fully meet the following requirements: consistency, completeness of information, the use of measurable indicators, a comprehensive system of indicators and criteria, reliability of results, ease of collecting baseline data, use of results, etc.

Therefore, author's method of estimating the level of service is shown in order to improve the level of customer service evaluation developed.

The main element of the service level is the speed (time) services, it is important for the majority of consumers. Customer service is the responsibility of marketing and logistics. Marketing identifies and often creates the need for a particular product (works, services) through advertising. A quality logistics helps to meet this need. Serving users is "Product" of logistics [2]. But marketing and logistics services interpreted in different ways.

Let`s introduce the concept of "logistics service users". It is necessary to distinguish the level of service on the level of logistics services, which is its integral part. That is, to the level of performance of logistics services will refer only to those which depend on the level of enterprise logistics. For example, indicators such as honesty, friendliness of staff, etc., in our opinion, does not reflect the efficiency of enterprise logistics for the consumer, but in general are associated with the service and are marketing competence.

One of the known definitions of logistics means the ability to ensure the availability of the right product in the desired quantity and quality specified in the right place at the scheduled time for a particular customer with the best cost. This definition emphasizes the importance of service. Customer service – a set of activities carried out during the execution of orders, to meet their needs and aimed at the creation of the clients idea of the reliability of the relationship with this company [3]. Customer service – the process of creating substantial benefits, containing added tax, subject to maintaining an effective level of costs in the supply chain. This way, the customer service is considered as a process aimed at supply chain management [2]. Logistics service performs an integrating function. Such a function is shown in the interaction of the functional areas of logistics in order to meet consumers. Order fulfilment is at the center of attention service system. Warehousing, inventory management, transportation, order management, etc. – is part of the implementation of the order and customer service [58].

If we consider the logistics services from the point of view of the industrial enterprise, it is a set of technologies, techniques, methods of enterprise interactions with customers to ensure continuous communication between the time of ordering and completion of its implementation with a view to long-term customer satisfaction.

The level of logistics services – is the degree of customer satisfaction expressed in the proper execution of orders, there is no error, the effective provision of services and constant striving to improve the level of service, as well as under the level of customer service standards, terms of the contract or the usual requirements for quality of service [2].

Assess the level of customer service is only possible when it is measured, i.e., obtaining quantitative assessment of the degree of customer satisfaction. Measuring the level of customer service in logistics is not possible without the use of specialized tools in the form of a system of performance indicators. It allows you not only to measure the level of achievement of planned results (such as reliability, accuracy of orders, etc.), But also to monitor the dynamics on the integral and particular indicators.

Service level indicators of each company can sufficiently differ from each other due to their sphere of activity, types of products or services, consumer demand, etc., and therefore. Nevertheless, the key factor here is the turnaround time as the period between placing and order fulfilment.

In the literature, there are various methods of evaluating the performance of suppliers, developed assessment scale [4], which can be conventionally used to measure the level of customer service of any company. To select the parameters you can use surveys of consumers. After that service standards need to bring to the customer, it is an important tool of competition. Possible market segmentation and providing different levels of service for different market segments.

According Rodnikov A.N., the level of service is a comprehensive index, calculated on set criteria, the composition of which may vary in different systems. The most important – is the ability of the logistics system to ensure delivery of the right product to the consumer due to the time and space required. Calculated as the probability of the delivery of the ordered goods in the required time in the right place and is not less than 0.95 in real logistic systems [5].

Customer service level should be viewed as an integral component, which includes many options logistics services, such as lead time, a willingness to supply, range, fidelity deliveries, accuracy of the order, the availability (probability of occurrence of a shortage of goods, the saturation rate of demand; the frequency of the completeness of inventories coverage orders for delivery); features (speed of order execution, supply continuity, flexibility, ie nonstandard orders execution); reliability (compliance regulations demand stocks); Territorial convenience and others. In the

study of a large number of different works on logistics and supply chain management, as well as the results of economic activity of the enterprises we have identified and analysed about 90 of such indicators [72].

The company, created its own system of service level indicators, can measure the effectiveness of the level of service, and also to compare the results with those of other enterprises.

This allows us to define new targets to improve the effectiveness of its activities. Focused logistics service strategy is a means to improve market efficiency and competitive differentiation for firms employing logistics [6]. "The level of logistics customer service directly affect the market share of the company, its overall logistics costs and, ultimately, profitability, determining not only the loyalty of existing customers, but also the number of its potential customers, which will be the actual" [7].

In many areas the result of quality service are repeat orders from customers. Proven methods of high-quality customer service can be applied to the whole logistics channel [3]. Currently, consumer demand is largely determined by the level of service. Studies in European enterprises show that the reputation of the company has a greater influence on customer orientation. This factor is most important for more than 90% of enterprises [8].

It is necessary to monitor the rate of logistics services in the dynamics. In the process of monitoring identified gaps, and where the company lags behind the demands of consumers, corrective actions can be carried out. It is advisable to analyse the level of service direct competitors for benchmarking procedure. When performance indicators exceed market requirements, there are two possible ways of development. You can either cut the process to a suitable level in order to reduce costs at the same time or continue to develop them as a criterion for receiving the order.

Level of performance of logistic service systems can be quite different in different circumstances (Table 1.1).

Table 1.1 – The level of logistic service indicator

№	Indicator of level measurement	The meaning of the formula	The criterion of the logistics service level effectiveness
1	2	3	4
1	Term of order fulfilment	The period of time between the moment of registration of the application and implementation of supply (provision of services, execution of works)	→ min
2	Compliance with the expectations of the consumers to the actual time of the order	The number of applications, timing of which correspond exactly to the expectations of customers * 100 % / total number of client requests.	→ 100%
3	Precise execution of orders on terms (continuity)	Number of orders, timing of which in fact correspond exactly to the terms of contracts * 100 % / total number of customer orders.	→ 100%
4	Lack of product scarcity (the ability to perform work, services)	The probability of the absence of production deficit.	→ 100%
5	The completeness of the range	Number of SKUs into the * 100 % / number of required SKUs.	→ 100%
6	Accuracy of order fulfilment	The number of applications, the run options that in fact correspond exactly to the terms of contracts * 100 % / Total orders.	→ 100%
7	Willingness to orders	The number of orders that have the same customer requests * 100 % / number of client requests.	→ 100%
8	Flexibility of order fulfilment	The number of changes made to orders being implemented * 100 % / number of customer requests for change orders.	→ 100%
9	Information support	Number of fast and accurate responses to customer requests / total number of client requests.	→ 100%
10	Correspondents to the level of service costs	Striking a balance on two criteria: the level of logistics services and the costs it.	→ 100%

However, the key factor here is the lead time as the period between the placement and execution of the order. Indicators of logistics services can be categorized as followed:

– the measurability: quantitative, qualitative;

– integrated assessment: complex, simple;

– with respect to time during the period (floating), at time (static);

– comparing the degree: absolute; relative;

– the frequency of observations: the permanent, periodic;

– by priority (importance) for consumers: significant, less significant, insignificant;

– on the application: universal, special;

– scale: general, single;

– the nature of the evaluation: positive, negative;

– on units of measurement: cost, in terms of time, in physical units (units of measurement of mass, volume, etc.).

– by the number of influencing factors: single factor, multi-factor.

From the set of indicators discussed in the literature and used in practice management companies (90), detected and analysed by us, as the level of logistics service system of indicators will take the ones that are most objective and complete, in our opinion, reflect the efficiency of logistics for customers, provide measurability and clarity, and which can be adjusted depending on the specific conditions if necessary (Table 1.2).

Since the term of the order is the main parameter of the level of service, it uses 3 different parameters (serial numbers 1, 2, 3) to measure it in the system.

Further indicators are determined by weight. Determining the weights should be done by skilled team of experts from the number of customers of this company. The group should be a representative sample of the total number of consumers. Matrix allows to set priorities among the indicators. Matrix that is ready to calculate each indicator rating has the form shown in the Table 1.2.

Comparison of produced is done in pairs. For example, with the first is compared with the second, then the third, with fourth, etc.; then the second is compared with the third, fourth, fifth, etc. Most important from the point of view of experts criterion is attributable to a INDICATE-value "1" less important – "0". After

this result for each indicator is added, and all amounts are reduced to a common denominator, that is the total number of indicators. That is how we obtain the weight of each indicator.

Table 1.2 – Determination of the scale service level indicators

Indicator	1. Term of order fulfillment	2. Compliance with the expectations of the consumers to the actual time of the order	3. Precise execution of orders on terms (continuity)	4. Lack of product scarcity (the ability to perform work, services)	5. The completeness of the range	6. Accuracy of order fulfillment	7. Willingness to orders	8. Flexibility of order fulfillment	9. Information support	10. Correspondens to the level of service costs
1. Term of order fulfillment										
2. Compliance with the expectations of the consumers to the actual time of the order										
3. Precise execution of orders on terms (continuity)										
4. Lack of product scarcity (the ability to perform work, services)										
5. The completeness of the range										
6. Accuracy of order fulfillment										
7. Willingness to orders										
8. Flexibility of order fulfillment										
9. Information support										
10. Correspondens to the level of service costs										
Points										
Weight of the indicator										

Then the integral indicator of the level of logistics customer service is calculated. It is a weighted average value, i.e., the sum of products of values of service parameters and their weights divided by the sum of the weights.

1.2 Communication with customers in a digital environment

To begin with Communication is simply the act of transferring information from one place, person or group to another.

Every communication involves (at least) one sender, a message and a recipient. This may sound simple, but communication is actually a very complex subject [22].

Technology and innovation has changed customer expectations and the way that companies communicate. While businesses have become more accessible by having a digital presence, the need is to successfully communicate with customers to meet their needs.

Various online mediums are also being used by businesses to market their products and services. Following are some ideas for effective communication with online customers [16].

1. Communicating Through Social Networking Websites.

Social media has grown with time and is now being used as an information sharing medium by customers as well as businesses. There are 2.03 billion active social media users and the figures would increase in the coming years.

2. Facebook.

Facebook provides a powerful yet systematic way to increase sales which gives businesses the ability to reach targeted customers. Anyone can sign up and start promoting their products but if the aim is to establish the company as a reliable brand and increase your engagement with followers, you need to approach things differently.

You have to know the importance of quality content, how and when to present it. Facebook’s page insights can help companies establish strategies as to how and when to engage with fans and followers and can also help in experimenting what works best for the business. While communicating with customers on Facebook, understand who your target audience is and what they would want.

3. Twitter.

This social media platform is used by businesses to constantly update customers and engage with them in one-to-one conversations. Twitter allows business to be precise and responsive at the same. It can also be used as a platform to advertise as it caters to an average of 236 million active members per month. Companies can make the most of this by engaging with customers regularly and responding to them in a timely manner. This would enhance the brand image and the company will also come across as responsible and reliable.

4. Instagram.

After Twitter and Facebook, Instagram is appearing to be the next big platform for customer engagement. Engagement rate on Instagram is 15 times higher than Facebook and the videos are twice as popular as compared to pictures. Businesses can not only use this platform to create hype for their products and services but, can also post behind the scenes footage, create catchy hashtags or come up with brilliant captions to get their customer's attention. Companies can engage with customers through the comments section and answer any queries they might have.

5. Communicating with Live Chat.

Live chat service has seen a lot of growth and popularity in recent years. It is being integrated on websites of various companies because businesses have begun to understand the importance of customer engagement in real time.

According to a survey conducted by EConsultancy, 73% of the customers experience a higher level of satisfaction using live chat as compared to email and phone.

For getting the most out of your live chat it is vital to respond in a timely manner, understand the needs of your customer and provide the service 24/7 in multiple languages. Live chat technology is also a great way to assess customer satisfaction and gather feedback about products and services.

6. Webinars and Videos.

ClickMeeting created an infographic which explained that 68% businesses run at least one webinar a month. Webinars are seminars which are arranged online. Executives, today, are signing up for creating webinars because it means instant

access to the public and if the people like what you say, you become an instant success. Webinars can be used to promote the ideology of the company and this can also help the company create a positive image for itself by helping and guiding customers. [60]

According to the Content Marketing Institute, more than 60% marketers are using webinars as part of their marketing content. Videos are another great way to engage customers. For example, YouTube has more than 1 billion users and millions of views are being generated every day.

A large number of people use YouTube to research and discover services/products that they're interested in purchasing. Businesses can create "how-to" videos, product reviews, etc. to attract new customers while effectively serving existing customers. This would help them gain popularity and the company would also be able to reinforce itself in a subtle manner.

These practices help businesses improve customer engagement via digital channels. It is essential to keep in mind that the digital environment is constantly expanding and businesses need to keep up with the latest trends and innovations in order to facilitate their customers [23].

The final part of a communication is feedback: the recipient lets the sender know that they have received and understood the message.

Recipients of messages are likely to provide feedback on how they have understood the messages through both verbal and non-verbal reactions. Effective communicators pay close attention to this feedback as it is the only way to assess whether the message has been understood as intended, and it allows any confusion to be corrected.

Bear in mind that the extent and form of feedback will vary with the communication channel. Feedback during a face-to-face or telephone conversation will be immediate and direct, whilst feedback to messages conveyed via TV or radio will be indirect and may be delayed, or even conveyed through other media such as the Internet.

Effective communicators pay close attention to this feedback as it is the only way to assess whether the message has been understood as intended, and it allows any confusion to be corrected. [24]

1.3 The specifics of managing the services of a brokerage company

A freight broker is an intermediary between a shipper and freight service provider. Freight brokers can specialize in certain types of freight, such as equipment hauling on lowboys, oversize, bulk tanker, auto, or other types of freight transportation.

A load may be posted on a truck load board by shippers, brokers, or agents. This may occur with special orders, brokers and/or agents that do not have an established logistics base, or brokers and agents seeking a backhaul for a truck not in a high-traffic lane. Many brokers specialize in certain freight such as full truckload (FTL) or less than truckload, auto, boat or yacht, bulk tanker (liquid or dry goods), oversize, equipment hauling on lowboys, flatbed, drop deck, or any other mode of freight transportation with enough loads [14].

So what exactly does a freight broker do? Very simply, a freight broker is an individual or a company that brings together a shipper who has goods to transport with an authorized motor carrier that wants to provide that service. A freight broker falls into the category of transportation intermediary, which is a company that is neither a shipper nor an asset-owning carrier, but plays an integral role in the movement of cargo.

Transportation intermediaries leverage their knowledge, investment in technology and people resources to help both the shipper and carrier succeed [61].

Brokers provide an important and valuable service to both motor carriers and shippers. They help carriers fill their trucks and earn a commission for their efforts. They help shippers find reliable motor carriers that they might not have otherwise

known about. In fact, some companies use brokers as their traffic department, allowing the broker to coordinate all of their shipping and transportation management needs.

Brokers aren't new to the trucking industry; they've been around since the industry itself began in the early part of the 20th century. Prior to the 1970's, however, regulations governing brokers were so restrictive that few firms were willing to even try to gain entry into the industry. But with dramatic changes in federal transportation policy during the 1970's, regulatory restrictions have eased, creating new entrepreneurial opportunities in the third party logistics provider arena.

An industry so huge and diverse requires a wide range of participants to thrive. Some of these participants' titles may be a bit confusing, and some of their responsibilities may overlap. So who are the key players in brokerage and what do they specifically do? (Table 1.3).

In a perfect world, of course, each entity in the industry would handle its traditional role and that's all. However, the transportation industry is changing so rapidly that once-distinctive lines are always blurring. Also, it's quite common for a successful freight broker to expand his or her business by creating subsidiaries or additional companies that offer other freight services [62].

Some brokers also may opt to use agents to develop a wider scope of operations. In this context, agents are independent contractors who represent a freight broker in a given area. This gives the broker a local presence while giving the agent access to the broker's services for their own customers. An agent's work is very similar to what a broker does, but the agent functions under the auspices of the broker and the broker is the one responsible for such issues as paying carriers and maintaining the required surety bond.

As you can tell, there are many different types of freight brokers out there. Hopefully this clears up what their roles are and what services they provide. A good freight broker or 3PL is a crucial asset in your supply chain [15].

The transportation and logistics industry should work on enhanced customer service. The reputation and brand image of a logistics company or any company for that matter are entirely dependent on the customers. Just like any other sector, the

transportation and logistics industry is constantly working towards creating a long-term mutually beneficial customer relationship. A sound relationship with the clients is critical for the long-term success of a freight forwarding company. For this reason, logistics companies need to invest in creating a robust customer support team.

Table 1.3 – Key Players in Brokerage

№	Key Players	Their functions
1	2	3
1	Freight Broker	A freight broker connects shippers with motor carriers to move their goods.
2	Shipper	A shipper is an individual or business that has products or goods to transport.
3	Motor Carrier	A motor carrier is a company that provides truck transportation. "Private" (A company that provides truck transportation of its own cargo). "For Hire" (A company that is paid to provide truck transportation of cargo belonging to others).
4	Freight Forwarder	Often confused with freight brokers, freight forwarders are significantly different. Forwarders typically take possession of the goods, consolidate numerous smaller shipments into one large shipment, then arrange for transport of that larger shipment using various shipping methods, including land, air and water carriers.
5	Import-Export Broker	They are facilitators for importers and exporters. Import-Export Brokers interface with U.S. Customs, other government agencies, international carriers, and other companies and organizations that are involved in international freight transportation.
6	Agricultural Truck Broker	Generally small and operating in one area of the country, unregulated agricultural truck brokers arrange motor carrier service for exempt agricultural products.
7	Shipper's Associations	Shipper's associations are exempt, nonprofit, cooperative organizations formed by shippers to reduce transportation costs by pooling shipments. Shipper's Associations operate in a manner very similar to that of freight forwarders, but their service is limited to their members and is not available to the general public.

Your customers seek a seamless experience while working with your brand. Customer service in freight forwarding is all about providing value-added services, timely delivery, and immediate response that would guarantee their satisfaction with your company. In other words, strong customer service is imperative for gaining the

loyalty and trust of your clients. Precisely for this reason, the transportation and logistics industry needs to work on providing real-time information, solve problems quickly, and keep the customers informed at all times. Today's blog is all about the importance of customer service in the transportation and logistics industry [73].

Customer service in this sector implies the creation of a client-centric work culture where your clients are the nucleus of your company's activities. A client-centric work culture enables every member of the team to work according to their responsibilities the ultimate objective of which is to meet the client's needs and expectations. Putting it simply, each part of your team needs to work on keeping the customers satisfied throughout every step of the project. Client servicing is a very important factor that gives a logistics company a considerable advantage over its competitors.

With a plethora of logistics companies in every city around the world, this industry is witnessing stiff competition in the post-pandemic months. In this scenario, enhancing your customer service can be a fool proof way to retain your old clients and gain new ones. For example, some of the essential aspects of good client service are providing transparency, timely updates about shipment status, regular communication, and immediate response. Additionally, the logistics companies also need to come up with proactive solutions, make good on their commitments, and optimize their operations by means of digitization [11].

As shipping becomes more complex due to supply chain woes, political turbulence, and market inflation, customer service is increasingly important within logistics business relationships. Key interactions between prospects or customers and a transportation or logistics brand can make or break that provider's reputation.

Missing tracking information, lost packages, weather delays, complex customs paperwork, rate increases, accessorial charges, and even nuances of cultural differences and international relations, are just a few of the anxieties that carriers, freight forwarders, and 3PLs have to calm for their clients who have large investments in transit on trucks, planes, and ships [75].

Moving forward, customer support and inside sales departments will only need to increase their availability and their service commitment to their shippers– and their consignees– in order to handle the complexities of their shippers' evolving needs.

Here, we'll share five of the most important components of customer service that today's transportation and logistics companies must incorporate within their customer lifecycle to retain and grow their client portfolio.

1. Omnichannel options.

Modern consumers come to the table with a number of preconceived notions of how customer service should work, many of which are derived from e-commerce – and wildly out of step with the capabilities and capacity of other industry norms.

Providing seamless service is imperative. When customer expectations are high in other areas, carrier-shipper customer experience should meet that bar. But what does that service look like? [64].

Omnichannel support is in high demand across industries. Having different ways for customers to seek help ensures that people get the support they need on the platform they feel the most comfortable using.

Research shows that more than 50% of customers across all age groups typically use the phone to reach out to a service team, but the other 50% still need support. Meet your customers where they are by providing support through various channels, including phone, email, and live chat.

2. 24/7 service.

The global supply chain runs at all hours of the day, regardless of where your call center is located. Many customers aren't able or willing to wait until office hours in your time zone to seek resolution for their inquiries, so you need an all-hours, ready and available team.

You should have availability to handle your customers' concerns when they need help. For example, DDC FPO supports it carrier and 3PL partners with 24/7/365 customer service teams that will quickly and effectively respond to inquiries while your in-house office staff is sound asleep at home. This kind of fast response resolution strengthens your brand and helps retain customers.

3. Multilingual capabilities.

When you're looking for timely and complete resolutions in the world of global shipping, you need to be able to offer scalable and high quality services in multiple languages.

Multilingual capabilities ensure the best customer experience possible, where no information is lost in translation. A customer service model that lets you overcome language barriers for better accuracy, more detailed and definite verbal exchanges will foster stronger, stickier relationships, and quicker resolutions for client retention.

With multilingual support, you can overcome challenges like miscommunication and ensure you hit your delivery targets on time, every time.

4. Support for business continuity.

A lot can happen in the world before freight gets from point A to point B. Turmoil from trade disputes, cyberattacks, natural disasters, pandemics, or international conflict creates unforeseen external market forces that disrupt the flow of goods. Unexpected sanctions can change regular cargo exchange practices in an instant.

You want to ensure that your team can withstand the unexpected and know that they have a business continuity plan with redundancy built-in (not to mention the experience needed to prevent service outages.) Additionally, locked-in rates can help your organization remain stable through uncertain times.

5. Emphasis on relationship building

A positive customer service experience can drive customers to choose you over your competitors, so your customer journey needs to be mapped out as an opportunity to build relationships that generate repeat business – not just a way to solve customers' issues as they arise. In addition to friendly, relationship-focused customer service, the ideal strategic partner will provide sales and account nurturing services to help you expand and retain your client base [10].

A good relationship with your clients will augment your reputation, and get you many new clients. Moreover, the word of mouth of a satisfied customer goes a long

way in obtaining many new project opportunities. On the other hand, lack of communication and poor customer service will lead to a damaged relationship with customers and eventually loss of clients.

Some of the benefits of good customer service in the transportation and logistics sector are enumerated below.

Untimely delivery, lack of communication, cargo theft or damage are a few factors that translate as poor customer service. Companies providing top-notch customer service generally have a great market reputation. A dissatisfied customer can leave a negative review of your company on your website or social media handles. Even one or two negative reviews can spell disaster for your business. This is the most important reason why you need to focus on customer satisfaction. Augmenting your brand image will also give you a competitive advantage allowing you to stay ahead in the race.

When your customer is satisfied with your services, they will look no further for their future project requirements. Outstanding client servicing is the best way to create a loyal customer base who will eventually become advocates of your brand. For example, a few added services like instant quote generation or providing a platform for checking shipment status are great ways to improve customer services.

Excellent customer service not only helps you create a loyal client base, but also gets you new clients. A happy customer will refer your services to their peers in the industry which in turn can get you more clients. Simply stated, you need to give your customers enough reasons to choose your services over the rest. The most straightforward way of doing this is to invest in customer servicing.

Timely responding to requests, questions, complaints, and feedback is a smart way to provide value-added services for your clients. For this reason, creating a separate department entirely dedicated to customer service is always a good idea. Moreover, when it comes to the effective movement of cargoes, the presence of a customer service department will ensure that the clients are kept updated about the delivery status of their shipment. It is their job to answer complaints and immediately respond to any inquiries your customers might have. They will inquire into the cause

of complaints so that you can implement measures that will help you avoid a similar circumstance in the future. A customer service department is a structural change in your business that will serve the purpose of keeping your customers happy.

When it comes to building customer loyalty, the transportation and logistics industry needs to focus on direct communication with customers at every stage. You need to update your clients about any problems that you faced with the shipment and how you managed to overcome them. Additionally, special care should be taken to prevent those issues from happening again. Lastly, you need to take your clients' comments seriously and evaluate whether you met their expectations or not [11].

Throughout any business, customer service is a vital operation from start to finish. To maintain a competitive edge in the shipping and logistics industry, businesses must follow a few best practices to improve freight forwarding customer service. But it can be tricky. How do you improve customer service processes and reduce the risk for human errors? Here are five ways to improve customer service and drive continuous business through your network with logistics chatbots and more.

1. Streamline Payment Management by Auto-Auditing Freight Invoices.

When it comes to freight invoices and learning how to streamline those processes, businesses find that technology plays a large role in the logistics industry. Freight invoicing involves maintaining the checks and balances of the shipper. Teams can spend countless hours ensuring that expenses are paid properly and eliminating errors. For example, a way to save time and money for customer service partners is by partnering with software providers to streamline the payment processes. Freight forwarders effectively turn freight invoices on auto-pilot by minimizing the efforts of the team, finding errors in extraordinarily quicker ways, and allowing teams to focus on other areas of the business that require human interaction. As such, they can better their freight forwarding customer service goals as well.

2. Integrated Disparate and Siloed Systems With APIs.

Another way that customer service is improved in the freight forwarding business is to integrate the current systems with application programming interfaces (APIs). These allow a cloud-based system to operate on logistics automation through

applications that exchange information with one another in real-time to keep employees informed. Siloed systems without APIs do not let information interchange and do not allow for automation like a fully integrated transportation management system (TMS) does. Even worse, disparate systems increase the risk of negative freight forwarding customer service. Together, an integration of formerly disparate and siloed systems opens new and improved processes without the need for manual input.

3. Obtain Customer Feedback on All Transactions, Using Automation to Aggregate Data and Identify Opportunities for Improvement.

Customer service advocates do well to continuously monitor interactions and ask for feedback through surveys and polls. Using robotic process automation (RPA), logistics management professionals can submit information about their experiences to freight forwarders. In turn, that amounts to more data for analytics to identify service failures and ways to avoid them in the future. Regardless of how the freight forwarding customer service team chooses to interact, online or with a more traditional method, the goal must stay the same. And that transcends interactions across all shipping modes, whether accounting for differences in sailing schedules or planning OTR moves. They must determine what happened and how they can improve future experiences. Customer feedback is vital to drawing new and repeat shippers and transportation businesses.

4. Create a Compelling, Immersive and Interactive Experience.

One of the best ways to continuously improve customer relations is to remain an active participant in the conversation. Messaging instantaneously is not always an option with human interactions. However, in a fully integrated system, chatbots offer a customized solution to your business that can make or break a sale, which undoubtedly equals more money. Chatbots are fully automated to simulate human conversations. Such interactions can be personal, give valuable information about shipment procedures, practices and needs, relying on integrated platforms along the way. Additionally, chatbots can ask questions about a specific topic, so who needs to speak to a person when a computer can do all the same things fully automated and

responsive? Even more so, using the systems to create an immersive experience can be further applied to help customers stay informed with track-and-trace functionality to always know shipment estimated time of arrival (ETA) and more. Together, it builds a better freight forwarding customer service experience.

5. Use RPA to Transform Your Marketing Efforts to Attract and Retain More Customers.

Robotic process automation is key to driving more business transactions. From beginning to end, chatbots improve customer service interactions and reduce human errors by eliminating the need for an email or other more laborious means of communication. They also provide updated tracking information to consumers and customers through cloud-based internet solutions. It all amounts to increasing how your team interacts with customers in initial marketing through closing a sale [30].

1.4 Chapter 1 summary

Customer service is a very important measure of the efficiency of a logistical system. Many measures and processes allow the logistics professional an opportunity to receive feedback from the customer on their efficiency. The adage that the customer is always right may not always be true but certainly reigns supreme in most companies. The complexity added by a global economy has increased the visibility of customer service in logistics and emphasizes the importance of measuring and examining the process. Customer service will influence many decisions in logistics and require much analysis for optimum performance.

So, guiding logistics strategy for customer service, organizations industrial enterprises can achieve sustainable and long-term competitive advantage Despite the importance of the level of service currently in the theory and practice are not fully worked out the question of organizing a system of indicators, criterion scale evaluation and an integral indicator to measure the level of service.. For reliable

response level logistics service system of indicators should be realistically measured, objective, related to the current and past results, comparable with other companies and other time periods, understandable to all interested parties, allow to identify problem areas. In this regard, the authors proposed an approach of measuring and assessing the level of logistics customer service, which should allow industrial companies to become more efficient.

The developed method allows to estimate the level of logistics customer service for individual indicators, as well as get an overall assessment of the level of service by means of an integral indicator of the level of service to individual orders section, categories of consumers and for the whole company, to conduct benchmarking procedure. This technique can also be used to assess suppliers and business partners (eg, contractors).

People in the field of freight brokers sell services to their clients. Instead of the shipper trying to find a freight company that can deliver their goods quickly and at the optimum speed to the desired destination, busy companies turn to a person with experience in the field of freight brokers. A freight broker is likely to have previous work experience in the sales or transportation business to be effective in this role.

When a potential client turns to a broker for help, he or she listens very carefully to his or her needs. Because the freight broker is well aware of the geography and time required to deliver goods from one place to another, he or she may recommend a solution that will allow you to quickly and efficiently deliver the customer's raw materials or finished products to their destination. Part of the job of a truck broker is to be familiar with the delivery process and the equipment available to move goods from one place to another.

Once the client has hired a freight broker to take responsibility for the shipment, the broker must select a suitable carrier for the job. Many trucking companies offer their services, and a truck broker has the resources to match the cargo with a transport company that can deliver it on time. Once a potential match is found, the broker should conduct some investigative work to ensure that the carrier has good safety performance.

Before sending the goods by truck, the broker must also draw up insurance and any other necessary documentation, such as a consignment note or customs declaration. He or she will also discuss the shipping cost with the carrier. The broker arranges for the driver of the freight company to pick up the cargo and will be informed of any invoices or container numbers associated with it. Once the cargo has arrived at its destination, the driver contacts the cargo broker to confirm that it has been received in good condition. At this stage, the broker has fulfilled its responsibilities and can bill the client for the services provided.

When you evaluate your customer service organization, make sure you're looking past current capabilities – consider how it is serving your brand and your customers' satisfaction.

A strategic partner for CX will help your company grow and excel. DDC FPO's Customer Care solution helps many transportation and logistics companies achieve goals from start to finish with a dedicated team of experts that possess decades of experience in transportation and logistics.

When it comes to building customer loyalty, the transportation and logistics industry needs to focus on direct communication with customers at every stage. You need to update your clients about any problems that you faced with the shipment and how you managed to overcome them. Additionally, special care should be taken to prevent those issues from happening again. Lastly, you need to take your clients' comments seriously and evaluate whether you met their expectations or not.

By leveraging automation and advanced technologies, freight forwarding customer service representatives can eliminate the usual window of three to five business days to resolve simple inquiries. Be part of the solution by using modern technology to automate more back-office workflows.

CHAPTER 2
RESEARCH OF BROKERAGE SERVICES IN UKRAINE

2.1 Analysis of the market of brokerage services in Ukraine

The Ukraine freight and logistics market is expected to witness a slow CAGR of less than 3% during the forecasted period of 2020-2025. The share of maritime transportation in the country is expected to increase in the coming years. Additionally, as the railways is currently being utilized to almost full load, it will not be able to grow much because of the limited capacity.

– Due to COVID-19 the impact on the freight transport is estimated to around 15% to 20% of reduction in the first half of the year 2020.

– Ukraine's trade with China improved while that with EU suffered in the year 2019. Ukraine’s exports of goods to the EU grew by very moderate 4% (January-November) 2019, gradually decelerating over the year, while exports to China soared by 70% and overall exports increased by 6%. (Fig. 2.1).

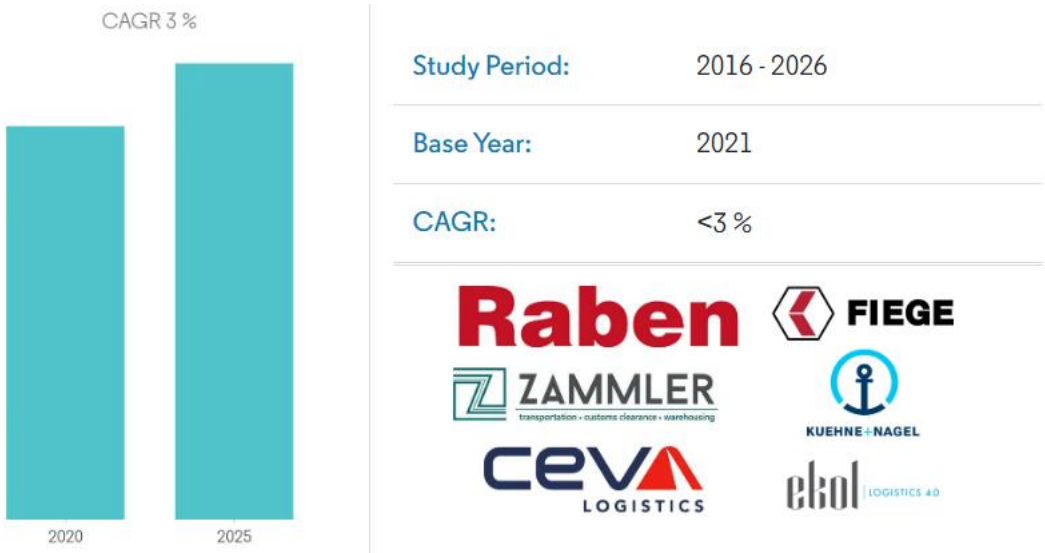

Figure 2.1 – Market Summary

The Ukraine Freight and logistics market report provides insights on the Impact of Ecommerce Growth on the Market, Impact of Regulations and Investments on Logistics Sector, Insights on Courier, Express, and Parcel (with Market Size), Ukraine Free Trade Agreements.

The report also provides qualitative and quantitative information on segmentation BY FUNCTION (Freight Transport, Freight Forwarding, Warehousing, Value-added Services and Others) and BY END-USER (Construction, Oil & Gas and Quarrying, Agriculture, Fishing, and Forestry, Manufacturing & Automotive, Distributive Trade, Others (Pharmaceutical and Healthcare)).

Furthermore, the report provides company profiles to understand the competitive landscape of the market.

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Over the past few years, Ukraine has intensified its trade links with the EU driven by both the positive stimulus provided by the Association Agreement and a negative stimulus, namely the need to replace lost trade links with Russia. Between 2013 and 2018, the share of EU in Ukraine’s international trade in goods increased to 42% from 31%, while 2018 trade value at USD 43.4 bn almost reached the pre-crisis level (USD 43.8 bn in 2013) and grew by over 50% from 2015.

However, future trade growth is constrained by logistical constraints. In 2018 and 2019, Ukrainian carriers have faced restrictions on their ability to deliver cargo

by road to EU countries. Poland proved the biggest sticking point as the number of Ukrainian cargo trucks allowed to pass in or through Polish roadways was reduced despite growing trade volumes. The role of road transportation in the EU-Ukraine trade is high. According to Eurostat road carriers accounted for 38% of Ukrainian exports and 81% of imports from the EU (in euros) in 2018. Switching mode of transportation may be difficult as Ukraine's rail, seaport and air capacity is limited and not always cost-effective.

Ukraine's main network of roads connects all of the major cities of Ukraine and provides cross-border routes with neighbouring countries. The total length of international highways on the territory of Ukraine exceeds 8,600 kilometres. However, the extremely poor condition of Ukrainian roads is one of the reasons they are named the deadliest in Europe.

In the assessment of the Ukrainian government, the condition of the roads and bridges in the country does not allow for the quick or safe transportation of passengers and cargo, and for the development of transit traffic. The Ukrainian road infrastructure is completely dilapidated – according to government estimates, 97 per cent of the roads require general refurbishment or ongoing repairs, some 9,600 bridges do not meet the modern technical requirements, out of which 1,923 bridges are in need of immediate repair and 86 are at risk of collapsing. [48]

Ukrainian ports began 2020 with a significant increase in cargo transhipment. The warm winter, as well as the export of grain and ore and a significant increase in coal imports, led to an increase in freight volumes of over 20%. In total, 13.5 million tons of cargo were handled in the seaports of Ukraine in January 2020. Grain loads continue to occupy the first place in terms of transhipment. In January 2020, 4.7 million tons (+ 22%) were shipped via seaports. The increase in cargo transhipment in Ukrainian seaports was mainly due to exports. During the first month, 10.2 million tons were processed in the export direction, which is 1.5 million tons or 17% more than in the same period last year. The top five transhipment leaders among Ukrainian ports include the Southern, Mykolaiv, Black Sea, Odessa and Mariupol ports. It is headed by the five port of Southern with a gain of transhipment of 28.5%. In January

2020, the volume of domestic traffic increased by 45% or by 29 thousand tons and made up more than 93 thousand tons. For the most part, the internal transport between the ports carried grain, other bulk cargoes and oil (Fig. 2.2).

Figure 2.2 – Processing of Freight by Stevedoring Companies in Seaports: in Million Tons, Ukraine, 2012-2019

The number of international players in the Ukraine freight and logistics market is increasing. The road freight market is competitive with reducing margins. While the rail freight market is observed to be suffering due to lack of competition.

Some of the major players in freight and logistics in the country are DHL, DSV, CEVA Logistics, and Agility to name a few [14].

Identifying a reputable, reliable agent or distributor is vital to mitigating risk and achieving success in the Ukrainian market. In order to identify such a business partner, it is absolutely essential to conduct appropriate due diligence. Depending on your business plan, you may want to look for distributors that have nationwide capabilities, including those located in the major cities and regions of Kyiv, Kharkiv, Dnipro, Lviv, and Odessa. These regions are the most densely populated and important commercial centres of Ukraine. (Fig. 2.3).

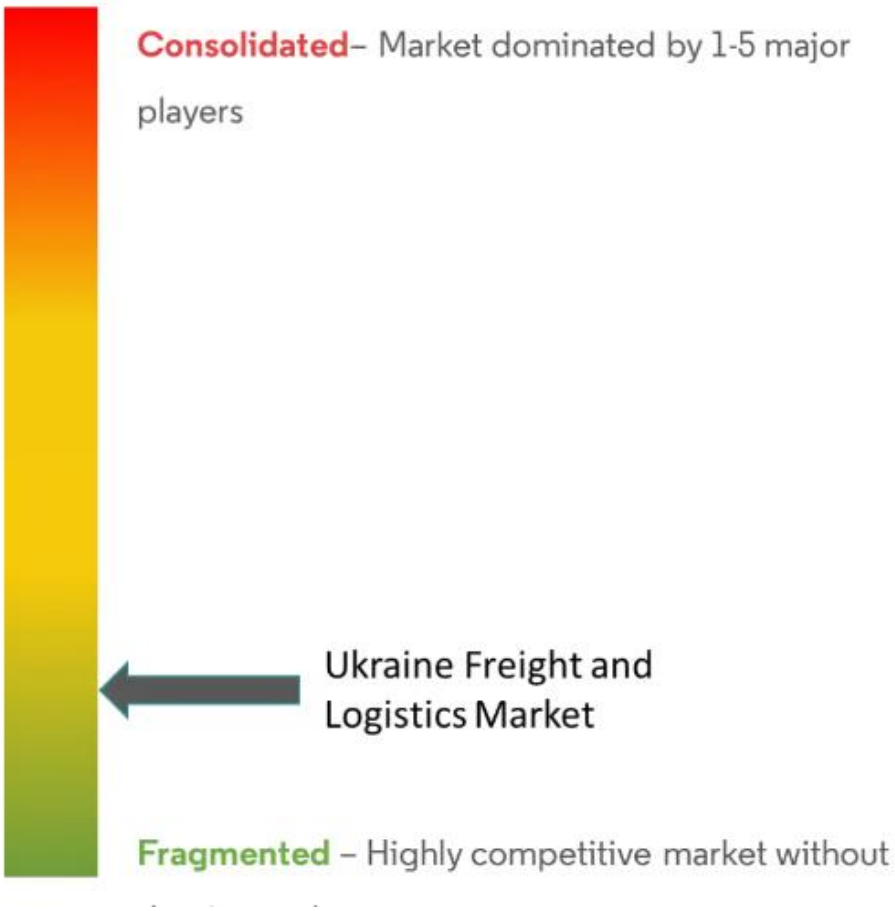

Figure 2.3 – Market Concentration

Depending upon your long-term interests, using an agent or distributor is an excellent way to learn about the Ukrainian market, gauge market potential, establish connections, develop a customer base, establish a foundation for future expansion into new product lines, introduce new-to-market technologies, and develop product recognition in the market. To find a qualified potential partner, the Commercial Service recommends using one of our services, such as the Gold Key Service, to conduct initial screening and meet with potential partners, agents, or representatives. Attending or participating in Ukrainian trade exhibitions is another way to identify and gauge the qualifications of prospective partners. For more details on the trade exhibitions taking place in Ukraine, please refer to the U.S. Commercial Service in Ukraine.

The Commercial Service strongly advises against covering the Ukrainian market from regional offices in Europe, particularly from Russia. Ukrainians prefer to deal

directly with local agents or representatives and subsequently an on-the-ground presence is crucial to successful business development in Ukraine. In addition, your Ukrainian partner can help you explore markets beyond Ukraine. Finally, given the ongoing war between Ukraine and Russia, several companies have reported that commercial relationships managed by regional offices in Russia have become very politicized and that information to U.S. headquarters companies regarding the Ukrainian market may be distorted as a result [20].

A foreign company interested in starting a business in Ukraine has the option of forming a joint stock company, a limited liability company, a wholly-owned subsidiary, or a representative office. It is also possible to work in Ukraine through joint venture/cooperation agreements and investment funds/mutual funds. For regulatory and taxation purposes, representative offices are considered to be independent legal entities, with some exceptions. A representative office can carry out marketing, promotional, and other auxiliary functions, but it cannot sell goods or services. The Commercial Service recommends establishing a wholly-owned company in Ukraine if you intend to carry out manufacturing or other significant local commercial activities. A foreign legal entity may have both a representative office and a wholly-owned subsidiary. A limited liability company is the most popular form of a legal entity in Ukraine as it can conduct a broad range of business activities [21].

Before the war, Ukraine was home to thousands of freight brokers and dispatchers who worked in the U.S. market. I spent three years from 2017-2020 managing an outsourced U.S. freight brokerage in Kyiv.

Ukrainian men are not allowed to leave due to martial law, but many women living in Kyiv have left the country. Currently, they are working remotely all over the world [25].

The war has caused widespread disruption to global shipping, and is likely to exacerbate ongoing supply chain disruption, port congestion and crew crises caused by the Covid-19 pandemic.

The shipping industry has been affected on multiple fronts, with the loss of life and vessels in the Black Sea, disruption to trade with Russia and Ukraine, and the growing burden of sanctions. The industry also faces challenges to day-to-day operations, with knock-on effects for crew, the cost and availability of bunker fuel, and the growing threat posed by cyber risk.

“Despite the tragic situation in Ukraine, and the threat to seafarers caught up in the war, the direct impact on shipping from the war in Ukraine has so far been largely contained to the Black Sea,” says Captain Rahul Khanna, Global Head of Marine Risk Consulting at AGCS. “However, the war is creating an additional burden on the maritime industry, which is already dealing with ongoing supply chain disruption, port congestion and a crew crisis caused by the pandemic.”

The International Monetary Fund (IMF) [26] warned that the war in Ukraine will exacerbate already high shipping costs this year, and could keep them – and their inflationary effects – higher for longer. The cost of shipping a container on the world’s transoceanic trade routes increased seven-fold in the 18 months following March 2020, while the cost of shipping bulk commodities spiked even more.

“Trade with Russia and Ukraine will suffer, adding to already strained global supply chains. Longer term, sanctions and a reduction in trade with Russia, could result in the redrawing of some supply chains and trade routes, but this all takes time and comes at a cost,” says Khanna.

The biggest impact of the war so far has been on vessels operating in the Black Sea and/ or trading with Russia. Ukraine’s major ports, including that of Odessa, were closed due to the war and a Russian naval blockade of Ukraine. The country ships over 70% of its exports, including 99% [27] of its corn exports. Hundreds of vessels were trapped in ports or at anchor while thousands of Russian and Ukrainian crews faced an uncertain future, unable to leave vessels or return home.

Russian vessels were also banned from entering UK and EU ports, and have been detained due to suspected sanctions breaches: in February 2022, French warships detained Russian roll-on/roll-off cargo ship Baltic Leader en route to St Petersburg while more than a dozen Russian-owned superyachts have been seized.

The Russian fleet has also been denied access to vital maritime services. A number of ports have withdrawn bunkering services for Russian-owned or flagged vessels, while engine manufacturers, maintenance companies, classification societies and insurers have said they will no longer serve Russian vessels.

The war is also having a knock-on effect for shipping outside the war zone. US and EU sanctions, in particular, pose a significant compliance challenge for shipping companies and insurers. Many western companies have voluntarily opted to cease trade with Russia, creating a complex and uncertain legal situation for contracts, including insurance.

A prolonged war is also likely to have deeper economic and political consequences, potentially reshaping global trade in energy and other commodities. An expanded ban on Russian oil could push up the cost and availability of bunker fuel and potentially push shipowners to use alternative fuels.

“We have already seen requests from ship owners who are considering using non-compliant bunker fuel that has a lower explosive temperature,” says Justus Heinrich, Global Product Leader Marine Hull at AGCS. “Longer term, we may see a shortage of bunker fuel with more and more vessels having to turn to non-compliant or substandard fuels, which could result in machinery breakdown claims in the future.”

A large part of the shipping sector will in some way be touched by the war, says Khanna. “In addition to the physical threats to shipping in and around the Black Sea from mines and rocket attacks, which is affecting trade, the availability and cost of bunker fuel, and the safety and welfare of crew, many container companies have already pulled out of Russia while the tanker sector faces huge restrictions and disruption, as do bulk and general cargo operators shipping Russian coal, wood and grain."

Coinciding with Covid-19 outbreaks in China, the war in Ukraine is compounding ongoing supply/ demand pressures for shipping, which have resulted in port congestion, higher freight fees and longer transit times. According to Clarksons Research [28] container and car carrier congestion at ports is trending towards

previous highs, while the impacts of the war are likely to create further inefficiencies across the maritime transport system.

2.2 Research of Total Quality Logistics Company's activities on the market of brokerage services

Total Quality Logistics (TQL) is the second-largest freight brokerage firm in the USA. TQL provides domestic and international freight transportation and logistics services. It was founded in 1997 by Ken Oaks in Cincinnati, Ohio, and is headquartered in Union Township, Ohio. As of 2018, TQL was the largest private company in greater Cincinnati according to the Cincinnati Business Courier.

TQL is a third-party logistics provider (3PL) with full truckload (TL), less-than-truckload (LTL), intermodal and other specialized logistic services.

As of April 2019, TQL was ranked as the second-largest freight brokerage firm in North America by Transport Topics magazine, posting $683 million in net revenue off gross revenues of $3.6 billion.

TQL has 57 offices in 26 states with more than 5,500 employees [31]. Let’s have a look at the structure of the Total Quality Logistics company (Fig. 2.4).

TQL connects customers with truckload freight that needs to be moved with quality carriers who have the capacity to move it. As a company that operates 24/7/365, TQL manages work-life balance with sales support teams that assist with accounting, and after hours calls and specific needs. At TQL, the opportunities are endless which means that there is room for career advancement and the ability to write your own paycheck. What’s your worth? Our open and transparent communication from management creates a successful work environment and custom career path for our employees. TQL is an industry-leader in the logistics industry with unlimited potential. Be a part of something big [32].

TQL connects customers with shipping needs with carriers that have the available capacity and service offerings.

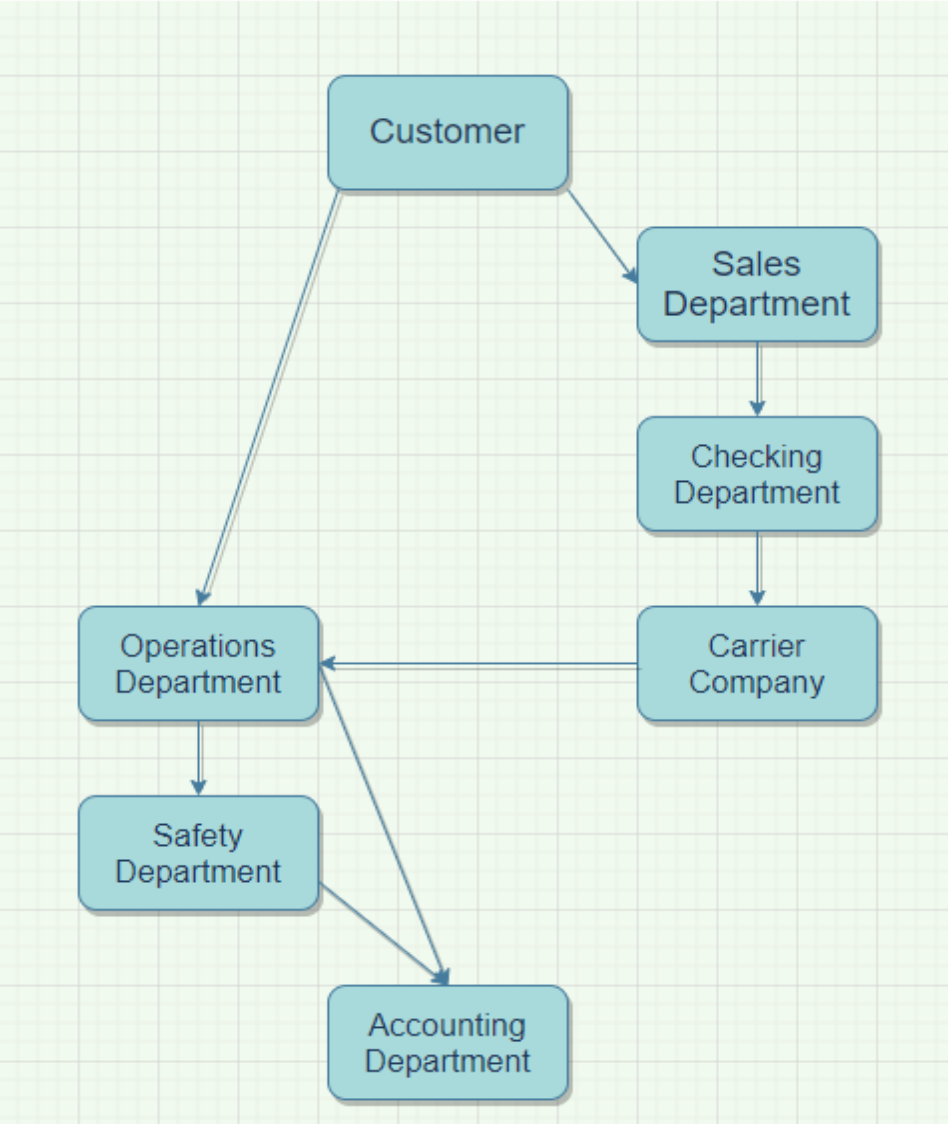

Figure 2.4 – Structure of the Total Quality Logistics company

They work with a network of more than 90,000+ carriers to create greater supply chain efficiencies for customers. This network, combined with industry leading technology and unmatched service has been the key to their growth, plain and simple (Fig. 2.5) [33].

As it was mentioned above Total Quality Logistics is a third-party logistics provider (3PL) with full truckload (TL), less-than-truckload (LTL), intermodal and other specialized logistic services.

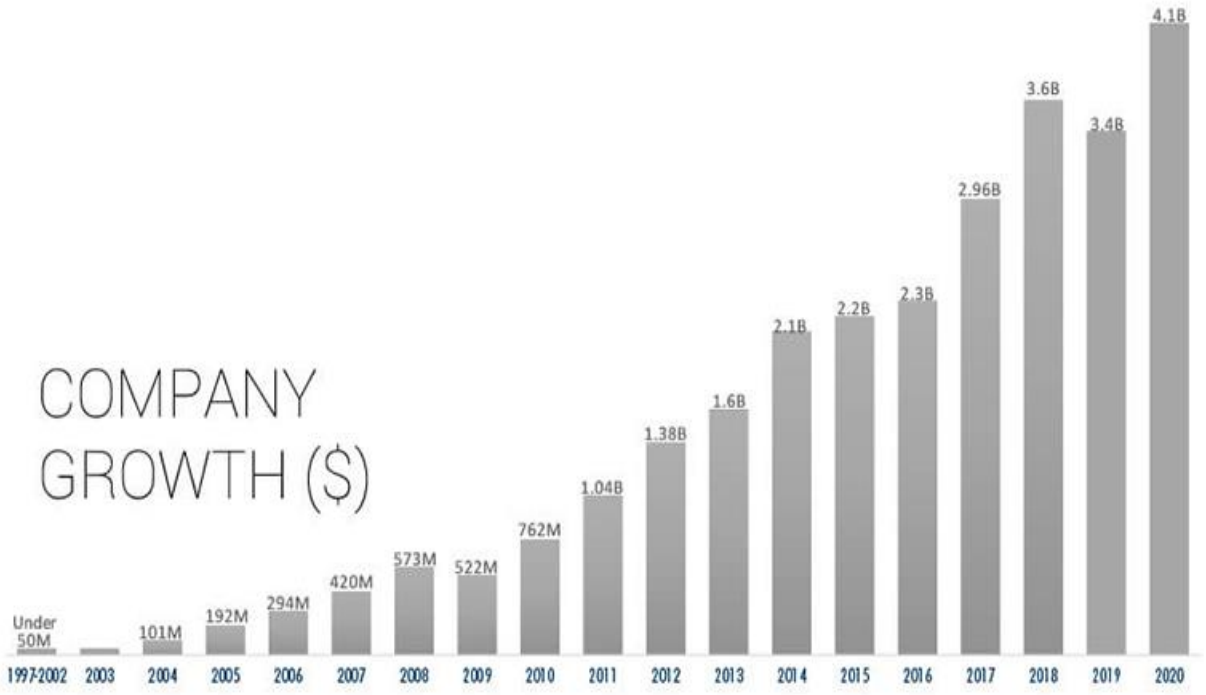

Figure 2.5 – Total Quality Logistics growth

Full truckload.

If you move full truckload freight, aligning yourself with a reputable and experienced freight broker can give you a competitive advantage.

Full truckload industry options.

When moving your product, your provider should be knowledgeable about the ins-and-outs of your commodity. We've been handling sensitive commodities since day one, so we know what it takes to move even the most delicate and high maintenance loads:

- automotive;
- chemicals & plastics;
- consumer goods;
- energy & infrastructure;
- food & beverage;
- government & non-profit;
- paper & packaging;
- pharmaceutical & healthcare;

– retail;

– technology & electronics [34].

Less than truckload.

When it comes to shipping your product through less than truckload services, you want qualified LTL expertise. More importantly, you want tailored logistic solutions that eliminate concerns and uncertainty.

At TQL, you can count on straightforward communication, shipment tracking and exceptional LTL service levels when moving LTL shipments so you won't be left in the dark [35].

Intermodal.

Your freight needs to move and knowing the options with intermodal shipping can strengthen your overall logistics strategy.

Intermodal can be a cost-effective and reliable choice for shippers. If you are looking to save money, expand your supply chain options, or you are just having trouble finding a truck intermodal could be the reliable solution you need. It also offers the unique benefit of reducing your carbon footprint and adding capacity by leveraging an extensive North American rail network. For every truckload moved to intermodal, greenhouse emissions drop by 75% as one ton of rail freight can move 479 miles per gallon of fuel.

Whether you are looking for a door to door offering, drayage and port services, or would like recommendations on how a multimodal solution can improve your operations the experts at TQL can create a customized solution to help you reach your goals. TQL can offer capacity for peak season, spot, or committed needs and with more than a decade of experience in intermodal freight can offer you dependability from coast to coast.

More options with our drayage network.

Considered a short haul, 200 miles or less, drayage moves the container to and from the rail terminal or shipping port. As a key component to intermodal shipping, working with an experienced company ensures its capabilities are fully leveraged.

Intermodal transit times.

Exploring intermodal for shipments may leave you wondering about transit times. The map below illustrates the estimated transit time using rail for three scenarios. When comparing a full truckload option, the typical driver averages 550 miles per day at the industry standard of 55mph. If a truck coast to coast move is 4–5 days, adding 2–3 more for rail provides an accurate assessment for an intermodal solution [36].

TQL works hard, day and night, to be the brokerage of choice for all quality freight carriers.

That means providing the services and technology carriers want to keep their trucks moving. Whether it's free load board with 40,000+ loads a week, our award-winning after-hours team or complimentary carrier technology, TQL Carrier Dashboard. Hauling freight requires a collaborative approach to achieve a shared goal – delivery. And for that reason, you need a freight broker that is reliable, responsive and provides the carrier resources to ensure success.

Responsiveness & Reliability.

From the moment of pick up until delivery, load assistance is available. Knowing TQL will provide you the support you need, when you need it, can make a big difference, especially at 3 a.m. Working with a reputable freight broker offers an additional level of reliability to your business. TQL understands the importance of keeping your truck loaded, no matter the equipment type. That's why we offer carriers:

Access to 40,000+ loads each week through TQL's load board:

- worry-free payment options;
- freight of all sizes and commodities;
- highest Blue Book credit rating;
- dedicated Carrier Relations Team;
- around the clock support, 365 days a year;
- in-house, night and weekend dispatch operating in the U.S.;
- TQL Load Experience 8.8 out of 10 from our carriers [37].

Total Quality Logistics Ships Until They Drop.

Headquartered in Clermont County's Union Township, TQL is now the largest privately owned company in Greater Cincinnati. How? "It's plain and simple—we work harder than anyone else in the business," its website says. TQL's founder and CEO, Anderson Township native Ken Oaks, is a near-billionaire and the wealthiest person in Cincinnati. TQL has consistently been named one of the best places to work in the region and in the country by dozens of business publications, including Forbes and Fortune magazines.

But it didn't work out that way for Yenser and thousands of other former TQL employees. She lasted longer than most TQL recruits: a year and half, first as a sales trainee at $33,000 per year and then as a junior account executive/broker who was paid a salary plus commission. The salary, however, has to be covered by the sales revenue a broker brings into the company. Many former TQL employees say that's difficult, if not impossible, for all but a tiny percentage of new recruits, no matter how many hours they work.

Some 4,500 former employees are now part of a class action suit against TQL in what local attorneys say could be the largest wage settlement case in Cincinnati history, claiming the group was collectively cheated out of tens of millions of dollars of overtime pay while struggling to make it under the company's boiler room conditions. After 10 years of filings and motions on both sides, the lawsuit is scheduled to go to trial in July.

On top of managing freight shipments, brokers at TQL typically make 75 to 100 sales calls a day trying to drum up new customers, many of them first-time "cold calls" to shipping agents who hear daily from other brokers, including other brokers within TQL, Yenser says. "If you're trying to make the most money, you're going to go for the biggest companies, and everybody tries to get the same big customers. The people who make it have to be kind of cutthroat and kind of lucky." For Yenser, the luck ran out when her biggest customer canceled the account over an incident she prefers not to discuss publicly.

Fueled by hard work and what critics call unrealistic sales pressures, TQL has had a remarkable run since Oaks launched it in 1997. And then came COVID-19,

working from home, and a new economic model. Analysts say it's still too early to predict the pandemic's full impact on the logistics industry, but it's certain that a slowdown in the trucking industry that began in 2018 will continue. "Given the largely uncharted waters we are in, it is likely to be a slow, drawn-out process in order to return to 'normal,' or even a semblance of that," Jeff Berman, group news editor of Supply Chain Management Review magazine, wrote in a March column.

Transportation logistics is one of the fastest growing U.S. industries, quadrupling in revenues from $57 billion in 2000 to more than $213.5 billion in 2018, the latest figures available from Armstrong & Associates, a market research and consulting firm. The modern transportation logistics industry was launched in the 1980s with the deregulation of the trucking industry, then exploded in the 1990s and onward with the growth of the internet, GPS tracking, and mobile technologies transforming every other part of our lives [67].

Logistics companies like TQL are matchmakers between the nation's 1.2 million trucking firms that deliver goods (carriers) and the hundreds of millions of companies that need more than 11 billion tons of freight moved safely and on time every year (shippers). At TQL, brokers negotiate rates with carriers and shippers, find the most efficient "lanes" or routes for delivering and picking up loads, and track the loads until they reach their destinations. If brokers generate a positive margin as a result of those negotiations, they pocket a portion of it as commission.

Shipping products from point A to point B may seem simple, but it's not, especially when carriers and shippers are at the mercy of fickle weather, road conditions, inevitable traffic accidents, and equipment breakdowns, not to mention outright theft and the foibles of truck drivers who can sometimes go AWOL. But there's plenty of data crunching, tracking, and communication software out there to help make the system more manageable. TQL has been an industry leader in developing and adopting those new technologies, including mobile apps that allow customers to track their own shipments and interact directly with brokers.

In 2018, TQL was the go-between for more than 1.5 million truckloads carrying nearly everything that touches our lives: food and beverages, chemicals and plastics,

pharmaceuticals and healthcare products, automotive parts and electronics, and a multitude of retail and consumer goods. Armstrong & Associates ranked TQL second in the nation among freight brokerage firms in 2019. According to company figures, it grew from $52 million in revenues in 2003 to $3.6 billion in 2018, a mind-boggling factor of more than 70 times.

At its peak earlier this year, TQL employed more than 5,500 people at 57 offices in 26 states, from Boston to Phoenix and Minneapolis to Ft. Lauderdale. Nearly 2,000 worked in its four Cincinnati area offices.

With its central location and access to nearby interstates, the Cincinnati area has become a regional hub for logistics companies. But TQL has also played a big role in the creation of that hub by developing and then spinning off talent who formed their own companies. There are now 24 logistics firms in Greater Cincinnati with revenues of more than $10 million each, according to a 2019 Cincinnati Business Courier survey. Many of the departing employees who became TQL competitors wanted a better work-life balance, including Ryan Legg, Oaks's original business partner. Legg and his wife Denise started MegaCorp Logistics in 2009 because they "wanted to create an employee-centric, family-oriented business where their employees could thrive," according to a MegaCorp press release [69].

Ken Oaks declined an interview for this story, but the record shows that he was one of the smart few who jumped hard on the right idea at the right time. Two trends created the U.S. logistics boom, says Lisa Ellram, a professor of supply chain management at Miami University. The deregulation of the trucking industry in the 1980s opened the way to negotiated shipping rates, and the internet's rapid growth provided an easy platform for brokers to connect carriers and shippers. Oaks, who graduated from McNicholas High School in 1983 and the University of Dayton in 1987, saw the opportunities while working as a produce buyer and salesman for Cincinnati-based Castellini Company, one of the nation's largest distributors of fresh produce.

From the beginning of TQL, Oaks has recruited to his management team many of his former McNicholas football teammates. The 1983 team yearbook photo reads

like a page from the future TQL executive playbook: Center No. 52 (CEO Oaks) hikes the ball to quarterback No. 7 (president Kerry Byrne), who hands off to tailback No. 23 (CFO Mike Zins), who drops back and throws long to wide receiver No. 15 (executive sales director Gary Carr). Touchdown, Rockets! And coming off the bench is freshman halfback Jeff Montelisciani, TQL's vice president of sales. Former McNicholas football coach George Markley remembers the 6-foot-2 Oaks as "a quiet leader, a very efficient blocker, someone who completed his assignments as directed. He was never any problem. He was a willing worker" [70].

"Athletes are definitely the type of personality they're looking for – the competitiveness and the ability to keep going in the face of No!" from cold-call customers, says Devin Reilly, a former safety on the St. Xavier football team. Reilly worked at TQL from 2005 to 2012 before leaving to start his own company, Custom Pro Logistics, which moved from Hyde Park to Over-the-Rhine in 2016. Kerry Byrne, who did give an interview for this story, says recruiting former players makes sense. After all, they learned on the field how to have each other's backs – literally. "Trust is the first thing," he says. "One of our guiding principles here is we value teamwork."

After winning the Carl H. Lindner Award for Entrepreneurial and Civic Spirit in 2017, Oaks told The Enquirer that he started TQL because he "saw the need for a higher level of service in the transportation industry that ensured customers received 24/7/365 service and honest, ethical, and proactive communication. So I leveraged everything I had and opened Total Quality Logistics in 1997. Over the years, we have consistently grown by hiring high-quality people with a great work ethic and incentivizing them to provide consistent, incredible service to our customers."

The former employees in the ongoing class action lawsuit against TQL argue the company was built in large measure on the backs of exploited young people. In a 2011 amended complaint filed in federal court here, plaintiffs tell a similar story – that they were expected to work 60 hours a week while on-call 24/7 for their customers, then discarded if they couldn't meet the company's sales revenue demands. The suit alleges the former employees were cheated out of their overtime

pay because TQL had illegally exempted them from provisions of the U.S. Fair Labor Standards Act (FLSA), a law that dates back to 1938 and the Great Depression. Neither side will talk about the case publicly. But at the heart of the legal dispute is whether TQL trainees and brokers fall under one of the three classes of exemptions for overtime pay allowed by FLSA: executive, administrative, and professional.

TQL argues that its trainees are exempt as administrative employees, which traditionally has meant office workers, IT staff, and others who support management or operations. But lawyers for the former employees argue that TQL trainees spend six months in the classroom, then primarily act as assistants to brokers who are selling the company's product, not managing its operations. As for its brokers, TQL argues that they're exempt from overtime pay as commissioned employees. Plaintiff lawyers say the law requires that exempted employees earn more than half their pay from commissions. Many TQL brokers can barely cover their salaries, much less earn twice as much from commissions, plaintiffs argue. Those who can't cover their salary with sales revenue within the first year are let go or, as company officials say, sometimes transferred to other company departments.

Oaks told Inc.com in a 2013 story headlined "Hiring Rule #1: Slackers Need Not Apply" that the average yearly pay for a second-year TQL employee was $60,000. After three years, the average jumps to $81,000, and, after four years, to $112,000. But he acknowledged in the article that the jobs weren't for everyone. "It's high stress, high pressure, but a lot of these people thrive on that." Company spokesperson Millikin says the average pay ranges from $53,000 to $79,000 a year for brokers who have been selling one to three years and $104,000 to $120,000 per year for those selling three to five years.

In pre-pandemic days, TQL also provided a variety of antidotes aimed at de-stressing its mostly millennial employees, including monthly and holiday-themed patio parties at headquarters, Friday afternoon office "beer drops" (or water or soda, if you prefer) when the sales force exceeded its weekly revenue goal, and fund-raising shenanigans like a semi-tractor pull for cancer research, trivia night contests for the Cincinnati Youth Collaborative, and a "Toss the Boss" event when Oaks and

14 other employees rappelled down the company's four-story headquarters to raise money for Big Brothers Big Sisters. The "TQL Cares" webpage says the company and its employees have an annual impact of more than 6,000 volunteer hours and $2 million donated to more than 2,800 charitable organizations.

Online reviews of the company's work culture are decidedly mixed among former and current TQL employees. A long-time employee who gave the firm five out of five stars posted this on Glassdoor: "Pros: Clear goals for Sales with training to succeed. High energy. Clear direction by Sr Leadership with open access to ask questions. Great perks (beer drops, patio parties, relaxed dress code, employee appreciation events and even had a camel and kangaroo visit). Cons: Fair amount of turnover. Pay and benefits are good but not great." But an employee who worked there less than a year posted a one-star review under the headline "Don't do it!": "If you are desperate enough and believe that after 26 weeks of training making $35,000 you will be able to make $100,000 then you are crazy. First of all you work for a Broker who is basically training you. You make all his calls and do all his work while he is supposed to be trying to get more. After 6 months when your training is up, if you are not hitting the revenue, and you won't be, then you will be terminated."

Chris Bregger, a former TQL trainee who went on to sell paper products for Millcraft, offers an opinion somewhere in the middle. Bregger joined the company after graduating from the University of Cincinnati in 2012 and left just six months later, but credits TQL's "unparalleled" sales training with launching his career. "People pay thousands of dollars to get that kind of training," he says.

Despite the growing competition—including recent entries into the industry of national heavyweights like Uber Freight and Amazon – TQL continues to grow with its hard-charging business model.

"There's a lot of discussion about potential disruption in brokerage with some of the new players," says company president Byrne. "How do we compete? Like we've always competed. Be very good at what we do. Offer superior customer service. And make sure that we are on the front lines of technology. We don't want to be the first ones to develop everything, because we want to make sure people want it. So we're

in the process now of getting out to our top customers and carriers and asking, What do you really like? What do you want?"

Byrne says he's confident the company will continue to adapt and grow. In recent years, TQL has boosted growth by expanding its brokerage service to include less than full truckloads and intermodal transport that uses both trucks and trains. A key component, too, has been the company's continuing focus on developing new technologies, including automated dispatch for carriers, enhancements to its mobile app for customers who want to book and track their own shipments, and the use of artificial intelligence to handle back office tasks like billing and scheduling. The new $20 million addition to the current headquarters building will accommodate a booming IT department, growing its 230 employees to 300 by year's end, says TQL's Millikin.

On the sales side, Byrne says TQL will stick to its tried-and-true approach of "single source accountability" in which brokers, with the help of trainees, vie for their own customers and then handle all their needs 24/7/365.

Coordinating all tasks in one point of contact rather than dividing and rotating the workload among teams prevents miscommunication and lost loads, he says. "Folks told us early on that we couldn't scale with that [approach], but we have been able to scale. I guess there are pluses and minuses to both, but this is what we've always done, and it's worked for us" [38].

Today's logistics technology should work to streamline daily responsibilities, improve transparency and communication, plus drive greater efficiencies.

TQL TRAX is a web portal and mobile app designed to give visibility and flexibility on all modes. By providing 24/7/365 access to load tracking, status updates, load documents, reporting data and more, busy days just got simpler (Fig. 2.6).

View mapping status updates of individual loads on your Load Board or get an aerial view of all your loads on the interactive Freight Map.

In this dynamic and fast-paced industry, faced with ever-changing customer expectations and market conditions. With an array of logistics technology platforms

available, it can be challenging to determine what technology is best suited for your shipping needs.

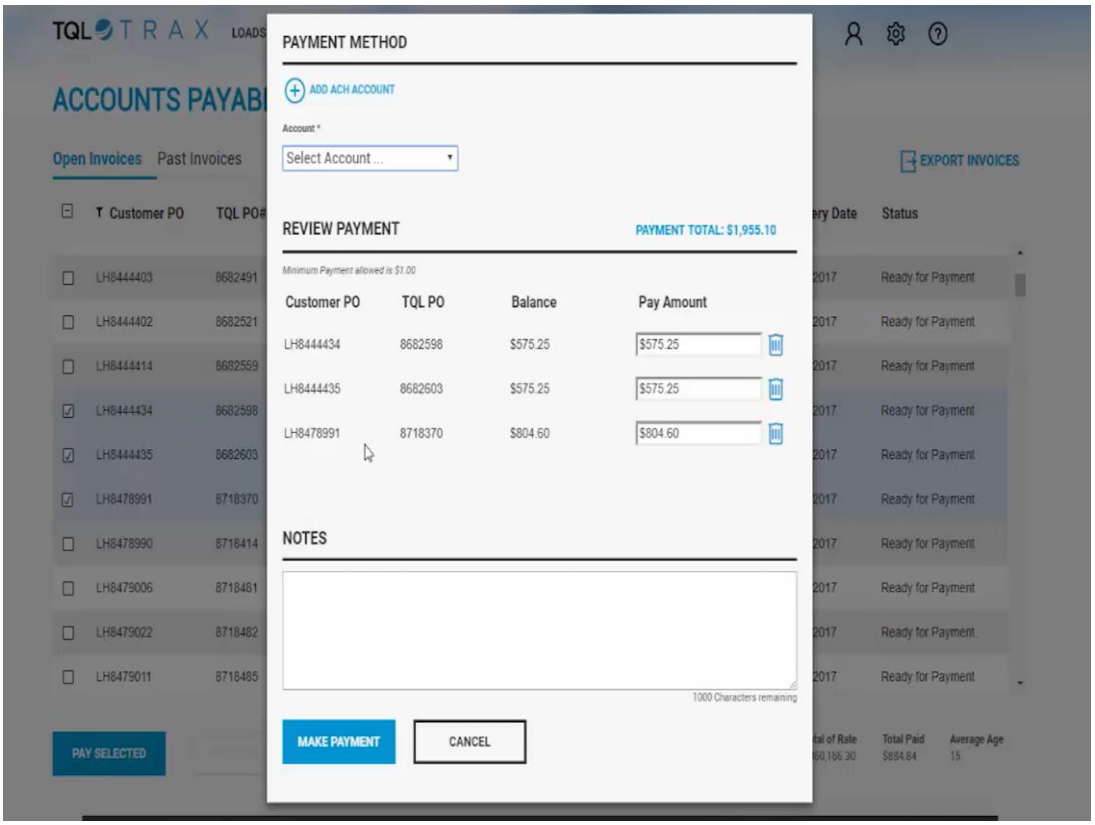

Figure 2.6 – Interface of TQL TRAX

Get a Truckload or LTL Quote. Streamline quoting process with online quotes sent directly to your Logistics Account Executive. Ship LTL? Can utilize our LTL self-service tools to get an instant quote, review multiple rates and select your carrier.

Tender a Load. With the click of a button, tender your truckload, IMDL, or LTL shipment.

Easily Save and Print Documents. With TQL TRAX, you'll have 24/7/365 access to shipping labels, BOLs and invoices, so they'll always be available when you need them.

Simplify Your Payment Process and Invoice Management. They've made Accounts Payable system more intuitive to give you greater efficiency.

Custom Reporting Capabilities. Arrange the Reporting page to suit unique needs and get a new perspective on freight.

2.3 Analysis of the main performance indicators of Total Quality Logistics Company

As of April 2019, TQL was ranked as the second-largest freight brokerage firm in North America by Transport Topics magazine, posting $683 million in net revenue off gross revenues of $3.6 billion (Fig. 2.7).

	Years Ended December 31,				
	2019	2018 (1)	2017 (2)	2016	2015
Statement of Income Data:					
Revenue	$ 3,668,117	$ 3,683,593	$ 3,123,063	$ 2,750,449	$ 2,699,236
Gross margin	521,070	445,601	337,630	331,319	295,725
Operating income	152,420	124,919	72,669	96,557	90,983
Income from continuing operations before provision for income taxes	143,870	116,726	66,931	94,027	85,973
Income from continuing operations, net of income taxes	107,171	87,661	120,014	57,646	54,954
Income from discontinued operations net of income taxes	-	114,079	15,139	17,159	15,995
Net income	107,171	201,740	135,153	74,805	70,949
Earnings per share from continuing operations					
Basic	$ 3.22	$ 2.62	$ 3.61	$ 1.70	$ 1.53
Diluted	$ 3.20	$ 2.61	$ 3.60	$ 1.70	$ 1.53
Earnings per share from discontinued operations					
Basic	$ -	$ 3.42	$ 0.46	$ 0.51	$ 0.45
Diluted	$ -	$ 3.40	$ 0.45	$ 0.51	$ 0.44
Earnings per share from net income					
Basic	$ 3.22	$ 6.04	$ 4.07	$ 2.21	$ 1.98
Diluted	$ 3.20	$ 6.01	$ 4.05	$ 2.20	$ 1.97

	As of December 31,				
	2019	2018 (1)	2017 (2)	2016	2015
Balance Sheet Data:					
Total assets (3)	$ 1,991,574	$ 1,924,898	$ 1,670,941	$ 1,360,259	$ 1,301,146
Long-term debt and financing leases	188,754	233,810	222,504	126,105	114,194
Stockholders' equity	1,075,279	980,834	769,872	628,179	647,840

Figure 2.7 – Statistics of the Company

The dynamics of revenue is shown in Fig. 2.8. Statistics about costs and expenses is shown in Fig. 2.9.

Revenue.

TQL's revenue remained consistent at $3.7 billion in 2019 and 2018. Intermodal revenue decreased 2.4% to $2.2 billion primarily due to a 7.2% decrease in volume

and lower fuel revenue, partially offset by improved pricing. Truck brokerage revenue decreased 12.8% to $433.8 million due to a 24.2% decrease in fuel, mix and price combined, partially offset by an 11.4% increase in volume due to the addition of CaseStack. Logistics revenue increased 14.2% to $769.2 million related primarily to the addition of CaseStack. Dedicated's revenue increased 2.0% to $298.7 million primarily due to growth with new accounts, partially offset by lost business.

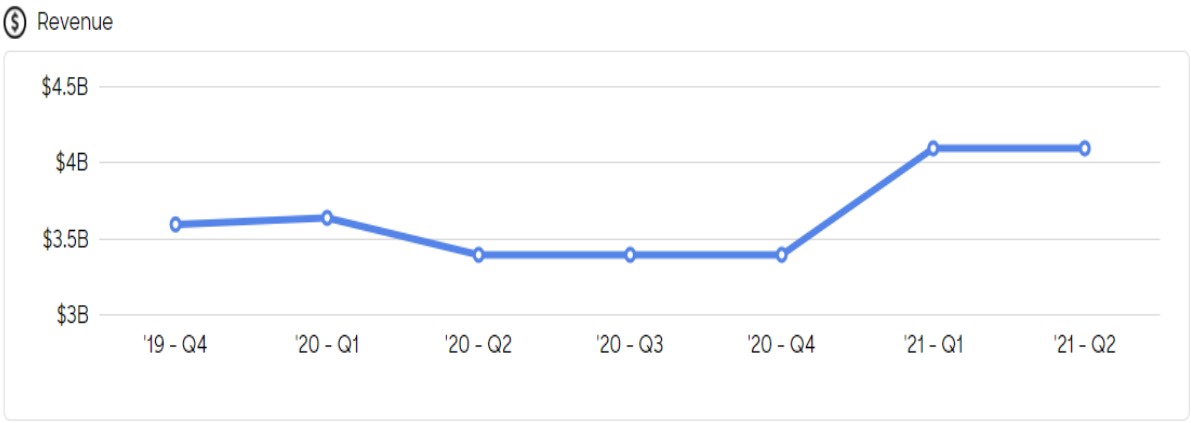

Figure 2.8 – The dynamics of revenue

	Twelve Months Ended December 31,			
	2019		2018	
Revenue	$ 3,668,117	100.0%	$ 3,683,593	100.0%
Transportation costs	3,147,047	85.8%	3,237,992	87.9%
Gross margin	521,070	14.2%	445,601	12.1%
Costs and expenses:				
Salaries and benefits	235,963	6.4%	222,786	6.0%
General and administrative	104,206	2.8%	81,272	2.2%
Depreciation and amortization	28,481	0.8%	16,624	0.5%
Total costs and expenses	368,650	10.0%	320,682	8.7%
Operating income	$ 152,420	4.2%	$ 124,919	3.4%

Figure 2.9 – Statistics about costs and expenses

Transportation Costs.

TQL's transportation costs decreased to $3.1 billion in 2019 from $3.2 billion in 2018. Transportation costs in 2019 consisted of purchased transportation costs of $2.5 billion and equipment and driver related costs of $652.3 million compared to 2018,

which consisted of purchased transportation costs of $2.6 billion and equipment and driver related costs of $607.8 million. The 5.2% decrease in purchased transportation costs was primarily due to decreases in intermodal volume and improved purchasing, partially offset by rail cost increases. Equipment and driver related costs increased 7.3% in 2019 primarily due to increases in equipment depreciation expense, higher insurance and claims costs and driver compensation.

Gross Margin.

TQL's gross margin increased 16.9% to $521.1 million in 2019 from $445.6 million in 2018. The $75.5 million gross margin increase was the result of increases in all lines of business. Intermodal gross margin increased primarily due to improved pricing and network optimization. Partially offsetting the intermodal margin growth were higher rail costs and an increase in insurance and claims costs and lower volumes. Truck brokerage gross margin increased due to the addition of CaseStack, benefits from our yield management strategy and improved technology. Logistics gross margin increased due to the addition of CaseStack. Dedicated gross margin increased due to revenue management initiatives and improved operational discipline.

As a percentage of revenue, gross margin increased to 14.2% in 2019 from 12.1% in 2018. Intermodal gross margin as a percentage of sales increased 50 basis points due to improved prices and network optimization, partially offset by rail cost increases, higher insurance and claims costs and lower surge volumes. Truck brokerage gross margin as a percentage of sales increased 400 basis points primarily due to the addition of CaseStack and improved purchasing and pricing. Logistics gross margin as a percentage of sales increased 550 basis points due to the addition of CaseStack and improved purchasing and pricing. Dedicated gross margin as a percentage of sales increased 410 basis points due to decreased costs for third party carriers and improved operational discipline.

Consolidated operating expenses.

Salaries and Benefits Hub's salaries and benefits increased to $236.0 million in 2019 from $222.8 million in 2018. As a percentage of revenue, Hub's salaries and benefits increased to 6.4% in 2019 from 6.0% in 2018.

Hub's salaries and benefits increase of $13.2 million was primarily due to the addition of CaseStack employees. Salaries increased $17.6 million, restricted stock increased $2.9 million and payroll taxes and employee benefits combined increased $0.6 million, partially offset by a $7.9 million decrease in bonuses and commissions combined.

Hub's headcount as of December 31, 2019 and 2018 was 2,024 and 2,312, respectively, which excludes drivers, as driver costs are included in transportation costs. The decrease in Hub's headcount is primarily due to technology driven efficiencies and improved processes.

General and Administrative.

Hub's general and administrative expenses increased to $104.2 million in 2019 from $81.3 million in 2018. As a percentage of revenue, these expenses increased to 2.8% in 2019 from 2.2% in 2018.

The increase of $22.9 million in general and administrative expense was due primarily to the addition of CaseStack, a $4.8 million settlement in 2019 of a claim first made in 2013 for the alleged misclassification of drivers, the $4.7 million fair value consideration adjustment related to the Dedicated acquisition that decreased general and administrative expenses in 2018, as well as increases in IT consulting and professional service expense of $6.3 million, rent expense of $2.1 million, office expense of $1.2 million, IT maintenance expense of $1.1 million, temporary labor of $0.5 million and a $0.3 million lower gain on sale of equipment in 2019 versus 2018.

Depreciation and Amortization.

Hub's depreciation and amortization increased to $28.5 million in 2019 from $16.6 million in 2018. This expense as a percentage of revenue increased to 0.8% in 2019 from 0.5% in 2018. This increase was related primarily to the addition of amortization related to CaseStack's intangible assets.

Other Income (Expense).

Hub's other expense increased to $8.5 million in 2019 from $8.2 million in 2018 due to higher interest expense on debt related to equipment purchases, partially offset by higher interest income earned on increased cash balances.

Provision for Income Taxes.

The provision for income taxes increased to an expense of $36.7 million in 2019 from $29.1 million in 2018 due primarily to an increase in income from continuing operations in 2019. Our effective tax rate was 25.5% in 2019 and 24.9% in 2018. The effective tax rate increased in 2019 largely due to an unfavorable adjustment related to stock-based compensation impacting the 2019 tax rate. Net Income Net income from continuing operations increased to $107.2 million in 2019 from $87.7 million in 2018 due primarily to increased margin, partially offset by higher operating expenses and higher income tax expense. 24 Liquidity and Capital Resources During 2019, we funded operations, capital expenditures, finance leases, repayments of debt, purchases of treasury shares and the purchase of our stock related to employee withholding upon vesting of restricted stock through cash flows from operations, proceeds from the issuance of long-term debt and cash on hand. We believe that our cash, cash flows from operations and borrowings available under our Credit Agreement will be sufficient to meet our cash needs for at least the next twelve months.

Cash provided by operating activities for the year ended December 31, 2019 was approximately $254.5 million, which resulted primarily from income of $107.2 million, non-cash charges of $134.2 million and operating assets and liabilities of $13.1 million.

Cash provided by operating activities increased $43.7 million in 2019 versus 2018. The increase was due to the change in non-cash items of $135.5 and transaction costs related to the Disposition in 2018 of $5.8 million partially offset by a decrease in net income of $94.6 million and operating assets and liabilities of $3.0 million. The increase in non-cash charges resulted from no gain on Disposition in 2019 versus a gain on Disposition in 2018 of $132.4 million, higher depreciation and amortization of $33.0 million, no contingent consideration of $4.7 million in 2019, higher compensation related to stockbased plans of $2.8 million and lower gains on the sale of fixed assets of $0.3 million, partially offset by a decrease in deferred taxes of $37.7 million. The negative change in operating assets and liabilities of $3.1 million was caused by decreases in the changes in accrued expenses of $43.6 million,

accounts payable of $20.4 million, prepaid taxes of $11.5 million and restricted investments of $4.2 million. The decreases were partially offset by increases in the changes in accounts receivable of $64.2 million, prepaid expenses of $5.2 million, other assets of $4.2 million and non-current liabilities of $3.0 million.

Cash provided by operating activities increased $85.6 million in 2018 versus 2017. The increase was due to higher net income in 2018 of $66.6 million and a $57.2 million change in operating assets and liabilities, partially offset by a decrease of $32.4 million of non-cash items and $5.8 million of transaction costs related to the Disposition in 2018. The positive change in operating assets and liabilities of $57.2 million was caused by increases in the change of accounts receivable of $53.3 million, accrued expenses of $46.4 million, prepaid expenses of $5.8 million and restricted investments of $4.1 million as well as a decrease in the cash used for prepaid taxes of $23.3 million. These increases were partially offset by decreases in accounts payable of $53.5 million due to the timing of vendor payments, non-current liabilities of $14.1 million and other assets of $8.1 million. The decrease in non-cash charges primarily resulted from the gain on Disposition of $132.5 million plus the $4.7 million contingent consideration adjustment and the higher gain of the sale of equipment of $1.4 million, partially offset by increases in deferred taxes of $80.9 million, depreciation and amortization of $21.7 million and compensation expense related to stock-based compensation plans of $3.6 million.

Net cash used in investing activities for the year ended December 31, 2019 was $66.1 million which includes capital expenditures of $94.8 million and acquisition payments related to CaseStack of $0.7 million. Proceeds included $19.4 million from the Disposition and $10.0 million from the sale of equipment. Capital expenditures of $94.8 million included tractor purchases of $26.5 million, containers of $25.5 million, technology investments of $20.4 million, construction of our corporate headquarters of $16.3 million, transportation equipment of $5.6 million and the remainder for leasehold improvements.

Capital expenditures decreased by approximately $104.9 million in 2019 as compared to 2018. The 2019 decrease was due to decreases in tractor purchases of

$69.5 million, transportation equipment, primarily trailers of $27.9 million, containers of $17.1 million, technology investments of $6.1 million and leasehold improvements of $0.7 million, partially offset by an increase of $16.3 million primarily for our corporate headquarters.

Net cash used in investing activities decreased by $25.6 million to $209.5 million in 2018 from $235.1 million in 2017. The decrease was due to the proceeds received from the Disposition in 2018 of $228.0 million as compared to no proceeds in 2017 and an increase in the proceeds from the sale of equipment of $5.6 million in 2018. These cash increases were offset by additional cash used in 2018 for capital expenditures of $125.3 million and acquisitions of approximately $82.7 million.

The increase in capital expenditures of $125.3 million was due to additional purchases of tractors of $80.1 million, containers of $25.0 million, technology investments of $19.0 million, transportation equipment, including trailers, of $12.8 million and the remainder for leasehold improvements. In 2020, we estimate capital expenditures will range from $115 million to $120 million.

SWOT Analysis:

Strengths:

– plans to add 100 total new sales employees by 2015;

– opened new office in Charlotte N.C. in May 2013;

– new mobile app for tracking shipments;

– customers have a single point to contact;

– partnership with US Environmental Protection Agency to reduce energy consumption and improve fuel efficiency.

Weaknesses:

– trucks not owned by TQL therefore reliance on drivers is crucial;

– continual increase in gas prices;

– still somewhat of a young company.

Opportunities:

– open new offices and expand out on the west coast;

– expand into air shipments and own their own shipping trucks to gain the trust of bigger companies.

Threats:

– upcoming companies such as IEL which is a fast growing logistics company who was just on the INC 500 list and voted as one of the Best Places to Work in Cincinnati;

– government pressure to regulate emissions and fuel consumption;

– other companies are expanding into air shipments.

2.4 Identification of problem areas in the customer service process

The organization of production is a set of measures aimed at the rational combination of labour processes with the material elements of production in space and time in order to increase production efficiency, i.e. to achieve the objectives in the shortest possible time with the best use of production resources.

As in every company there is structure of all processes that helps to optimize functions of the company. Process of customer service of the Total Quality Logistics company is presented in Fig. 2.10.

1. Everything starts with the search of customers; this is the responsibility of Sales team.

Customer search is often the most difficult part of all processes of almost all companies, this company is not an exception. This task is very difficult, especially given the level of competition in most business sectors, however, it is quite real if you use different sources of customer search and create a competent competitive advantage.

There are a lot of ways to find clients for company service.

Let’s start with the existing customer database. Since Total Quality Logistics has existed in the market for a long time, it has a big database that is used all the time.

The list of clients all the time is growing and one more responsibility of sales team is to update it and adding new customers. Updating the database confirmation and editing of available information, checking lists, obtaining the necessary data about companies, forming a list of contacts. With the help of the formed actual database it is possible to prevent unjustified expenses at distribution, and the information is guaranteed to reach the potential consumer. It is a large company that should have the source where it should be stored and organized. We will discover it later.

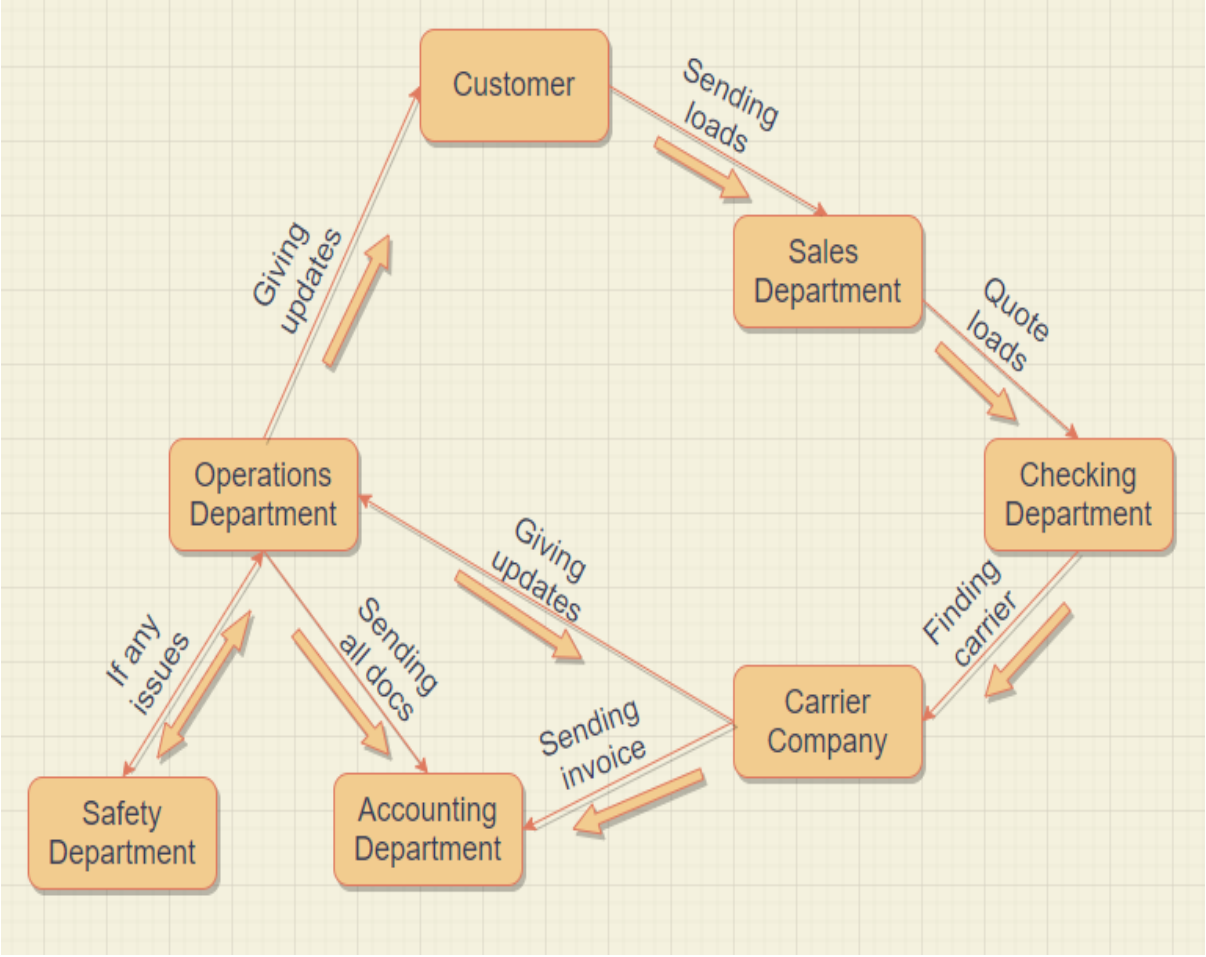

Figure 2.10 – Process of customer service of the Total Quality Logistics Company

To this block also we can add a cold customer database. It is a list of contacts of people who have no idea about your company and their services. The advantage is that the company can buy ready client database and all that they need is to make calls thru this list of potential customers and interest them in their services. This cold

database should be consisting of already interested in this sphere companies and people, thereby it is easier to attract more customers. Moreover, sales team can make calls to small and large facilities, they are always interested in cargo transportations.

The next method is SMM. There is a separate department in TQL company, that responsible for that. SMM (social media marketing) is a set of measures to use social media as a channel to promote companies and solve other business problems. So, this department can you e-platforms like different sites and social medias to attract more customers, i.e. Facebook, Twitter, Instagram etc. One of the main purposes of using social networks in marketing is as a communication tool that makes companies accessible to those who are interested in these services and makes them visible to those who do not know about them.

2. When the customers already know about such company, they send the request that they need to transport their load from point A to point B. There are two ways how they can contact the TQL. The first is when the customer wants to work with TQL for the first time, they just need to leave the request on the TQL website, and the sales team will quickly contact them. The second is when the customer use the service of TQL company repeatedly, often they have already had the contacts of one or more dispatch of TQL company.

There are two types of communication with the dispatch. The first is faster is to call him/her, the dispatch answer very quickly the call and discuss all the details about the load. And the second is more effective – to send the email. The TQL company use the Google service Gmail.com for communication with the customers and carriers.

About the email and what exact information should be. There are should be such points:

- pickup and delivery addresses;
- timeframes (date and working hours of the sipper and receiver);
- type of truck (Sprinter van, straight truck, dry van 53, reefer, flatbed, etc.);
- commodity (Hazmat or not, etc.);
- weight and dimensions;

It will be enough to quote the load to the checking team.

3. When the sales team collects all necessary information, they send the email to checking team. This mail where the load is described call “quote”. One quote can check only one dispatch from checking team.

The same as sales team looking for the customer, the checking team should search the carrier, and they have several ways, too.

The checking team has the list of carriers that they have already worked with. At the middle of the day when they already get some loads from sales team, they collect them into loads list and send it to these carriers that are already in their system snd waiting for a response.

At the same time dispatchers post the loads on special platforms. The Total Quality Logistics as a broker uses such platforms as DAT Power and Truckstop. These services help brokers and carriers to find each other. They both post their available loads and trucks and the system make matches. So, the broker can easily find the trucks that are near the city where their load is needed to pick up, and vise versa. Then the dispatch can contact the carrier who has the truck nearby and call or text them, discuss the details and rate. Also the broker cannot work with all carriers, because there are a lot of bad service carriers, that are not acceptable for Total Quality Logistics company. The dispatchers check them for bad reviews on various sites.

If the carrier and broker accept all (timeframes, rate, etc.), the carrier advise when the truck can be at the pickup and the dispatch send the email to the sales team, saying that he/she have a truck nearby and advise the rate, they call it “an option”. When dispatch from sales team approves all, they ask to book the truck.

The dispatch from checking team advise the carrier to book the truck and send the “carrier packet”, where the broker company request all insurance and all necessary information from the carrier company. It means that these two companies are set up and ready to carry the loads together.

After all this load with this carrier transfer to the operations team, which is the bridge between the carrier and customer. They need to add this load and the carrier to

the system and send the document the Rate Confirmation, which the carrier needs to sign. Operations team helps the carrier during the transportation and gives the updates regarding the load to the customer.

When the load delivered successfully, the broker company sends the invoice to the customer and the carrier company sends the invoice to the broker.

Furthermore, the TQL company has one more department that deals with issues and problems during the transportation, it calls Safety Department. When it happens, the operations team can ask them to deal with it to not waste their time to one load but concentrate on others.

According to my research, I can highlight the bottle necks, that show the issues that Total Quality Logistics can face with. The first and most important is that the sales team does not pay enough attention to existing customers in the database. We need to discover why it happens and how the company can fix it. And the second is how the TQL company can grow the amount of customers all the time.

2.5 Chapter 2 summary

Over the past few years, Ukraine has intensified its trade links with the EU driven by both the positive stimulus provided by the Association Agreement and a negative stimulus, namely the need to replace lost trade links with Russia. Between 2013 and 2018, the share of EU in Ukraine's international trade in goods increased to 42% from 31%, while 2018 trade value at USD 43.4 bn almost reached the pre-crisis level (USD 43.8 bn in 2013) and grew by over 50% from 2015.

The shipping industry has been affected on multiple fronts, with the loss of life and vessels in the Black Sea, disruption to trade with Russia and Ukraine, and the growing burden of sanctions. The industry also faces challenges to day-to-day operations, with knock-on effects for crew, the cost and availability of bunker fuel, and the growing threat posed by cyber risk.

Total Quality Logistics (TQL) is the second-largest freight brokerage firm in the USA. TQL provides domestic and international freight transportation and logistics services. It was founded in 1997 by Ken Oaks in Cincinnati, Ohio, and is headquartered in Union Township, Ohio. As of 2018, TQL was the largest private company in greater Cincinnati according to the Cincinnati Business Courier.

TQL is a third-party logistics provider (3PL) with full truckload (TL), less-than-truckload (LTL), intermodal and other specialized logistic services.

TQL has 57 offices in 26 states with more than 5,500 employees.

TQL connects customers with truckload freight that needs to be moved with quality carriers who have the capacity to move it. As a company that operates 24/7/365, TQL manages work-life balance with sales support teams that assist with accounting, and after hours calls and specific needs. At TQL, the opportunities are endless which means that there is room for career advancement and the ability to write your own paycheck. What's your worth? Company's open and transparent communication from management creates a successful work environment and custom career path for our employees. TQL is an industry-leader in the logistics industry with unlimited potential. Be a part of something big.

CHAPTER 3
RECOMMENDATIONS ABOUT FORMATION OF LOGISTICS CUSTOMERS SERVICE SYSTEM OF A BROKERAGE COMPANY

3.1 Implementation of logistics customer service in the activity of the brokerage company

Based on the analysis of the theoretical material, we can claim that the organization of logistics service for customers of the broker company takes place according to the following stages (Fig. 3.1) [based on 23].

Therefore, the first stage is the segmentation of the company's customers, that is, their division into certain categories, for each of which certain service strategies will need to be developed. Usually, a logistic approach to customer segmentation involves the use of ABC and XYZ analyses.

Analysis of ABC is carried out based on revenues that customers bring to the broker company for a certain period. For our calculations, we will take only those customers with whom the company has more or less stable relations. As the calculations showed, these customers in total bring to the broker company Total Quality Logistics approximately 77% of its total income. All other clients of the broker company Total Quality Logistics are usually one-time and each individually do not bring significant income.

To divide clients of the broker company Total Quality Logistics into categories A, B and C, it is better to use the following approach:

– to category A include customers of the ordered list, starting from the most profitable to the first large value of the specific weight jump inclusively. Usually this is about 20% of the total number of customers;

– to category B include the following clients of the ordered list up to and including the second large value of the jump in specific gravity. Usually this is about 30% of the total number of customers;

– to category C include customers who remained at the bottom of the ordered list. Usually, this is about 50% of the total number of customers.

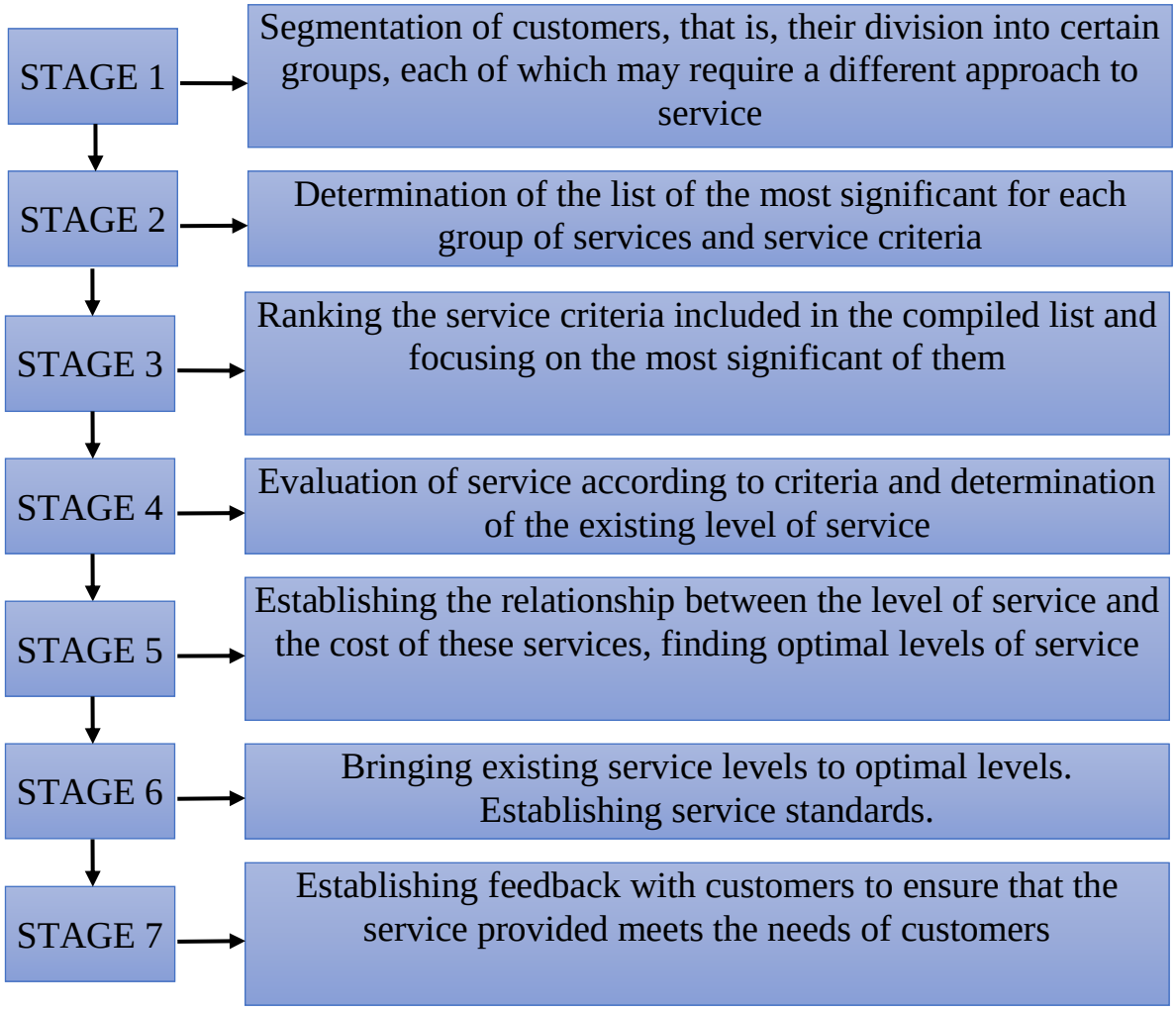

Figure 3.1 – Stages of formation of logistics service for clients of a broker company

The specific weight jump is calculated as the difference between the specific weights of the previous and the next client, according to the ordered list.

The raw data on clients of the Total Quality Logistics broker company, necessary for carrying out ABC-XYZ analysis.

Taking into account all of the above, we will conduct an ABC analysis of clients of the broker company Total Quality Logistics (Table 3.1).

Table 3.1 – Results of the ABC analysis of customers of the broker company Total Quality Logistics

№	Customers	The share of each customer in the total revenue, %	Accumulative share, %	Jump of the share	Group
1	2	3	4	5	7
1	Company 1	15,20	15,20	1,60	A
2	Company 2	13,60	28,80	0,00	A
3	Company 3	13,60	42,40	4,00	A
4	Company 4	9,60	52,00	0,80	A
5	Company 5	8,80	60,80	0,00	A
6	Company 6	8,80	69,60	3,12	A
7	Company 7	5,68	75,28	2,32	A
8	Company 8	3,36	78,64	0,56	B
9	Company 9	2,80	81,44	0,48	B
10	Company 10	2,32	83,76	0,24	B
11	Company 11	2,08	85,84	0,24	B
12	Company 12	1,84	87,68	0,00	B
13	Company 13	1,84	89,52	0,08	B
14	Company 14	1,76	91,28	0,16	B
15	Company 15	1,60	92,88	0,72	B
16	Company 16	0,88	93,76	0,00	C
17	Company 17	0,88	94,64	0,04	C
18	Company 18	0,84	95,48	0,00	C
19	Company 19	0,84	96,32	0,04	C
20	Company 20	0,80	97,12	0,08	C
21	Company 21	0,72	97,84	0,08	C
22	Company 22	0,64	98,48	0,00	C
23	Company 23	0,64	99,12	0,16	C
24	Company 24	0,48	99,60	0,08	C
25	Company 25	0,40	100,00	0,00	C

As for the XYZ analysis, it is carried out taking into account the stability of the relationship with each client. For this, the standard formula of the coefficient of variation is used. The results of the division of clients of the broker company Total Quality Logistics into categories X, Y and Z are presented in the table. 3.2.

Table 3.2 – Results of XYZ analysis of clients of TQL.

№	Initial Data			Sorted Data		
	Customers	Average numbers of orders	Coefficient of variation, %	Customers	Coefficient of variation, %	XYZ
1	2	3	4	5	6	7
1	Company 1	44,00	8,35	Company 22	2,27	X
2	Company 2	36,50	28,57	Company 20	2,90	X
3	Company 3	106,75	8,47	Company 13	4,65	X
4	Company 4	44,50	17,52	Company 19	4,73	X
5	Company 5	128,75	11,11	Company 7	5,62	X
6	Company 6	119,25	6,85	Company 21	5,84	X
7	Company 7	29,50	5,62	Company 6	6,85	X
8	Company 8	106,75	8,04	Company 9	6,85	X
9	Company 9	119,25	6,85	Company 17	7,05	X
10	Company 10	42,75	27,70	Company 24	8,02	X
11	Company 11	89,25	11,02	Company 8	8,04	X
12	Company 12	52,75	13,76	Company 1	8,35	X
13	Company 13	150,75	4,65	Company 25	8,47	X
14	Company 14	41,75	12,14	Company 3	8,47	X
15	Company 15	39,00	29,85	Company 11	11,02	Y
16	Company 16	41,50	13,47	Company 5	11,11	Y
17	Company 17	45,25	7,05	Company 14	12,14	Y
18	Company 18	37,75	25,98	Company 16	13,47	Y
19	Company 19	43,25	4,73	Company 12	13,76	Y
20	Company 20	44,75	2,90	Company 4	17,52	Y
21	Company 21	44,50	5,84	Company 18	25,98	Z
22	Company 22	44,00	2,27	Company 10	27,70	Z
23	Company 23	44,75	30,86	Company 2	28,57	Z
24	Company 24	40,75	8,02	Company 15	29,85	Z
25	Company 25	32,75	8,47	Company 23	30,86	Z

The distribution of customers into groups X, Y and Z was carried out as follows:

– category X includes clients whose relationships are stable and easily predictable ($0\% < v \leq 10\%$);

– category Y includes clients whose relations have some fluctuations ($10\% < v \leq 25\%$);

– category Z includes clients whose relationships are difficult to predict or unpredictable ($v > 25\%$).

Based on the results of the ABC and XYZ analyses, we will construct a cross ABC-XYZ analysis matrix (Table 3.3).

Table 3.3 – The resulting ABC-XYZ matrix of the analysis of customers of the broker company Total Quality Logistics

№	The results of dividing by X, Y and Z	The results of dividing into A, B and C		
		A	B	C
1	2	3	4	5
1	X	Company 2 Company 3 Company 4 Company 5 Company 6	Company 9 Company 11 Company 13 Company14 Company 15	Company 17 Company 16 Company 18 Company20
2	Y	Company 1 Company 7	Company 12 Company 8	Company 22 Company 23
3	Z	-	Company 10	Company 19 Company 24 Company 21 Company 25

Now let's develop recommendations for servicing each received customer segment of the TQL company.

Clients who fall into categories AX and AY are the clients who bring the greatest income to the TQL broker company. Their service must be provided at the highest level, individual programs must be developed for each client, and discounts and loyalty programs must be provided. For customers who fall into the AY category,

it is necessary to identify the reasons for the fluctuation of orders and create all possible conditions to increase their stability.

Clients who fall into categories BX, BY and BZ are also quite important for the broker company TQL. Servicing these customers must be carried out using additional services, as well as create conditions for increasing the income that the company can receive from them. For a client who has entered the VZ group, it is worth determining the reasons for the instability of orders and trying to eliminate them. However, in contrast to customers who fell into category A, it is necessary to control that additional measures for customers B are not unprofitable for the company.

Clients who fell into categories CX, CY and CZ bring the least income to the broker company TQL. Therefore, it is necessary to minimize the costs of servicing these customers and provide them with only the minimally necessary list of services. For customers of these categories, the number of discounts provided should be minimized, and loyalty programs should not be developed for them. Exceptions can be made only by customers of the X category, who can become a source of "word of mouth" and therefore indirectly be useful for the broker company TQL. At the same time, for customers of categories CY and CZ, it is necessary to constantly monitor the costs of their service.

Summarizing the recommendations made, we can say that customers who fell into category A should be served first, customers who fell into category B should be served second, and customers who fell into category C (this especially applies to customers of category CZ) should serve last. This will help to organize better management of the resources of the broker company TQL and will make it possible not to lose the best customers during peak loading periods.

In addition, taking into account the specifics of the activity of the broker company TQL and its existing problems, it is necessary to pay more attention to customers who fell into category X, that is, regular customers. After all, these customers can become an invaluable source of information, a positive image of the broker company TQL, a source of "word of mouth", and as a result, they will help attract new profitable customers.

The second stage, according to fig. 3.2, there is a definition of the list of the most significant services for each category of customers, as well as the criteria for their service. Considering the specificity of our company's activity, we believe that the list of important criteria is the same for all categories of clients. The difference should be only in the established standards of their service. Therefore, we offer the following list of customer service criteria for the broker company:

1. Continuity of service is the ability of a broker company to maintain the expected terms of order fulfillment during a certain period of time. The formula for calculating continuity is as follows [39]:

$$K = \frac{1}{n}\sum_{i=1}^{n}\frac{Q_{від\_i}}{Q_{заг\_i}} * 100\%, \quad (3.1)$$

where Qвід_i is the number of orders of the i-th client that were fulfilled in accordance with the approved terms; Qзаг_i – the total number of completed orders of the ith client; n – is the total number of customers of a certain category.

2. Service flexibility is the ability of a broker company to adjust its services and the service process to the requirements and requests of specific customers. The formula for calculating service flexibility [39]:

$$F = \frac{\sum Q_{заг}}{\sum Q_{зверт}} * 100\%, \quad (3.2)$$

where Qзаг is the total number of completed orders from customers of a certain category; Qзверт – the total number of appeals (contacts) from customers of a certain category about the provision of company services to them.

3. The level of unpretentious work is a criterion that shows how many customers were satisfied as a result of receiving the company's services. The formula for calculating the level of unpretentious work [39]:

$$Y = \frac{\sum Q_{заг} - \sum Q_{пр}}{\sum Q_{заг}} * 100\%, \quad (3.3)$$

where Qnp is the total number of orders for which claims were received from customers of a certain category; Qзаг – the total number of completed customer orders of a certain category.

4. Information availability is a criterion that shows how much information about the company is available to its potential and existing customers. The formula for calculating information availability:

$$Iд = \frac{\sum N_{I\_вик}}{\sum N_{I\_заг}} * 100\%, \quad (3.4)$$

where N1_вик is the number of information channels that are actually used by the company for contacts with clients; N1_заг is the total number of possible information channels used for contacts with customers.

The calculation of the existing level of logistics service for customers of the broker company is performed by determining the value of the integral service criterion [39]:

$$S^{\text{інт}} = \sqrt[m]{\prod_{j=1}^{m} S_j}, \quad (3.5)$$

where m is the number of established service criteria (in our case, there are 4 of them); Sj is the value of each logistic service criterion.

The results of calculations of the values of the listed criteria separately for each category of customers A, B and C for the broker company TQL are shown in the Table 3.4.

Table 3.4 – Results of calculations of the values of criteria for logistics service of the company's customers

№	Customers	ABC	Number of completed orders	Orders fulfilled on time	Number of claims received	Number of client appeals	Value of logistics service criteria, %				
							K	F	Y	I_d	S^{int}
1	2	3	4	5	6	7	8	9	10	11	12
1	Company 1	A	515	499	18	543	96,80	94,45	96,16	55,56	83,60
2	Company 2	A	477	458	17	510					
3	Company 3	A	427	419	11	461					
4	Company 4	A	603	588	14	629					
5	Company 5	A	427	412	23	450					
6	Company 6	A	357	350	19	382					
7	Company 7	A	477	451	24	501					
8	Amount by category A:	-	3283	3177	126	3476					
9	Company 8	B	173	165	14	182	94,20	93,97	93,29	55,56	82,30
10	Company 9	B	176	171	12	185					
11	Company 10	B	163	160	9	170					
12	Company 11	B	178	172	19	191					
13	Company 12	B	131	120	6	152					
14	Company 13	B	146	125	11	155					
15	Company 14	B	211	201	15	223					
16	Company 15	B	178	167	5	185					
17	Amount by category B:	-	1356	1281	91	1443					
18	Company 16	C	179	176	12	183	95,45	96,42	93,49	55,56	83,15
19	Company 17	C	176	167	9	181					
20	Company 18	C	167	159	19	171					
21	Company 19	C	179	165	6	186					
22	Company 20	C	118	112	11	122					
23	Company 21	C	166	154	15	171					
24	Company 22	C	156	149	8	160					
25	Company 23	C	171	166	9	182					
26	Company 24	C	181	179	12	190					
27	Company 25	C	151	143	6	159					
28	Amount by category C:	-	1644	1570	107	1705					

When calculating the values of the "information availability" criterion, it was assumed that today the broker company TQL uses 5 information channels for contacts with customers:

– Viber;
– What'sApp;
– Telegram.
– 1C;
– Outlook;

The conducted market analysis showed that the total number of possible information channels for contacts with customers today is 9:

– Viber;
– What'sApp;
– Telegram;
– 1C;
– OutLook (Gmail and others);
– Facebook + Messenger;
– Chrome and others;
– LinkedIn;
– website (forums, chats, etc.).

This criterion turned out to be the same for all categories of the company's customers, because the broker company TQL contacts all customers in the same way. This same criterion turned out to be the weak point of the company.

In general, the existing approach to customer service of the broker company turned out to be not very correct, because, according to the recommendations given above, customers of category A should be served at the highest level, customers of category B at the average level, and customers of category C at the lowest level. According to the results of our calculations, we have a slightly different situation: the existing level of customer service of category A is the highest and equal to 83.6%, the existing level of customer service of category B is the lowest and equal to 82.3%, and

the existing level of customer service of category C is average and is equal to 83.15%. That is, the existing level of service for category C customers is almost equal to the level of service for category A customers, which is a completely incorrect approach. Therefore, it is necessary to review the existing customer service process of the TQL in order to improve the level of service for customers of categories A and B.

The next stage, according to the above algorithm for the formation of logistics service for customers of the broker company, is to establish optimal levels of service for each category of customers.

The optimal level of customer service is the level at which the broker company will be able to satisfy the needs of its customers with maximum economic efficiency for itself.

Based on the current trends in the broker services market, as well as taking into account that category A customers should be served at the highest level, category B customers at the average level, and category C customers at the lowest among the listed customers, we will establish the following optimal levels for each customer category TQL company:

– for clients of category A – optimal level of service 97%;

– for clients of category B – optimal service level of 95%;

– for customers of category C – the optimal level of service is 92%.

The next stage is the development of recommendations for bringing existing service levels to optimal levels. Based on our calculations, we can provide the following recommendations to TQL company.

1. Their existing level of customer service for category A was found to be sub-optimal, so they needed to improve their existing level of service to bring it closer to optimal. This can be done by improving the weak spot in the customer service process of this category. The weak spot in the process of service to category A customers, in addition to the already mentioned criterion "information availability", turned out to be the criterion "flexibility of customer service". At the same time, the importance of this criterion for category A clients is very high. A recommendation

can be better identification of requests and wishes of customers for more accurate fulfillment of their orders and satisfaction of their needs. This will also contribute to the expansion of the company's information availability.

2. The existing level of customer service of category B also turned out to be below the optimal level. That is, it also needs to be increased. The criterion "level of unpretentious work" turned out to be a weak point in the process of service to category B customers. The recommendation may be to increase the value of this criterion due to more accurate fulfillment of contractual obligations or, perhaps, revision of the company's promises (for example, advertising).

3. The existing level of customer service for category C was also found to be less than optimal, so it also needs to be improved. The criterion "unpretentious work level" also turned out to be a weak point in the process of service to category C customers. And therefore, the company TQL really needs to pay attention to the accuracy of the fulfillment of contractual obligations or review the external information that its clients receive.

In order to achieve optimal levels of service for each category of customers, as well as taking into account the different importance of criteria for different categories of customers, we propose to establish the following standards of service for different categories of customers of the TQL broker company (Table 3.5).

The last stage of the algorithm is the establishment of feedback between the company TQL and its customers in order to determine and ensure the compliance of the provided service with the needs of customers.

All this can be achieved due to the expansion of information channels of contact with customers, as well as due to the implementation of CRM systems, which are precisely aimed at improving the understanding of customer needs, maintaining constant relations with them and ensuring contact in exactly those ways that are convenient for customers [49].

In addition, it should not be forgotten that the company Total Quality Logistics has business partners who also influence the process of customer service.

Table 3.5 – Proposed customer service standards of the broker company Total Quality Logistics

№	Customer category	Category	Existing value, %	Optimal value (standard), %	Deviation, %
1	2	3	4	5	6
1	A	Continuity of service (K)	96,8	97,50	+0,70
		Service flexibility (F)	94,45	97,51	+3,06
		The level of unpretentious work (Y)	96,16	98,00	+1,84
		Information availability (Id)	55,56	95,00	+39,44
		Integral service criterion, (Sint)	83,6	97,00	+13,40
2	B	Continuity of service (K)	94,2	95,00	+0,80
		Service flexibility (F)	93,97	94,00	+0,03
		The level of unpretentious work (Y)	93,29	96,00	+2,71
		Information availability (Id)	55,56	95,00	+39,44
		Integral service criterion, (Sint)	82,3	95,00	+12,70
3	C	Continuity of service (K)	95,45	92,15	-3,30
		Service flexibility (F)	96,42	88,00	-8,42
		The level of unpretentious work (Y)	93,49	93,00	-0,49
		Information availability (Id)	55,56	95,00	+39,44
		Integral service criterion, (Sint)	83,15	92,00	+8,85

Therefore, it is necessary to go beyond the framework of one company and form a logistics service system.

3.2 Conceptual principles of forming a system of logistics service for clients of a brokerage company

As the conducted studies have shown, in order to maintain a competitive position on the market, the broker company needs to solve a whole set of tasks every day:

– selection of the most effective option for cargo delivery;

– finding ways to minimize the cost of delivery services;

– organization of the full cycle of the process of delivery of raw materials, materials or finished products to the end points of their consumption;

– organization of storage of material resources at hired warehouses;

– organization of customs clearance of goods;

– cargo insurance organization;

– organization of information support of the logistics process;

– carrying out mutual settlements with all participants of the transport process, etc.

Based on this list, we see that not all services are provided by the TQL independently. The organization and implementation of some stages (processes) are carried out by other subjects, business partners. However, the responsibility to customers for the quality of service is still borne by the TQL company.

The formation of the logistics service system for customers of the broker company involves the use of compromises, in which decisions are made based on the general goal of the system's functioning, taking into account the interests of all participants in the logistics process. At the same time, the main difficulties usually arise in situations where neighboring units use different principles of organizing operations, as well as different criteria for evaluating the logistics service of their customers.

In such cases, in the process of contacting business partners, problem areas arise where the interests of the parties begin to conflict. Such discrepancies in practice usually lead to dissatisfaction of end customers. Therefore, the company must constantly monitor not only its own implementation of established customer service standards, but also their implementation by business partners [50].

The system of logistics service (SLO) of customers of a broker company can be defined as a consciously developed and structured workflow of logistics flows. The structure of each link of the logistics system can determine the hierarchy of individual

components, distinguishing subsystems as elements of a wider meaning and smaller segments that make them up.

Broker companies belong to a special group of enterprises that, as far as logistics is concerned, lack the full traditional cycle, i.e., subsystems of supply, production and distribution. In this case, only two stages are defined, namely supply and production, or supply and production combined with distribution. This is the key difference between companies in the service sector and companies operating in the market for tangible goods.

In the companies, the subsystems of the logistics system are characterized by the presence of direct and reverse relations, which determine the integration of the system and form its integrity. These connections are specified due to the simultaneous processes of flow movement and material flow transformation. It can be concluded that the totality of the behavior of all elements determines the behavior of the entire logistics system.

The entire structure of a broker company consists of several functional subsystems, and its logistics system is only one of them, while interacting with other subsystems [51]. Therefore, logistics is often perceived as an end-to-end function of the system.

The structuring and formation of the logistics service system for the broker company's customers is carried out by studying the structure of the system and the connections between its elements. We can distinguish two main structural areas of SLO of company customers:

– physical flows, that is, transport and storage processes, which form four utilities to increase the value of the flow (utility of form, time, place and possession),

– areas of regulation, i.e., areas of management and control of logistics processes.

The functioning of the SLO of the broker company's customers can be presented as clearly as possible through the structure of the logistics system at the operational level (Fig. 3.2).

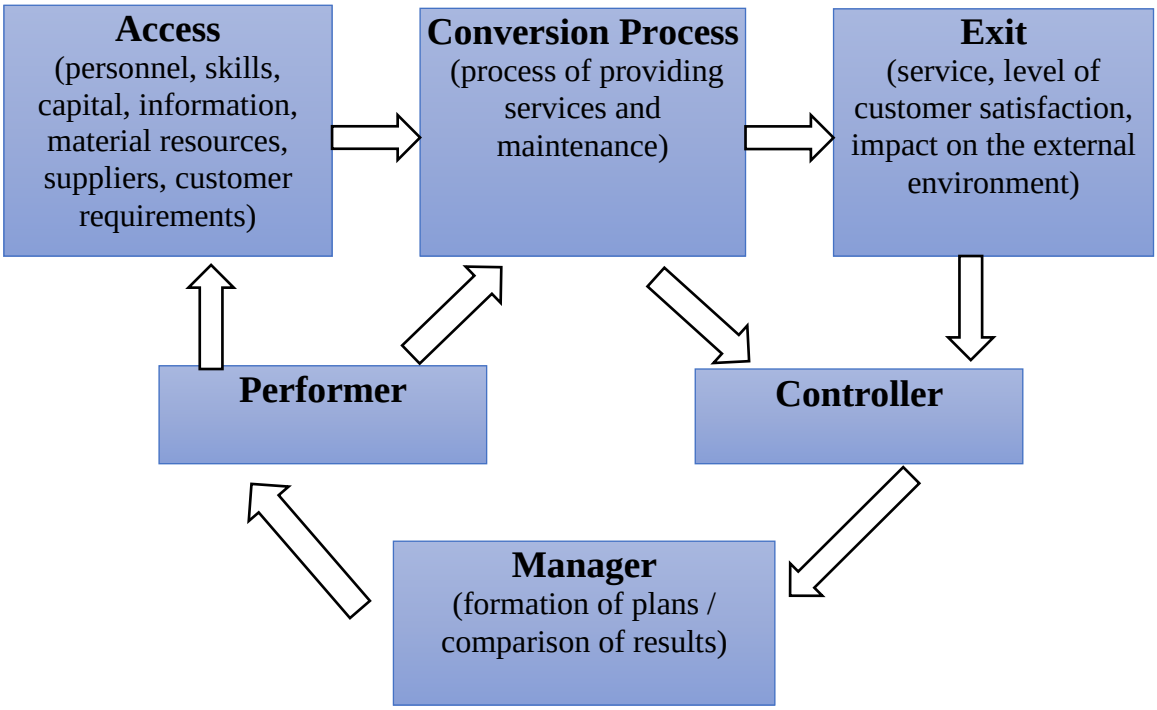

Figure 3.2 – Logistics service system for customers of a broker company at the operational level

The figure above shows all the relationships between the elements and their properties to create a service that is an output module by implementing all the input elements through bindings, including:

– manager-planner who seeks to adjust the system according to the needs of end customers;

– manager-comparator, who constantly records any changes in the process of preparing and providing the service,

– the executor, whose task is to eliminate any deviations in order to obtain the result of the process in accordance with the expectations of customers,

– a controller that checks whether the result meets expectations.

The logistics system in a broker company plays the same important role as in any other business. A systematic approach to providing services allows you to clearly prepare the company to come up with the right way of doing things. It is possible to define the following stages of the preparation of a system dedicated to a specific company, aimed directly at the nature of its activity, i.e.:

– the stage of analyzing the situation and specific tasks and determinants of the system;

– phase of system structure formation;

– the phase of connecting the logistics system and subsystems with other subsystems defined within the company;

– system implementation phase [52].

The SLO of the company's customers is designed to regulate all activities in the company from the moment of acceptance of the service to its final execution, control related information flows, data collection and the entire process.

The two most important characteristics of SLO customers of the company:

– a significant degree of cohesion – this means that the connections between different subsystems and their dependence on each other are strong enough that changes in one subsystem automatically trigger changes in other systems;

– flexibility – manifested through the ability to respond to changes occurring in the economic or competitive environment, and therefore, vulnerability to price changes or changes in the level of taxes [53].

A well-designed and well-functioning SLO is the key to achieving what is especially important for broker companies, namely: obtaining a competitive advantage, ensuring maximum customer satisfaction from the services received, and sustainable development – all at the lowest possible level of costs and the highest level of profit. . It is extremely important to competently manage logistics processes with the help of a developed logistics system. In order for this system to function smoothly in its entirety, constant collection and processing of information is required.

On the basis of the above, as well as using the theoretical foundations of the formation of the logistics service system, we offer the following procedure for the formation of SLO of customers of the broker company TQL (Fig. 3.3).

The first stage is related to the development of the logistics system project. The design process consists of five stages. At the first stage, problems are identified and the goals of the system are determined, on the basis of which a logistics mission and a set of goals are formed, which must be achieved in certain periods of operation of the

SLO of the broker company's customers, the company's logistics competencies and ways of its further development are determined. Specific goals depend on the state of the company and its strategy. Based on the structure of goals, logistics tasks within the company and the entire logistics service system are determined. The set goals should describe specific parameters of the company's activity, which usually represent the characteristics of the level of logistics service.

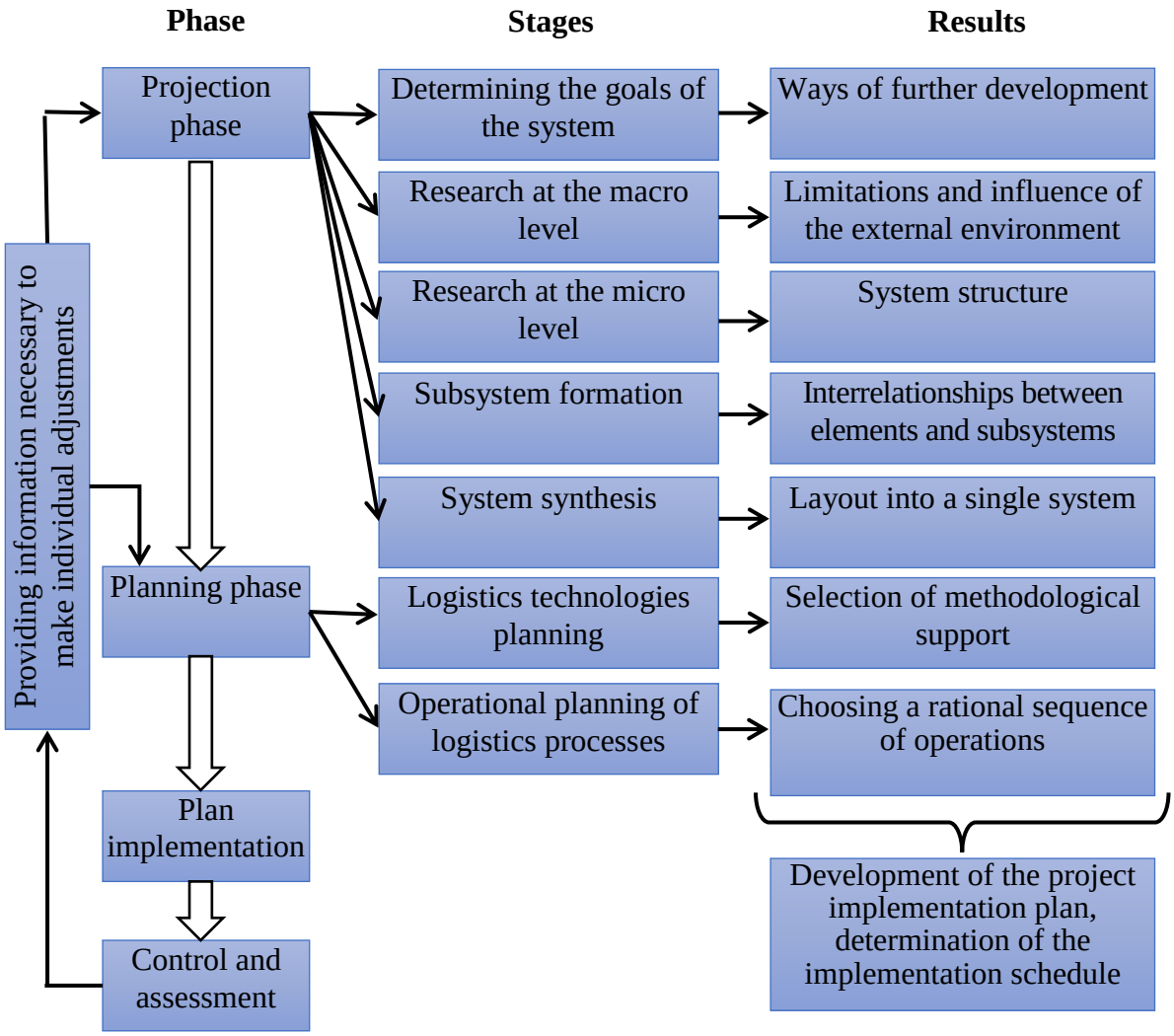

Figure 3.3 – The order of formation of the logistics service system for customers of the broker company

At the second stage, a study of macroeconomic factors of influence and relations of the company with business partners (external environment) is carried out. The influence of the external environment can be analyzed by the following factors:

– state of relevant market segments and industry;

– activities and capabilities of competitors;

– conditions regarding the geographical location of the logistics network (relief of the area, communication routes, location of suppliers and customers);

– current changes in information technologies, as well as in transportation, cargo processing, packaging, etc.;

– the state of external logistics infrastructure (existing means of transportation, storage, communications, etc.);

– development trends in the field of logistics services;

– state regulation.

Taking into account the existing prerequisites and restrictions, the structure and configuration of the territorial location of the logistics network is usually determined, and the relations between its participants are regulated [54].

At the third stage of designing the customer's SLO, research is carried out at the micro level, that is, the activities of the company and its business partners. The entire logistics process and each logistics function is subject to study.

In addition, it is necessary to analyze data on the structure of orders, the organization of their processing, planning of resource needs, the production potential of companies and the management system, the organization of transport and warehouse management, the structure of the logistics chain, current costs, performance indicators of logistics functions, etc. As a result, reserves for improving the organization of logistics activities are revealed, the structure of the SLO of the company's customers is determined (system boundaries, its composition). The connections of SLO and its subsystems with other subsystems of the company are determined [56].

At the fourth stage, the SLO is detailed at the level of subsystems, their structure and relationships are determined. As part of the logistics system, the following main subsystems can be distinguished: transport, warehouse, inventory management, information, logistics service, logistics management, etc. At this stage, the broker company, together with its partners, should work out possible technical and

organizational solutions for optimizing the service provision process, their flexibility, in relation to the organization of partnership relations, information flows and customer service.

The fifth stage of design is the synthesis of the system, namely the analysis of various options for the arrangement of subsystems into a single system and the selection of the best of them. The choice of system synthesis is based on the evaluation and comparison of costs and benefits of various alternatives. Thus, at this stage, the coordinated formation of the SLO structure of the company's customers is carried out, which eliminates conflicts between the goals of individual subsystems and the goals of the entire system.

The second stage of the formation of the SLO of the company's customers is related to the planning of logistics processes. The components of this stage are the planning stages of logistics technologies and operational planning of logistics processes. As a result of this stage of planning, we should get:

– comparison of options and selection of a rational sequence of operations with material, information and financial flows;

– determination of the list of necessary material infrastructure of the logistics service system;

– the choice of methodical support for improving the efficiency of customer service.

The list of SLO methodical support includes:

– logistics technologies for improving flow management;

– information technologies;

– formalization tools and logistics decision-making;

– procedures for coordination of partners' activities;

– logistics service procedures;

– means of improving the management of logistics chains and operations, etc.

The design and planning stages of SLO should end with the development of a plan for its implementation and determination of the schedule for its implementation.

At the stage of implementation, there is a gradual composition of SLO and its combination with the organizational structure of the broker company and its partners. The process of project implementation requires monitoring of adherence to the implementation schedule and assessment of actual results.

At the final stage, the measurement and assessment of SLO activity indicators take place, as well as providing people who plan the strategic process with the information necessary to make individual adjustments or modify the entire system.

Based on all of the above, we offer our own vision of the structure of the logistic service system for clients of the broker company TQL (Fig. 3.4).

Considering the fact that the elements of this system go beyond the scope of the broker company Total Quality Logistics itself, all processes, procedures and standards of its customer service must be communicated to its business partners, who take direct or indirect participation in the process of providing services and customer service.

3.3 Economic effect of practical implementation of the proposed recommendation

Based on above calculations we can say that the TQL broker company has a big database of customers, so the recommendation would be to provide a good customer service for existing clients. One of the solutions could be a Customer Relationship Management (CRM).

The concept of CRM (Customer Relationship Management) means that disparate business tools are combined into a well-established system. It includes programs for collecting customer data, managing deals, monitoring managers, analytics and forecasting. It simplifies the routine, accelerates making the right decisions and eliminates mistakes.

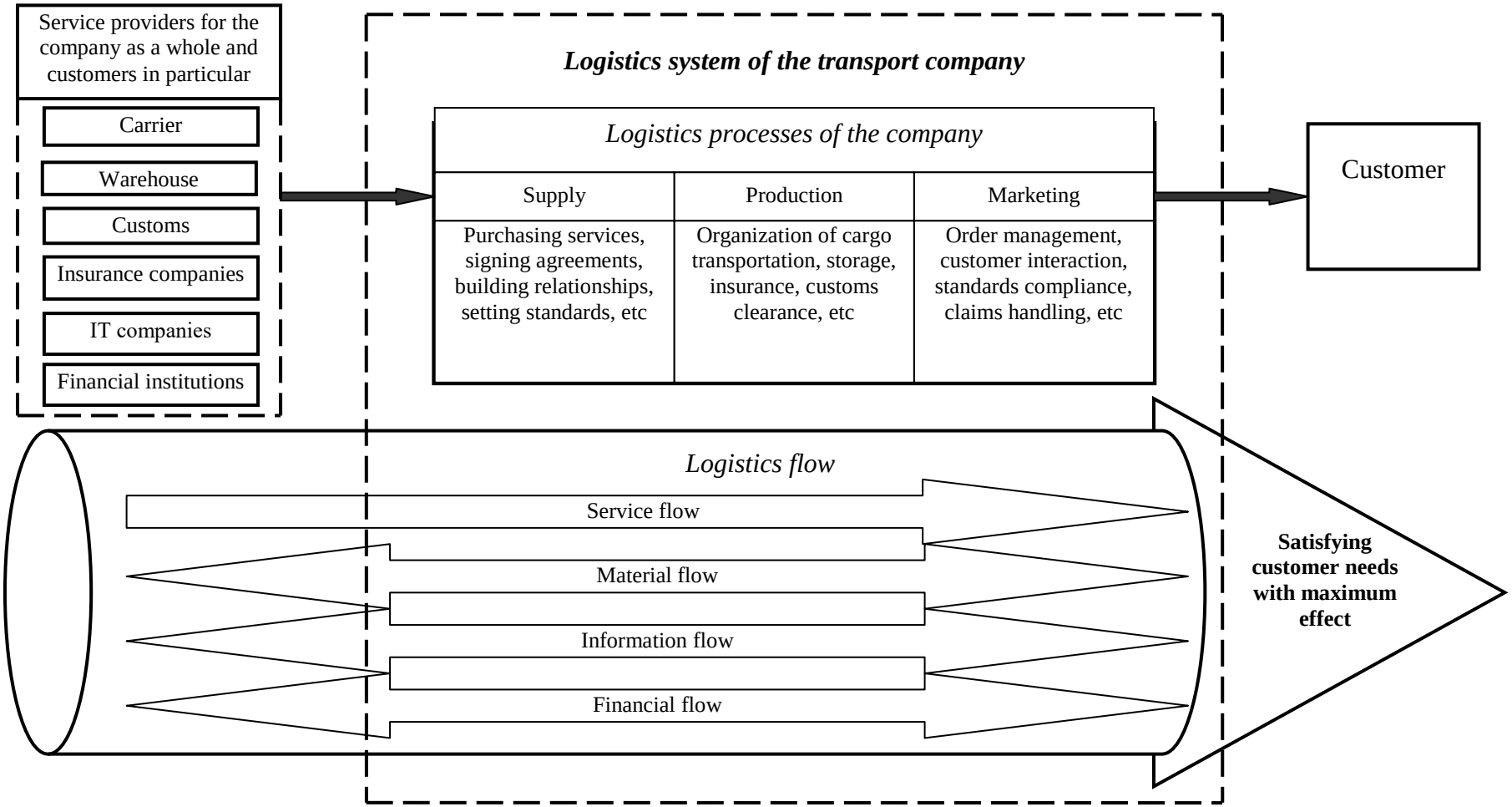

Figure 3.4 – The proposed system of logistics service for customers of the Broker company TQL

Check out the benefits of a CRM system:

– tracking customer data in an organized way;

– makes it easier to follow up with customers;

– generating more conversions that translate into sales thus achieving faster business growth and success;

– makes it easier to manage customer data since all employees are using the same system to counter customer issues and difficulties;

– makes it easier to track conversions;

– gives an organization a better understanding of all customer needs and wants from time to time since the system allows for easy assembly of historical data stored in the system.

The concept of CRM (Customer Relationship Management) means that disparate business tools are combined into a well-established system (Fig. 3.5).

Figure 3.5 – Components of CRM system

Replace Excel tables, messengers, documents and files on cabinets, one-one service is available. They must include programs for collecting tribute about customers, managing pleasures, controlling managers, analytics and forecasting. It simplifies the routine, accelerates making the right decisions and eliminates mistakes [40].

CRM systems have a number of advantages that simultaneously improve customer relations and establish productive collaboration within the team. They also provide you with all the resources to improve your future business development planning. Since their main goal is to automate and optimize customer interaction, they save a lot of time and money.

1. Automated request processing. The purpose of the CRM system is to eliminate routine tasks of employees from the very beginning of the customer's journey. These solutions automate the processes of receiving applications, assigning them to managers and managing orders until the moment of closing the deal. Customers always expect a quick response from companies. A transportation CRM collects messages coming from different channels (phones, websites, social media, and emails) in one place. In this way, the manager can quickly respond to the inquiries of new potential customers and start the deal immediately.

2. Optimized sales and marketing. Using a CRM system to manage logistics customers, sales and marketing departments will be able to:

– more effectively manage new inquiries to lead potential customers to the first sale;

– evaluate each stage of the sales chain and "correct" the client's path at the right moment;

– determine the best channels for attracting customers;

– use messages to offer services to existing customers;

– communicate with several customers by email to provide them with updates and new offers;

– turn inactive customers into active ones by reminding them about their services through various communication channels;

– make calls directly from the CRM system using integrated telephony.

The CRM system is an effective tool for comprehensive analysis of customer requests and sales data. This data allows company managers to understand the level of customer satisfaction with a particular deal. Given the information about previous customer experiences available through a transportation CRM, the marketing department can make communication with customers more personalized and work with them more productively.

3. Increased economic efficiency. Customer service automation can help offload or even downsize to reduce human resource costs. Sometimes companies have to pay a high price for employee mistakes. For example, if the managers do not enter the correct data into the system, it will be a serious threat to the entire work process. The system allows you to eliminate such errors with the help of automation.

4. Advanced reporting. Company managers can receive detailed reports on the work of customer-facing departments and evaluate the performance of each manager based on these reports. For example, you can view data about deadlines, listen to recordings of incoming and outgoing calls, find out information in customer cards. Based on this data, all previous customer interactions can be analyzed to improve service quality and even drive initiatives in consumer supply chains and other industry aspects.

5. Improved customer service. There are two ways to show you care about your customers. One of them is a quick response to any customer request and providing him with the necessary information in the shortest possible time. Thanks to the automated processing of requests and the tracking of every aspect of interaction with the client, CRM systems allow you to inform customers in a matter of minutes.

Another aspect of customer service is dealing with unforeseen problems. Transportation and delivery are complex processes involving many people. One of the most important aspects here is keeping customers informed of any issues faced by members of the supply chain. These can be transport agents, specialists responsible for vehicles, terminals, warehouses, terminal workers.

CRM systems allow managers to be informed about these problems in a timely manner, which is especially important in the conditions of a rapidly changing global business. Broker companies must inform customers of any problems with their deliveries due to force majeure. This is an effective measure to prevent further financial losses to your customers and to protect companies from accusations and legal prosecution. And a well-thought-out CRM for transportation will take care of this.

6. Convenient data management. Logistics companies get all the opportunities to flexibly set up different processes, in addition to the typical tasks of sales and deal management. In the 21st century, Excel spreadsheets are no longer convenient for finding and using customer information. In addition to a broad customer base, CRM systems provide detailed information about each customer through their profiles. A special logistics CRM allows you to find out the following data:

– current and completed operations;

– cargo status;

– evaluation of the order;

– accepted commercial offers;

– vehicles, transport/freight transportation and customs documentation;

– payment information;

– limited commercial offers and others.

7. Organized team cooperation. The CRM system makes data about potential customers and loyal customers available to different departments and managers of the company. Each process is transparent and understandable to any team member. This makes the team more organized and eliminates confusion when setting and executing tasks. Anyone can constantly monitor the work process and the quality of communication with customers. If some employees leave the team, CRM software allows new employees to learn current processes more quickly.

Now let's calculate the economic effect that the TQL company can get due to the formation of a logistics customer service system and the implementation of an integrated CRM system.

The cost components required for the implementation of an integrated CRM system are listed in the table. 3.6.

Direct benefits from the implementation of an integrated CRM system are an increase in the number of served customers, which in turn will lead to an increase in the company's income.

We can say that for TQL company the implementing the CRM system is an integral part for increasing the profit of the company. For implementing the CRM system in the company we need to start with:

– creating a single database of existing and potential customers, determining the composition and formats of source data on them, as well as information entry procedures;

– building a communication system that provides interaction all divisions of the TQL within the concept of CRM and organization of their access to the general database;

– development of a system of procedures, regulations and algorithms interaction of all enterprises involved in this supply chain, with customers on a common basis strategy, as well as business logic of interaction of all processes front and back offices of the company;

– defining performance evaluation criteria as units and individual employees, the organization control systems for their activities within the CRM system;

– system setup and staff training.

We can compare two CRM software, the first is Creatio (cloud-based) and Dynamics 365 CRM (on-premises)

Creatio is an agile CRM platform designed to cater to both large and midsize business organizations helping them to boost sales, marketing, services, and other operations through aligning of data, processes, and teams so that they can connect with online customers and rapidly adapt to them (Fig. 3.6) [41].

The product comes with a set of tools that can either be sold as standalone applications or as a bundle depending with an organization’s specific needs.

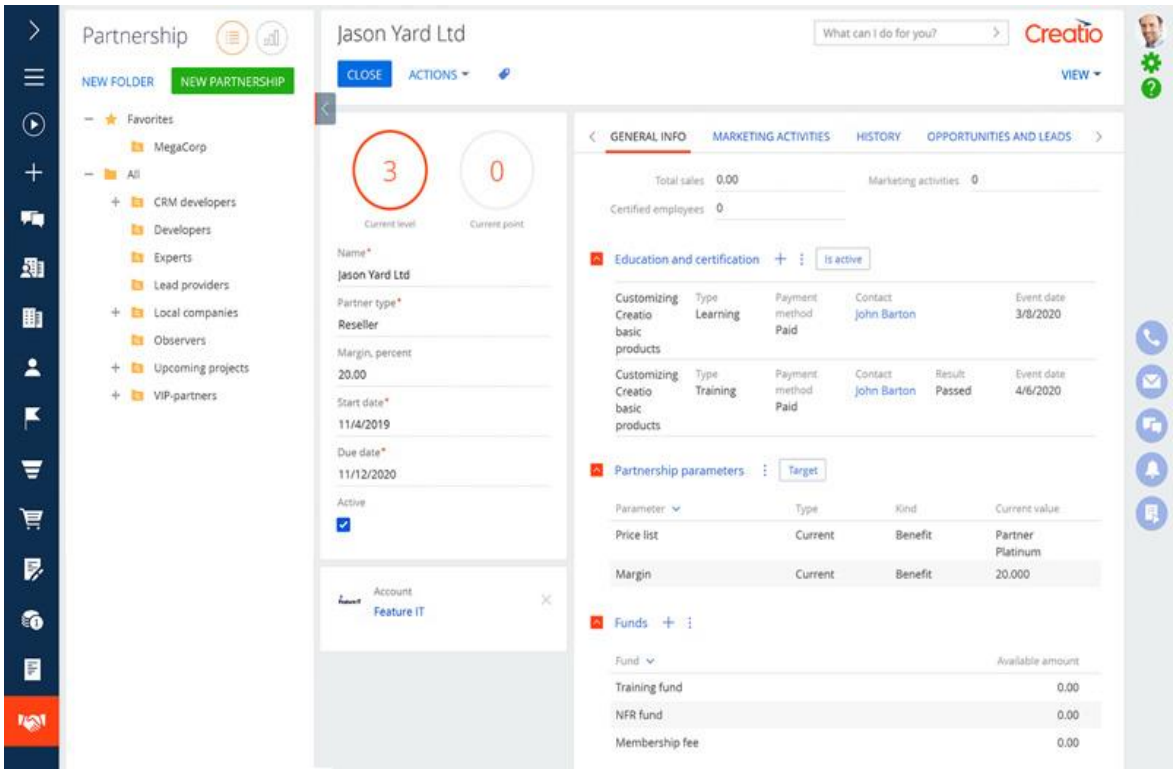

Figure 3.6 – Interface of Creatio CRM

This is a cloud-based CRM that helps to drive efficient sales processes to enable total control over the complete customer journey, right from lead generation to loyal repeat customers (fig. 3.7). Creatio, therefore, offers the best out-of-the-box processes to manage the entire sales cycle.

Microsoft Dynamics 365 CRM is customer relationship management (CRM) business solution that drives sales productivity and marketing effectiveness through social insights, business intelligence, and campaign management in the cloud, on-premises, or with a hybrid combination. Customer relationship management (CRM) can help reduce costs and increase profitability by organizing and automating business processes that nurture customer satisfaction and loyalty in the sales, marketing, and customer service fields. CRM solutions can deliver ROI through marketing automation, customer service, and sales force automation. We also offer mobile CRM apps and platforms that enable you to manage your customer relationships on your mobile devices, along with tools that integrate data and reporting from social media directly into your CRM application [42].

Interface of Microsoft Dynamics 365 CRM is presented in fig. 3.8.

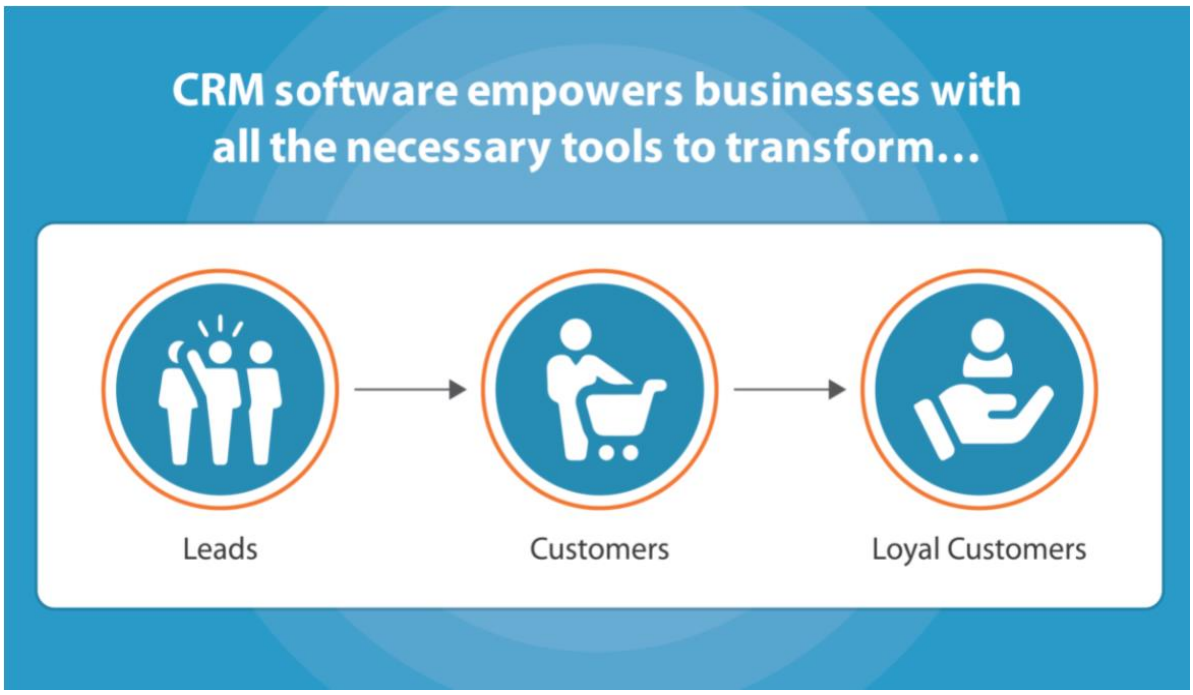

Figure 3.7 – Customer journey in the Creatio CRM

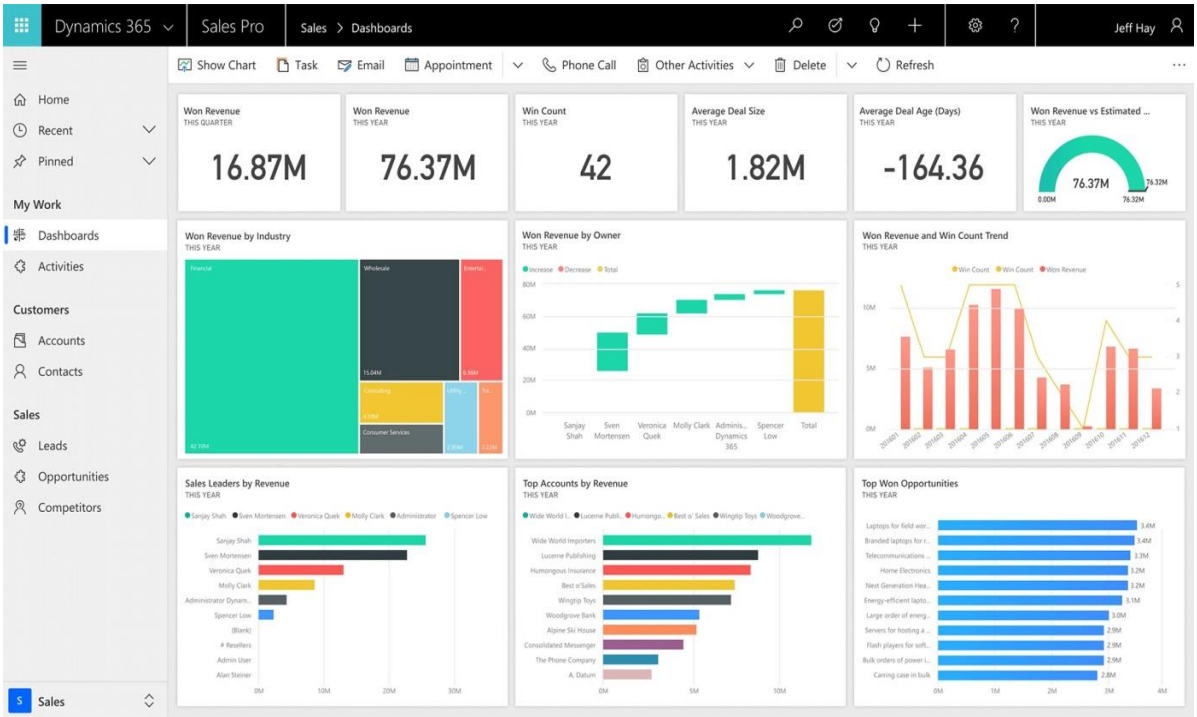

Figure 3.8 – Interface of Microsoft Dynamics 365 CRM

With Microsoft Dynamics CRM, get powerful CRM software delivered on cloud, hosted or on premises. Our CRM Online service providing instant-on anywhere access, predictable pay-as-you-go pricing, and a financially backed service level agreement (SLA) (Fig. 3.9) [43].

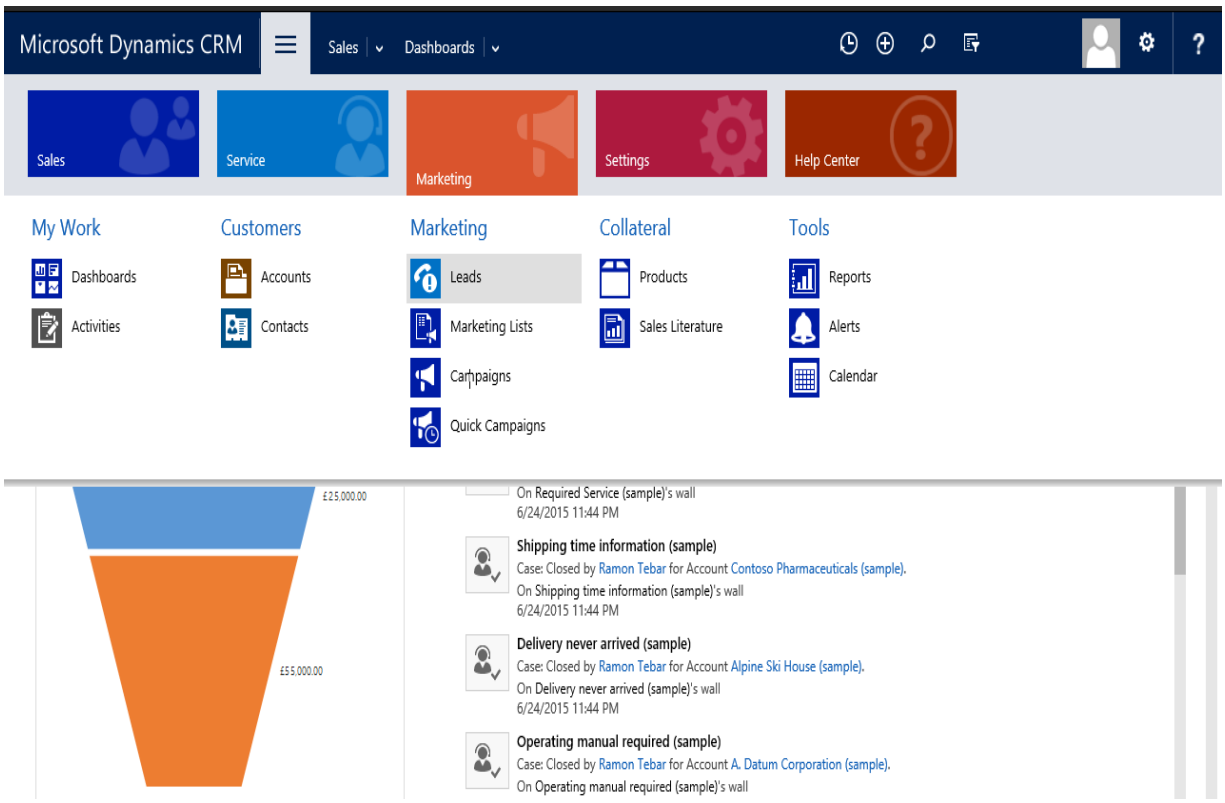

Figure 3.9 – Functions of Microsoft Dynamics 365 CRM

First of all we need to choose if it will be cloud CRM or on-premise CRM.

A cloud CRM is a system that lives online – you pay a subscription fee to get a license for your business. Cloud CRMs give you more flexibility in customization and payment options, are easier to scale up, and offer remote-access for all of your devices.

An on-premise CRM is a system you purchase up front (for a whole lot of money). You own it. It exists on your servers. The maintenance, updates, and uptime are your responsibility [38].

After my research I could note that for such a big company with 5500+ employees it will be more reasonable and cost effective to use this system on-permises with unlimited number of users, because TQL company is growing all the time. Dynamics 364 CRM will be one of the most suitable for TQL. Now we need to count all expenses for this system and determine the income that CRM system will bring to company.

After my research I have such data for calculations.

We will start with expenses. I compared some companies that sell this service and for such big company the average cost for the product will be around $240,000; it is one-time payment in first month.

Also with this system the TQL company need to buy additional functions, like SMM and SEO, it will help to increase the amount of the customers. We discussed the SMM in previous chapters and what about SEO? SEO or search engine optimization – the process of adjusting HTML-code, text content, site structure, control of external factors to meet the requirements of the search engine algorithm, in order to raise the position of the site in search results in these systems on certain requests of users. The higher a site's position in search results, the more likely a visitor will come to it from search engines, as people usually follow the first links.

Search engines rank sites in search results according to a certain coefficient of relevance to the key query. If the site owner, having posted this or that information, did not provide the content with the required level of relevance to the topic, then such a page, in the opinion of the search engine, does not deserve to be in the TOP search results. There are more than 200 ranking factors used by SEO optimizers to promote websites. Making a mosaic of the same 200-t factors, you can get a high-quality site that will meet the requirements of search engines.

So, the cost of this service will be $48,000 also one-time payment.

The next step is installation of this system and design work. All this process will take two months. And the average cost will be $60,000 per month.

When all technical processes are done, the company can start using it, but this system is not so easy for use. For most employees it could be difficult in use. So, the company needs to provide trainings and help for their staff. This training will last for 3 month and also not for free. The average cost for one employee is $15 per month, as in TQL company accrued around 5500 people we get $82500 per month.

For such systems also the company needs information and technical support. This payment will start once all installations will be done, from third to twelfth month. The cost per month will be $52200.

After all we need to add all expenses per each month (Table 3.5).

Table 3.6 – Economic effects, USD

№	Indicators	Months											
	Expenses	1	2	3	4	5	6	7	8	9	10	11	12
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	Cost of CRM system	240000	-	-	-	-	-	-	-	-	-	-	-
2	SMM+SEO additional functions	48000											
3	Design work and system installation	60000	60000										
4	Training of system users	-		82500	82500	82500							
5	Information and technical support	-		52200	52200	52200	52200	52200	52200	52200	52200	52200	52200
6	Total expenses	348000	60000	134700	134700	134700	52200	52200	52200	52200	52200	52200	52200
7	Incomes												
8	Reduction of man-hour per day, minutes	0	0	0	5	10	15	20	25	30	35	40	45
9	Reduction of man-hour (payment for 1 hour*0.5 hours*22 days)	0	0	0	50417	100833	151250	201667	252083	302500	352917	403333	453750
10	Total income	0	0	0	50417	100833	151250	201667	252083	302500	352917	403333	453750
11	Effect (income-expenses)	-348000	-60000	-134700	-84283	-33867	99050	149467	199883	250300	300717	351133	401550
12	Accumulated effect	-348000	-408000	-542700	-626983	-660850	-561800	-412333	-212450	37850	338567	689700	1091250

Now we need to count all profit that this system will bring to the company. In this project I will show on the example of economy on labor force. Per employees are training and getting better in knowledge of this system, the reduction of the working hours will be growing all the time. We will start with the forth month after one month of training. It will save 5 minutes of working hours of each employee and with each passing month will grow by 5 minutes.

The next step will be to count this economy in dollars USD for all employees per month. Now we have the income that CRM system brings to the company for one year.

The effect of implementation of CRM system in Total Quality Logistics is the difference between income and expenses per each month. And the last step that will show when this system pays off is determining accumulated effect. It is multiplication effect of the previous and current months. Accumulated effect it is Net present value (NPV) of the project. NPV is used in capital budgeting and investment planning to analyze the profitability of a projected investment or project.

The payback period of our proposals is presented in Fig. 3.10.

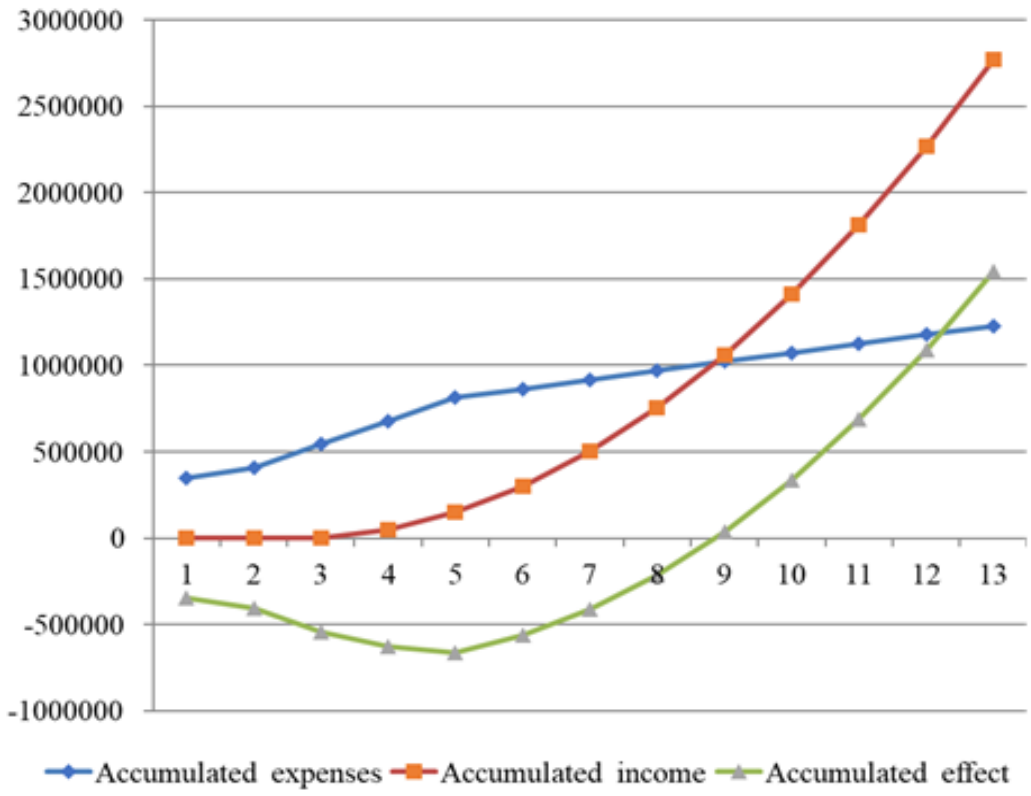

Figure 3.10 – The payback period of CRM system

To conclude, after our research we can see that expenses became less than the company's incomes of using CRM system on fifth month. The difference of income and expanses on forth month is $-33867 and on fifth it became $99050.

The payback period of CRM system is eight month, on ninth month the accumulated affect became $1091250.

Therefore, our project proposals are cost-effective and can be recommended for implementation in the company's activities.

3.4 Chapter 3 summary

In this chapter we showed all the segmentation of the company's customers, that is, their division into certain categories, for each of which certain service strategies were developed. Moreover we made a sample of the customers and on their example calculated ABC-XYZ analysis and pointed out the customers that bring bigger profit for the company and who needs more attention in servicing.

In general, the existing approach to customer service of the broker company turned out to be not very correct, because, according to the recommendations given above, customers of category A should be served at the highest level, customers of category B at the average level, and customers of category C at the lowest level. According to the results of our calculations, we have a slightly different situation: the existing level of customer service of category A is the highest and equal to 83.6%, the existing level of customer service of category B is the lowest and equal to 82.3%, and the existing level of customer service of category C is average and is equal to 83.15%. That is, the existing level of service for category C customers is almost equal to the level of service for category A customers, which is a completely incorrect approach. Therefore, it is necessary to review the existing customer service process of the TQL in order to improve the level of service for customers of categories A and B.

At the stage of implementation, there is a gradual composition of SLO and its combination with the organizational structure of the broker company and its partners. The process of project implementation requires monitoring of adherence to the implementation schedule and assessment of actual results.

At the final stage, the measurement and assessment of SLO activity indicators take place, as well as providing people who plan the strategic process with the information necessary to make individual adjustments or modify the entire system.

Based on all of the above, we offer our own vision of the structure of the logistic service system for clients of the broker company TQL

After all, one of the main benefits of CRM systems that they provide to the company that uses them is the improvement of the overall quality of customer service. There is a growing likelihood that current customers will recommend you to their acquaintances as a responsible and reliable performer.

We can compare two CRM software, the first is Creatio (cloud-based) and Microsoft Dynamics 365 CRM (on-permises) [45].

A cloud-based CRM helps to drive efficient sales processes to enable total control over the complete customer journey, right from lead generation to loyal repeat customers [44].

Microsoft Dynamics 365 CRM is customer relationship management (CRM) business solution that drives sales productivity and marketing effectiveness through social insights, business intelligence, and campaign management in the cloud, on-premises, or with a hybrid combination. Customer relationship management (CRM) can help reduce costs and increase profitability by organizing and automating business processes that nurture customer satisfaction and loyalty in the sales, marketing, and customer service fields [38].

After my research I could note that for such a big company with 5500+ employees it will be more reasonable and cost effective to use this system on-permises with unlimited number of users, because TQL company is growing all the time. Dynamics 364 CRM will be one of the most suitable for TQL. Now we need to

count all expenses for this system and determine the income that CRM system will bring to company.

The use of such systems increases the accuracy and simplifies the work on their segmentation, the needs are identified and entered into the database, the tasks are implemented in a timely and accurate manner. All this leads to a reduction in the time of concluding contracts, increasing profits and a high level of customer retention due to the fact that their satisfaction increases.

Then we calculated the cost effective of CRM system for Total Quality Logistics and can make such conclusions. For large companies most efficient is to buy CRM system, and for small and medium to use cloud-system.

The expanses of the company were to buy the CRM system, its installation, the expenses for additional functions, employees trainings and for good work of the system the company need to provide the technical support monthly.

The income is the economy of labour-hours. We stated with 5 minutes per one employee per day and every month increased this time also by 5 minutes.

So, of the use of Microsoft Dynamics of Total Quality Logistics Company , including all incomes and expenses the payback period is eight month on ninth month the accumulated affect became $1091250.

CONCLUSIONS AND RECOMMENDATIONS

Customer service is a very important measure of the efficiency of a logistical system. Many measures and processes allow the logistics professional an opportunity to receive feedback from the customer on their efficiency. The adage that the customer is always right may not always be true but certainly reigns supreme in most companies. The complexity added by a global economy has increased the visibility of customer service in logistics and emphasizes the importance of measuring and examining the process. Customer service will influence many decisions in logistics and require much analysis for optimum performance.

So, guiding logistics strategy for customer service, organizations industrial enterprises can achieve sustainable and long-term competitive advantage Despite the importance of the level of service currently in the theory and practice are not fully worked out the question of organizing a system of indicators, criterion scale evaluation and an integral indicator to measure the level of service.. For reliable response level logistics service system of indicators should be realistically measured, objective, related to the current and past results, comparable with other companies and other time periods, understandable to all interested parties, allow to identify problem areas. In this regard, the authors proposed an approach of measuring and assessing the level of logistics customer service, which should allow industrial companies to become more efficient.

The developed method allows to estimate the level of logistics customer service for individual indicators, as well as get an overall assessment of the level of service by means of an integral indicator of the level of service to individual orders section, categories of consumers and for the whole company, to conduct benchmarking procedure. This technique can also be used to assess suppliers and business partners (eg, contractors).

People in the field of freight brokers sell services to their clients. Instead of the shipper trying to find a freight company that can deliver their goods quickly and at

the optimum speed to the desired destination, busy companies turn to a person with experience in the field of freight brokers. A freight broker is likely to have previous work experience in the sales or transportation business to be effective in this role.

When a potential client turns to a broker for help, he or she listens very carefully to his or her needs. Because the freight broker is well aware of the geography and time required to deliver goods from one place to another, he or she may recommend a solution that will allow you to quickly and efficiently deliver the customer's raw materials or finished products to their destination. Part of the job of a truck broker is to be familiar with the delivery process and the equipment available to move goods from one place to another.

Once the client has hired a freight broker to take responsibility for the shipment, the broker must select a suitable carrier for the job. Many trucking companies offer their services, and a truck broker has the resources to match the cargo with a transport company that can deliver it on time. Once a potential match is found, the broker should conduct some investigative work to ensure that the carrier has good safety performance.

Before sending the goods by truck, the broker must also draw up insurance and any other necessary documentation, such as a consignment note or customs declaration. He or she will also discuss the shipping cost with the carrier. The broker arranges for the driver of the freight company to pick up the cargo and will be informed of any invoices or container numbers associated with it. Once the cargo has arrived at its destination, the driver contacts the cargo broker to confirm that it has been received in good condition. At this stage, the broker has fulfilled its responsibilities and can bill the client for the services provided.

When you evaluate your customer service organization, make sure you’re looking past current capabilities – consider how it is serving your brand and your customers' satisfaction.

A strategic partner for CX will help your company grow and excel. DDC FPO’s Customer Care solution helps many transportation and logistics companies

achieve goals from start to finish with a dedicated team of experts that possess decades of experience in transportation and logistics.

When it comes to building customer loyalty, the transportation and logistics industry needs to focus on direct communication with customers at every stage. You need to update your clients about any problems that you faced with the shipment and how you managed to overcome them. Additionally, special care should be taken to prevent those issues from happening again. Lastly, you need to take your clients' comments seriously and evaluate whether you met their expectations or not.

By leveraging automation and advanced technologies, freight forwarding customer service representatives can eliminate the usual window of three to five business days to resolve simple inquiries. Be part of the solution by using modern technology to automate more back-office workflows. And don't forget to ook a demo with RPA Labs to see how your business can improve customer satisfaction rates, which can lead to more business, more money and higher retention rates.

Over the past few years, Ukraine has intensified its trade links with the EU driven by both the positive stimulus provided by the Association Agreement and a negative stimulus, namely the need to replace lost trade links with Russia. Between 2013 and 2018, the share of EU in Ukraine's international trade in goods increased to 42% from 31%, while 2018 trade value at USD 43.4 bn almost reached the pre-crisis level (USD 43.8 bn in 2013) and grew by over 50% from 2015.

The shipping industry has been affected on multiple fronts, with the loss of life and vessels in the Black Sea, disruption to trade with Russia and Ukraine, and the growing burden of sanctions. The industry also faces challenges to day-to-day operations, with knock-on effects for crew, the cost and availability of bunker fuel, and the growing threat posed by cyber risk.

Total Quality Logistics (TQL) is the second-largest freight brokerage firm in the USA. TQL provides domestic and international freight transportation and logistics services. It was founded in 1997 by Ken Oaks in Cincinnati, Ohio, and is headquartered in Union Township, Ohio. As of 2018, TQL was the largest private company in greater Cincinnati according to the Cincinnati Business Courier.

TQL is a third-party logistics provider (3PL) with full truckload (TL), less-than-truckload (LTL), intermodal and other specialized logistic services.

TQL has 57 offices in 26 states with more than 5,500 employees.

TQL connects customers with truckload freight that needs to be moved with quality carriers who have the capacity to move it. As a company that operates 24/7/365, TQL manages work-life balance with sales support teams that assist with accounting, and after hours calls and specific needs. At TQL, the opportunities are endless which means that there is room for career advancement and the ability to write your own paycheck. What's your worth? Company's open and transparent communication from management creates a successful work environment and custom career path for our employees. TQL is an industry-leader in the logistics industry with unlimited potential. Be a part of something big.

In this chapter we showed all the segmentation of the company's customers, that is, their division into certain categories, for each of which certain service strategies were developed. Moreover we made a sample of the customers and on their example calculated ABC-XYZ analysis and pointed out the customers that bring bigger profit for the company and who needs more attention in servicing.

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