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INTRODUCTION

We are happy to invite you to get acquainted with the first issue of the new scientific and practical publication "Intellectualization of Logistics and Supply Chain Management".

We strongly believe that the launch of this magazine indicates the objective need to rethink a wide range of issues related to the development of theory and practice in logistics and supply chain management, awareness of the need to unite the scientific community and logistics practitioners, dissemination of modern knowledge and best practices for innovative development of the logistics services market.

The first issue of the magazine is published at a difficult time. The global coronavirus pandemic and the deep economic crisis have significantly worsened business activity in the world. Currently, global supply chains are collapsing, international trade is declining, and competition between global and regional logistics operators is intensifying. The most common thesis is that the world will never be the same again. Industry experts predict the emergence of new, more flexible and adaptive supply chain management strategies and approaches to logistics business process management. The trend towards collaborations, cooperation and unification of services is emerging, comprehensive proposals for clients are being developed. There is increasing talk about the need to build bimodal supply chains, which involves the development of different decision-making scenarios: the traditional approach - cost-effective efficiency, low risk, high predictability; a new approach "second mode" - rapid recognition of opportunities, adaptability, willingness to solve unexpected problems and look for new opportunities.

Radical transformations of the global and national markets for logistics services require appropriate scientific support. Logistics science has a special role to play in this process. Initiating the emergence of a new journal, we decided to focus on its coverage of problematic aspects of the formation and development of logistics systems at the micro, mezo and macro levels, supply chain management, digitization of logistics, methods and tools for optimizing processes in logistics and supply chains, sociopsychology relations and network interaction of enterprises using cloud technologies, artificial intelligence, e-learning, neural business process management systems, etc.

Therefore, we invite scientists, researchers and business representatives, as well as our colleagues from abroad, to cooperate and present the results of scientific research, to discus and debate on them, to work together to develop the scientific theory of logistics and promote mutual intellectual enrichment.

We hope that the new scientific publication will become a theoretical guide for young researchers and representatives of other fields.

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DIGITAL TRANSFORMATIONS OF LOGISTICS CUSTOMER SERVICE BUSINESS MODELS

Hryhorak Mariia, Trushkina Natalia, Tadeusz Popkowski, Molchanova Kateryna. «Digital transformations of logistics customer service business models». *The article presents the results of expert surveys conducted by international organizations as a method of empirical research to identify current problems, features and trends of customer-oriented logistics services to consumers in the context of digital space. The statistical analysis of the indicators characterizing the level of use of information and communication technologies at management of mutual relations with consumers at the Ukrainian enterprises is executed. The key barriers that hinder the digital transformation of the logistics service have been identified, which are conditionally classified into 6 groups: trading, transport, marketing, information, organizational and financial and economic. The content structure of CRM-system implementation as a customer relationship management tool is proposed. The expediency of the complex approach application to digital transformation of consumers*

logistic service on the basis of customer orientation is substantiated and the formula of an estimation of synergetic effect from its realization is offered.

***Keywords**: logistics service, customer orientation, customer experience, digital economy, digital technologies, CRM-system.*

Марія Григорак, Наталія Трушкіна, Tadeusz Popkowski, Катерина Молчанова. «Цифрові трансформації бізнес-моделей логістичного обслуговування споживачів». *У статті викладено результати експертних опитувань, проведених міжнародними організаціями, як методу емпіричних досліджень для визначення сучасних проблем, особливостей і тенденцій клієнтоорієнтованості логістичного обслуговування споживачів у контексті цифрового простору. Виконано статистичний аналіз показників, що характеризують рівень використання інформаційно-комунікаційних технологій при управлінні взаємовідносинами зі споживачами на українських підприємствах. Виявлено ключові бар'єри, що стримують цифрову трансформацію логістичного сервісу, які умовно класифіковано за 6 групами: ринкові, транспортні, маркетингові, інформаційні, організаційні, фінансово-економічні. Запропоновано змістовну структуру впровадження CRM-системи як інструменту управління взаємовідносинами з клієнтами. Обґрунтовано доцільність застосування комплексного підходу до цифрової трансформації логістичного обслуговування споживачів на засадах клієнтоорієнтованості та запропоновано формулу оцінювання синергетичного ефекту від його реалізації.*

***Ключові слова:** логістичне обслуговування, клієнтоорієнтованість, клієнтський досвід, цифрова економіка, цифрові технології, CRM-система.*

Мария Григорак, Наталия Трушкина, Tadeusz Popkowski, Катерина Молчанова. «Цифровые трансформации бизнес-моделей логистического обслуживания потребителей». *В статье изложены результаты экспертных опросов, проведенных международными организациями, как метода эмпирических исследований для определения современных проблем, особенностей и тенденций клиентоориентированности логистического обслуживания потребителей в контексте цифрового пространства. Выполнен статистический анализ показателей, характеризующих уровень использования информационно-коммуникационных технологий при управлении взаимоотношениями с потребителями на украинских предприятиях. Выявлены ключевые барьеры, сдерживающие цифровую трансформацию логистического сервиса, которые условно классифицированы по 6 группам: рыночные, транспортные, маркетинговые, информационные, организационные, финансово-экономические. Предложено содержательная структура внедрения CRM-системы как инструмента управления взаимоотношениями с клиентами. Обоснована целесообразность применения комплексного подхода к цифровой трансформации логистического обслуживания потребителей на основе клиентоориентированности и предложено формулу оценки синергетического эффекта от его реализации.*

***Ключевые слова:** логистическое обслуживание, клиентоориентированность, клиентский опыт, цифровая экономика, цифровые технологии, CRM-система.*

Introduction. The key vector of digital transformation should be aimed at increasing the requirements for the level of logistics services, the emergence of new criteria for service quality, in other words, the formation of a customer-oriented approach to customer relationship management. This is confirmed by the various international analytical centers researches. According to a survey of 13 thousands customers, conducted by Accenture Digital [1], 2 out of 3 consumers change service providers due to low quality of service. According to Gartner [2], 9 out of 10 companies today compete primarily in terms of "quality of customer service".

According to the IDG Communications Inc. company's report, prepared on the basis of the more than 700 top managers opinions,

was found that the digital transformation is a means of improving customer service (46% of respondents). A survey of 528 managers and specialists on strategic management of digital transformations, conducted by the consulting company Altimeter-Prophet, showed that the main efforts are aimed at improving the system of contacts with consumers (54% of experts).

According to a survey conducted by the e-consulting agency Econsultancy, among the most important characteristics for success in the digital economy is customer orientation (58% of respondents). That is, more than half of respondents believe that customer focus is an effective tool for doing business using digital technologies. At the same time, when forming a customer-oriented approach to customer service, companies face a number of problems, including: barrier to functional disconnection of data exchange (52% of respondents); non-compliance of corporate culture with customer requirements (39%); lack of technological platforms to manage data (35%); inability of IT departments to maintain communication with customers (28%); insufficient competence in data analysis (28%); focusing organizations on sales, not on the consumer (28%), etc. [3].

Thus, the problems of transformation of the customer relationship management system based on the formation of a customer-oriented approach in the context of digitalization remain relevant and require further research.

Literature and researches review. The generalization of the scientific literature indicates the relevance of various aspects of the logistics customer service problem in the context of digitalization of enterprises' business processes.

According to scientists [4], the key problem is strategic marketing transformation or strategic CRM. Investing in technology without understanding the expectations, preferences and values of consumers without attracting customers and a positive customer experience (the basis of the so-called "consumer age") - the wrong strategy that cannot give the desired result. In contact with customers, it is not just the question of tools that becomes fundamental, but how individual tools can solve customers' problems, meet their needs and train customers and manufacturers. It is this strategy that creates a unique consumer value, and the company becomes a "system integrator" in its formation.

According to D. Kuzin [5], the customer-centric approach and use of the consumer network is one of the main characteristics of the fourth industrial revolution. This is due to the development of the economy of shared consumption, when it is not the ownership of a product that is important, but its joint use (the so-called "organizational consumer") with the help of digital information and communication technologies. This challenge is due to fundamental changes in the marketing system and marketing technologies.

In [6] it is noted that new business models become customer-centric (customer centric), which completely determines their structure: from the value proposition aimed at meeting customer needs, timely delivery (just-in-time) and cash flow (income), which are created during the use of products. PwC analysts note that the new business models are focused on generating additional revenue from digital solutions that optimize customer interaction and logistics services.

Foreign and domestic scientists pay considerable attention to defining the essence and content of the "customer orientation" concept from different scientific points of view [7-18]; to study of the CRM-system features and its differences from other information systems [19-23]; applied aspects of the digital technologies application in the activities of enterprises (including to improve the management system of relations with consumers) and the development of scientific and methodological approaches to assessing the effect of their implementation [24-26].

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At the same time, the versatility, multifacetedness and debatability of certain issues on the selected topic necessitate further research. And especially the solution of this problem is actualized in modern conditions of digital economy rapid development.

Aim and objectives. The purpose of this article is to study the features and identify key barriers that hinder the effective development of customer relationship management in a digital economy; substantiation of a comprehensive approach to the digital transformation of logistics customer service on the basis of customer orientation.

To achieve this goal used general scientific methods of analysis and synthesis, generalization, structural and logical, statistical, economic and mathematical methods, expert surveys and evaluations.

Results, analysis and discussion. International experience shows that the priority tasks of the digital strategy of enterprises include customer experience and improving its quality. According to Simpler Media, it has been found that of the 325 audience managers, 79% identify DCX (Digital Customer Experience) as an extremely important tool for their organizations. PwC, together with experts from the British economic research institute Oxford Economics, proved that investing in digital transformation primarily improves the quality of customer service (40% of respondents). For many global companies, digitalization of business, according to an IDC study, primarily means meeting consumer expectations (52% of respondents).

As a result of a survey of 1,155 managers of manufacturing companies in 26 countries around the world, conducted by PwC Strategy & [27], found that "Digital Champions" are continuously strengthening and improving their digital product offerings and access to customers. They have succeeded in building an understanding of customer needs and strive to take customer requirements into account when creating attractive and personalized solutions, improving traditional products through services, software, data analysis and the added value of engaging broad partner networks. More than 50% of Digital Champions' revenue comes from digitally advanced products and services. It is projected that investment in new technologies and digital ecosystems could contribute to a 15% increase in revenue over the next 5 years. The study found that 68% of Digital Champions respondents have mastered customer service programs that offer personalized products and services, while 63% take advantage of more complex value chains.

The main goals of the digital transformation, according to 100 IT managers of large companies in the financial, telecommunications, oil and gas and other sectors of the economy, are to increase customer satisfaction (58% of respondents); cost reduction (54%); entering new markets, expanding the range of products and services (33%).

An expert survey of 700 representatives of more than 300 Russian companies from 15 industries, conducted in 2018 by "Komanda-A Management" company [28], revealed that the most important area of digital transformation is digital customer service (65,6% of respondents). Channels and tools of client communications include: e-mail (86% of respondents); websites (78%); social networks, messengers (60%); mobile applications (38,5%); SMS (38,5%); chatbots (25%). Only 6,2% of experts called omnichannel fully implemented tools in their company. The majority (75%) to some extent doubt the completion of this process, and 18,8% admit the lack of omnichannel.

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Table 1

Comparative analysis of existing assessment methods digital maturity and transformation of business processes at the enterprises

Name	Description
1	*2*
Digital Maturity Model by company Deloitte	Assessing digital capabilities in 5 key dimensions: relationships with consumers who consider the company as their digital partner (Customer); strategy that provides new competitive advantages (Strategy), Digital Technology, the use of digital technologies in operational processes (Operations), Organizational Culture
Index of digital maturity of enterprises	There are 5 major areas of evaluation: strategy and business model; consumers; organizational culture and staff; operational processes; information technologies
Industry Maturity Index 4.0 Acatech, developed by the National Academy of Sciences and Technology of Germany	The index is formed in 5 functional areas: development; production; logistics; service; marketing and sales. In the context of these areas, corporate processes are analyzed
Index of digital maturity of enterprises	Areas in which the level of digital maturity can be assessed: clarification, formation of a unified strategy of digital transformation; analysis and evaluation of the effectiveness of applied software services and platforms; assessment of the digital marketing level and communications; participation in the software development process; introduction of Agile IT; analysis, evaluation, audit of digital processes; level of organizational culture; the level of innovation potential of the enterprise; assessment of equipment and systems and their further modernization; study of the competitive environment
Digital Maturity Index, developed by consulting company Gartner	To calculate the index, it is proposed to use 9 criteria: the level of omni-(multi) channel in working with consumers; development of the channels themselves; the degree of use of new business models; the degree of change in value chains; the level of education of new values with the help of digital resources; the degree of significance of these values for the organization; degree of information technology support; the ability and readiness of the organization to conduct digital business; priority of digitalization in the company's strategy
Digital Transformation Index, which was developed by the analytical agency Arthur D. Little	Has the following areas of evaluation: Strategy & Governance; Products & Services; Customer Management Operations & Supply Chain; Corporate Services & Control; Information Technology; Workplace & Culture
Digital Transformation Index proposed by the MIT Center for Digital Business and Capgemini Consulting	According to the results of the analysis of more than 400 large companies from different industries, 3 key areas of digital transformation have been identified: Transforming Customer Experience; Transforming Operational Processes; Transforming Business Models
Digital Business Aptitude by company KPMG	Includes 5 areas of assessment: Vision & Strategy; Digital Talent); Digital First Processes; Agile Sourcing & Technology; Governance. A feature and advantage of this model is a diagnostic tool for self-assessment, which is freely available

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End of the Table 1

1	2
The model "Digitization Piano)", that was developed by Global Center for Digital Business Transformation at the initiative of companies IMD and Cisco	There are 7 Transformation Categories, which are the most important elements of the value chain of the organization: Business Model; Structure; People; Processes; IT Capability; Offerings; Engagement Model. A feature of this model is to determine the gap between the current and required levels in each direction
Index of digital conversion changes proposed by the company Ionology	Includes 5 blocks: Strategy & Culture; Staff & Customer; Process & Innovation; Technology; Data & Analytics
Index of strategic transformations in the digital transformation process, proposed by the Russian company Komanda-A (KMDA)	Includes 6 main areas: customer-centric (digital customer service, omnichannel, digital marketing and communications); collaboration (representation of business as an ecosystem, creation and development of a platform for interaction with partners); data (extensive use of analytical tools, use of data to adapt products and services, behavioral marketing); innovation (innovation culture within the company, the formation of a system of continuous improvement and development); value (definition and construction of a value proposition management system); staff (new approaches to attracting and developing employees based on digital culture and thinking)
Digital Strategy of the United Kingdom, adopted in 2014	The strategy is based on the concept of "digital by default". A standard for providing digital services has been created, which includes 18 different criteria, one of which is understanding the needs of customers

Compiled by the authors on the basis [29, p. 43; 30, p. 48].

At the same time, 17,2% note that the digital channel is a fundamentally important factor for customers. 59,4% answered that for them the digital channel is important along with other factors, and for 23,4% of respondents the digital channel is unimportant.

Currently, many methods have been developed to assess the digital maturity of enterprises, one of the components of which is a customer relationship management system (Table 1).

A study by PwC Strategy & [27] shows that in order to implement the business model, Digital Champions has focused on the formation and development of the following platforms:

– omnichannel trading platform - multi-channel trading and marketing platform for products and services (42% of respondents);

– product platform as a service - the product is sold through the platform in a model with a pay per use system (23%);

– customer service quality platform - offers highly individualized products or services (33%);

– comprehensive solutions for customers - includes products from many partners (24%);

– open platform - others person have the opportunity to build their own digital business models (10%).

Digitalization of business processes of enterprises significantly affects the digital transformation of the state economy. There are a lot of different indicators for evaluation the level of development of the country's digital economy. Some of them are described in the Table 2.

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Table 2

Indicators for evaluation the level of development of the country's digital economy

Name	Description
Networked Readiness Index (NRI)	The NRI, also referred to as Technology Readiness, measures the propensity for countries to exploit the opportunities offered by information and communications technology (ICT). It is published in collaboration with INSEAD (European Institute of Business Administration), as part of their annual Global Information Technology Report (GITR). The report is regarded as the most authoritative and comprehensive assessment of how ICT impacts the competitiveness and well-being of nations
UNCTAD B2C E-commerce Index	The UNCTAD B2C E-commerce Index, which measures an economy's preparedness to support online shopping, has expanded its coverage to include 152 economies. The index is calculated as the average of four indicators: account ownership at a financial institution or with a mobile-money-service provider (% of population ages 15+); individuals using the Internet (% of population); Postal Reliability Index; Secure Internet servers (per 1 million people)
Global ICT Development Index (IDI)	The IDI is an index published by the United Nations International Telecommunication Union based on internationally agreed ICT indicators. This makes it a valuable tool for benchmarking the most important indicators for measuring the information society. The IDI is a standard tool that governments, operators, development agencies, researchers and others can use to measure the digital divide and compare ICT performance within and across countries. The ICT Development Index is based on 11 ICT indicators, grouped in three clusters: access, use and skills
E-Government Development Index (EGDI)	The EGDI presents the state of E-Government Development of the United Nations Member States. Along with an assessment of the website development patterns in a country, the EGDI incorporates the access characteristics, such as the infrastructure and educational levels, to reflect how a country is using information technologies to promote access and inclusion of its people

Compiled according to data: [31 - 34]

In 2019 Ukraine had rank 67 of NRI from 121 countries (for comparison top 3 countries are Sweden, Singapore and Netherlands). In accordance with UNCTAD B2C E-commerce index, in 2019 Ukraine had rank 52 from 152 countries (top 3 countries are Netherlands, Switzerland and Singapore).

The last IDI rating was published in 2017 and Ukraine had rank 79 from 176 countries. The EGDI rank of Ukraine in 2018 was 82 from 180 countries. The DESI is calculated only for EU member states but methodology of this index could be implemented in Ukraine.

Based on statistical analysis, it has been established that in the last decade the problems of using information and communication technologies in the management of relations with consumers have also become relevant at Ukrainian enterprises. Thus, according to the State Statistics Service of Ukraine, the number of enterprises in which the website provided personalized content for regular customers increased by 95,9% in 2011-2018, and the implementation of proposals for the possibility of production in accordance with customer requirements is insignificant decreased by 1,1% (Table 3).

The number of enterprises in which the website provided customer service opportunities increased in 2018 compared to 2016 by 15,5%. The number of enterprises that purchased programs for customer relationship management increased by 26,5% [39, p. 11, 15; 26, p. 11, 15; 41, p. 11, 15].

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Table 3

Website features when using the Internet

Years	Number of businesses that had a website	*Of these,* the companies in which the website provided:	
		proposals for the ability to manufacture products in accordance with customer requirements	personalized information content within the website for regular / repeat customers
2011	15962	4581	2330
2013	16916	4742	2648
2014	13485	3849	1903
2015	18323	4639	2635
2016	15608	4603	4118
2017	16240	4567	4018
2018	22331	4531	4565

Compiled according to data: [35, p. 18; 36, p. 18; 37, p. 15; 38, p. 11; 39, p. 11, 12; 40, p. 11; 41, p. 11].

During 2011-2018, there was a tendency to increase the number of enterprises that used automated data exchange for: sending or receiving transport documentation (consignment notes) in 4,3 times; receiving orders from the client – 2,8 times; sending or receiving information about products – 2,5 times (Table 4).

During the study period, the number of enterprises engaged in regular electronic exchange of information increased for: delivery of final products to customers by 98.5%; formation of production plans or forecasting of consumer demand - by 87.8% (Table 5).

Table 4

Objectives of automated data exchange

Years	Businesses that have used automated data exchange for the following purposes:		
	receiving orders from the customer	sending or receiving product information	sending or receiving transport documentation
2011	13005	15038	6398
2013	14669	16031	8683
2014	19703	21139	12337
2015	22161	23702	14057
2016	26290	27551	17594
2017	31187	32026	22021
2018	36998	37226	27561

Compiled according to data: [35, p. 19; 36, p. 19; 37, p. 16; 38, p. 12; 39, p. 13; 40, p. 12; 41, p. 12].

Table 5

Directions of electronic data exchange

Years	Enterprises that carried out regular electronic exchange of information in the following areas:	
	formation of production plans or forecasting consumer demand	delivery of final products to customers
2011	3840	4331
2013	4020	4894
2014	3874	4525
2015	5206	6088
2016	5803	6830
2017	6469	7663
2018	7211	8597

Compiled according to data: [35, p. 209; 36, p. 20; 37, p. 17; 38, p. 13; 39, p. 14; 40, p. 13; 41, p. 13].

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The number of enterprises that used social media to receive customer feedback or provide answers to their questions increased by 106.4% in 2014-2018, and to attract customers to innovative product development - by 97.2% (Table 6).

Table 6

The purpose of using social media in enterprises

Years	Businesses that have used social media to:	
	receiving customer feedback or answering their questions	involvement of clients in development or innovation of products and services
2014	4002	2647
2015	5497	3703
2016	6089	3963
2017	6871	4388
2018	8260	5221

Compiled according to data: [37, p. 19; 38, p. 15; 39, p. 14; 40, p. 14; 41, p. 14].

However, despite the positive trends of increasing the number of domestic enterprises that implement information technology in the organization of logistics processes, as a result of own research [42-46] it was proved that the effective digital transformation of logistics customer service is hindered by many barriers that can be systematically systematized in 6 groups:

$$X = \begin{cases} X_1(x_{11}, x_{12}); \\ X_2(x_{21}, x_{22}, x_{23}); \\ X_3(x_{31}, x_{32}, x_{33}, x_{34}, x_{35}); \\ X_4(x_{41}, x_{42}, x_{43}); \\ X_5(x_{51}, x_{52}, x_{53}, x_{54}, x_{55}); \\ X_6(x_{61}, x_{62}) \end{cases} \quad (1)$$

where

X_1 – *trading:* constant fluctuations in market conditions (x_{11});instability of consumer demand for finished products (x_{12}); X_2 – *transport:* untimely delivery of goods due to breakdown or unforeseen downtime of vehicles (x_{21}); unpreparedness of cargo in needed time (x_{22});loss of cargo due to unfavourable transportation conditions (x_{23}); X_3 – *marketing:* insufficient consideration of the peculiarities of service to different categories of consumers depending on the specifics of enterprises (x_{31}); imperfection of contract activities of enterprises (x_{32}); inefficient use of marketing communication tools (x_{33});lack of the generally accepted concept of "customer orientation" (x_{34}); insufficient application of a customer-oriented approach to customer logistics (x_{35}); X_4 – *information:* lack of a unified approach to the definition of the categorical-conceptual apparatus (for example, "digital economy", "digital transformation", "logistics service", etc.) (x_{41}); lack of knowledge and skills in the digital economy (x_{42}); insufficient use of digital technologies and electronic platforms to manage customer relationships (x_{43}); X_5 – *organizational:* lack of a clearly defined strategy for digital transformation, vision of

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the digital future of the company and shortcomings of management (x_{51}); inability to manage organizational change (x_{52}); lack of a digital strategy for customer relationship management (x_{53}); low level of employee involvement (x_{54}); lack of qualified and competent personnel that would meet modern requirements of digitalization of the economy (x_{55}); X_6 – *financial and economic:* late payment for shipped products (x_{61}); insufficient amount of investment and financial resources (x_{62}).

To eliminate the above barriers, it is advisable to implement effective customer relationship management tools. Among them is the CRM-system (Customer Relationship Management), which implements a customer-oriented approach to logistics service and customer service. The essence of this system is the rational management of relationships with customers, i.e. attracting new customers, transforming neutral customers into loyal customers, the formation of business partners from regular customers (*Table 7*). McKinsey & Company research shows that the share of companies in the EU that use CRM systems is 33%.

Table 7

Characteristics of the main CRM-systems

Name	Description
1	2
AmoCRM	Its functionality allows you to build interaction with the customer at all stages of sales. The program generates orders, systematizes and organizes all orders from customers, creates a calendar plan for the sales department. The system has the following capabilities: agreements and contacts for sales management; sales funnel for reports; tasks and reminders; sales analysis. The interface is adapted for a smartphone.
Bitrix24	Optimization of work within the company's staff. Employees respond more quickly to various tasks and customer questions.
Salesforce	Accounting for industry specifics of the client. A convenient set of analytical tools allows you to track the traffic of potential customers and analyze the effectiveness of sales. The system is able to evaluate the marketing strategy of the business and provide suggestions for its improvement. This is a universal CRM, which is suitable for enterprises of different types of economic activity.
Zoho	Focused more on the business owner. The program is able to process information about interaction with the customer, and on this basis generates statistical reports on sales. Takes into account the activity of buyers and tracks the sources of traffic on the site.
Fresh Office	This is a platform that facilitates access to various information in a "single window". The system automatically keeps records, records all transactions and monitors the status of accounts. Possibility of warehouse accounting of business. The software automates the movement of goods in the warehouse / between warehouses. All document flow is integrated into a single system.

Compiled by the authors.

Based on the analysis and generalization of special literature [19-23] it is established that scientists and specialists understand CRM-system as: information technology, which provides functionality to automate the full cycle of relationships with customers and provides the necessary tools to manage the areas of marketing, sales, service; strategy, which provides for the creation in the company of such mechanisms of interaction with customers, in which their needs are the highest priority for the company; the key goal

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of implementing a CRM strategy is to create a single ecosystem for attracting new and developing existing customers; technology – specialized software that automates business processes, procedures and operations that implement the company's CRM strategy (Fig. 1).

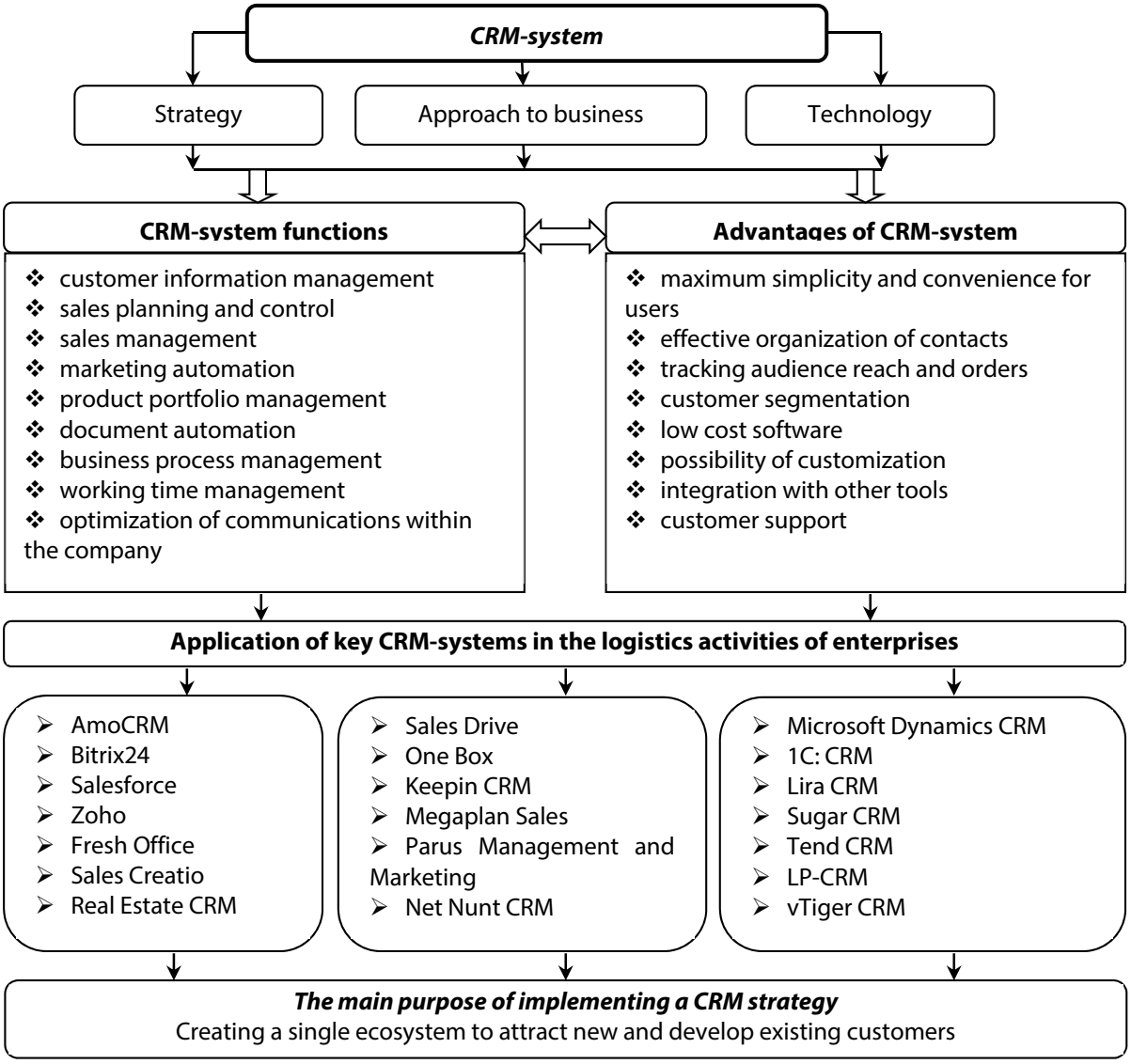

Figure 1. Features of CRM-system implementation as a tool of customer relationship management *(proposed by authors)*

For digital transformation of consumers logistic service in the conditions of economy digitalization it is expedient to introduce the complex approach (Fig. 2).

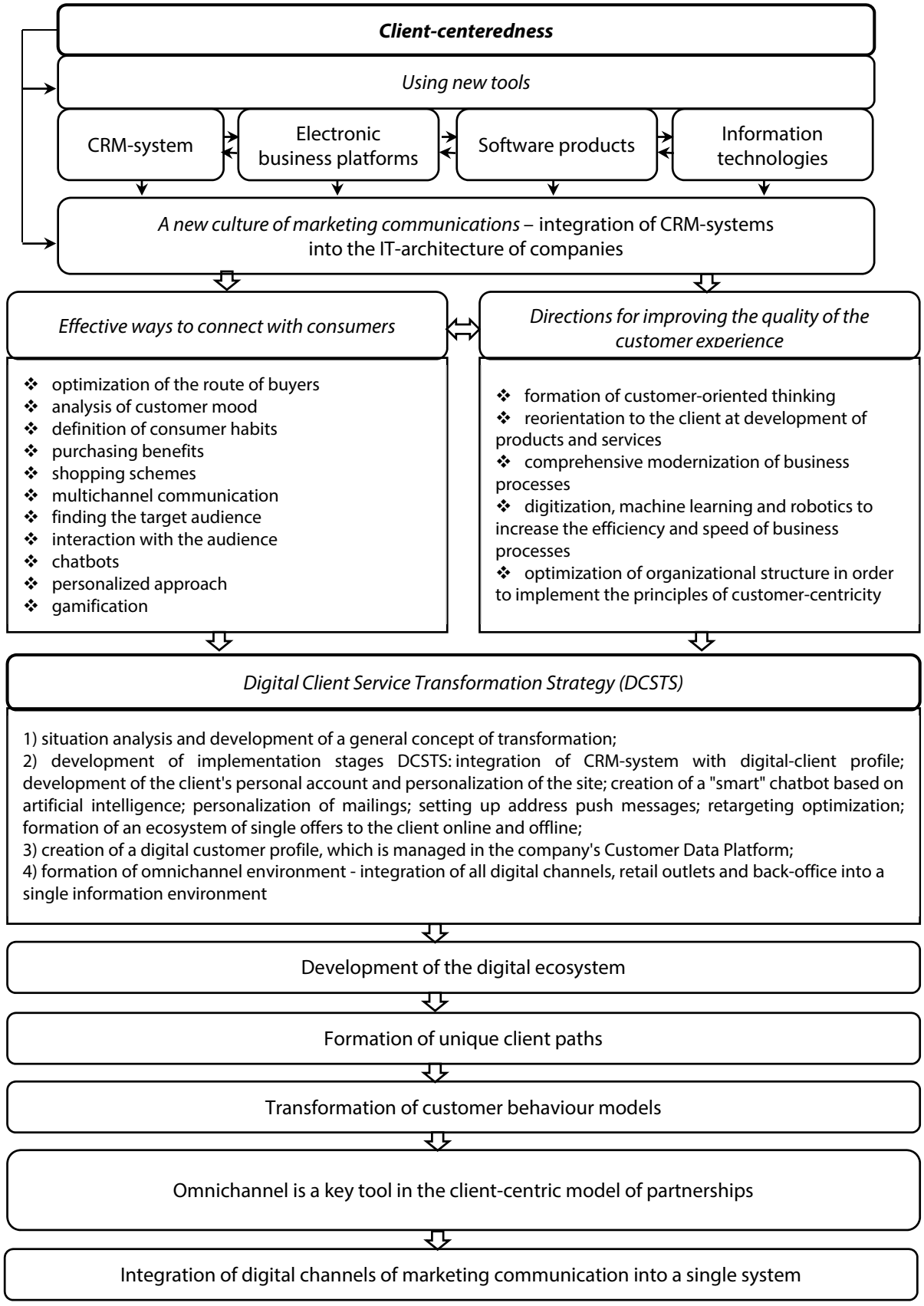

Figure 2. A comprehensive approach to the digital transformation of customer service logistics on the basis of customer orientation *(proposed by authors)*

According to PwC Strategy & [27], the integrated Customer Solutions ecosystem has a number of advantages, including: higher revenue from initiatives to increase customer satisfaction across all channels by offering individualized solutions; obtaining greater marginal profit as a result of optimal use of internal capabilities and an expanded partner network; great maneuverability by managing a flexible affiliate network; continuous connectivity of operational activity for increase of efficiency and reduction of expenses.

According to the Technical Assistance Research Program, the average return on investment in quality service for industrial enterprises is 100%, banking institutions - up to 170%, retail enterprises - up to 200% [47, p. 16].

The results of research by foreign scholars [48] show that a 5% increase in the number of loyal consumer companies is accompanied by an increase in profits from 25 to 85% depending on the type of economic activity. According to the calculations of J. Coleman [49], the implementation of strategies, methods and systems to increase customer loyalty helps to increase the company's profitability by 25-100%. At the same time, with the correct implementation of loyalty programs, sales volumes increase by 15%, the marketing effect by 20%, and the level of brand loyalty by 23%. [50, p. 12].

American researchers [6] found that a 1% increase in the customer satisfaction index leads to a 3% increase in company capitalization. The average cumulative effect of the increase in profitability (by 11,5% over five years) is from 1% of the annual increase in the consumer satisfaction index.

According to expert estimates [51], the cost of acquiring a new consumer is 5-10 times higher, and the return of a lost consumer is 50-100 times higher than the cost of maintaining a satisfied consumer. It is proved that according to the Pareto principle, 80% of the company's profit comes from 20% of regular customers, and the cost of attracting a new customer is 5 times higher than the nominal cost of maintaining the existing one. An increase in turnover from existing customers by 10% leads to an increase in the company's shareholder value by 15,5% [52].

According to the consulting agency "PRCA" [5], in 2018 the average percentage of the marketing budget of companies to promote products and related services online is about 16% and will increase annually by 10%. PwC's Global Digital IQ Survey found that: 54% of transport and logistics executives believe that investing in digital technology can increase revenue; 16% - profit; 11% - to improve the quality of customer service. 64% of respondents say that over the next 5 years, changes in customer behaviour will lead to breakthrough transformations in their business [52].

According to the forecasts of the international analytical agency Gartner, by 2020 the customer service may outperform such indicators as price and product quality. Personalization, according to analysts at the international consulting firm McKinsey, already allows global players to increase revenue by 5-15%. According to Gartner, in 2019, companies in many countries have increased their investment in personalized marketing by 50%. According to Gartner Research, by 2025, companies that use more than 4 digital channels to interact with customers will be 300% more efficient than single- and dual-channel competitors. And the number of multi-channel consumers will double in 2025. At the same time, the cost of maintenance can be significantly reduced by redistributing requests to digital channels.

Digital transformation of logistics service in the system of logistics management of enterprises will help to obtain a synergistic effect:

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$$E = \sum_{ij=1}^{n} E_1(y_{11}, y_{12}, y_{13}, y_{14}, y_{15}) + E_2(y_{21}, y_{22}, y_{23}) + E_3(y_{31}, y_{32}, y_{33}) \to max \quad (2)$$

where E_1 – *economic effect:* y_{11} – increase in average profitability from the organization of logistics activities by 15-20%; y_{12} – increase in consumer retention by 5%; y_{13} – reduction of time for execution of current operations by 25-30%; y_{14} – increase the accuracy of forecasting shipments to 99%; y_{15} – reduction of costs for sales, marketing and customer support by 10-15%;

E_2 – *social effect*: y_{21} – optimization of work of employees of the enterprise; y_{22} – increasing the speed of processing consumer orders and the level of information security; y_{23} – reduction of time spent on the organization of information exchange between the enterprise and economic contractors;

E_3 – *environmental effect* – reduction of negative impact on the environment as a result of; y_{31} – improving the conditions of transportation and storage of products; y_{32} – application of the concept of industrial waste management in the context of the circular economy; y_{33} – implementation of "green" technologies in industrial production.

Conclusion. The transformation of the logistics activities of the enterprise is closely interrelated with the development of the digital economy. Full customer orientation is achieved through the organization of accumulation, structuring and exchange of information, and a high level of competitiveness in the digital economy is impossible without a customer-oriented approach to logistics service. Customer relationship management is becoming a priority in the context of business digitalization. In today's digital environment, the role and importance of improving the quality of logistics services using a customer approach is growing. This approach means building all business processes around customer needs and is seen as a tool for creating value for consumers and using digital technologies to enhance the customer experience.

The key trends in the digital transformation of customer service logistics on the basis of customer-centricity include: personalization of products, experience and communication using digital technologies; transition to flexible management methods; formation of a qualitatively new marketing structure of enterprises (the emergence of specialists in consumer preferences and data processing); ensuring multichannel in marketing communications; introduction of chatbots as one of the most effective ways to provide instant customer support; application of a comprehensive approach to the organization of logistics services, the essence of which is to modernize the corporate culture of communication in the company, maintaining a friendly atmosphere of communication and digital interaction with consumers through online channels; implementation of CRM-system. This will increase the level of customer satisfaction with service and quality of logistics services by about 3%; support regular and attract new customers through the implementation of loyalty programs; improve the level of organizational culture as a result of using the client's approach to personnel management; optimize costs for the organization of logistics activities; increase sales and profitability of sales.

Prospects for further research are to develop an organizational and economic mechanism for managing relationships with consumers in the context of marketing strategy of enterprises in a digital economy.

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