TRANSFORMATION OF STRATEGIC MANAGEMENT PRINCIPLES OF AIR TRANSPORT AND LOGISTICS ENTERPRISES IN CONDITIONS OF INSTABILITY

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Resume

The significance of this study is derived from instability situations faced by various markets, particularly in the transport and logistics sectors, and the necessity to ascertain methods for their future advancement. The aim of this paper is to determine transformative modifications in the fundamental principles of strategic management for companies engaged in transport and logistics markets. In the course of the research, various methods were employed, including generalization, system analysis, abstract-logical method, systemic approach, analysis and synthesis method, graphical method, induction, deduction, comparison and systematization method, expert analysis, and selective observations. As a result, the authors identified the prerequisites for the transformation of unique and oversized air carriers into 3PL (Third-Party Logistics) operators, which are divided into the following blocks: needs, threats and risks, and product uniqueness.

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1 Introduction

Initially, the history of the strategic management evolution should be analyzed. According to David [1], the strategic management can be defined as the art and science of formulating, implementing and evaluating cross-functional solutions allowing the company to achieve its goals. Thus, the strategic management focuses on the integrated interaction of management, marketing, finance, production, research, and information systems to achieve organizational success. We disagree with the F. David's opinion who emphasizes that the term "strategic management" is sometimes used as a synonym for the term "strategic planning", which is completely incorrect. The strategic planning is a preliminary stage of the evolution and it concerns only the formulation of strategy, while the term strategic management should be used to describe the complex process of strategy formation, implementation and evaluation.

The strategic management of enterprises is inextricably linked to the green economy. Currently, management pays increased attention to this problem both at the macro and micro levels. Environmental priorities are identified as key factors in the economic development in the world's leading countries.

In the early 2000s, the transition to the principles of sustainable development was outlined by the UN and other global organizations as the most appropriate for countries. Their reports still emphasize the importance of sustainable development [2].

A large number of researchers believe that

sustainable development remains dominant, while developed countries consider the greening of the economy a breakthrough opportunity for their development. The importance of sustainable development is emphasized to end poverty, ensure prosperity, and create better conditions for health, education, and social needs [3-4]. Sustainability at the organizational level is also crucial [5-7]. At the same time, there are researchers who criticize the central role of sustainable development as a dominant worldview [8].

Understanding the sources of sustainable competitive advantage has become the main focus of studying the strategic management. The strategic management is the process and approach to defining the goals of the organization, developing policies, programs, paradigms and plans to achieve these goals, as well as the allocation of resources. The strategic management can be considered the management of the combined components of the strategy process: strategy development, implementation and evaluation [9].

The problems of enterprises' strategic management have been investigated by many authors and a number of important scientific tasks have been successfully solved. However, enterprises in various sectors of the economy are undergoing dynamic development, the external environment is changing rapidly, and new challenges are emerging. These shifts have particularly affected companies in the transportation and logistics sector. It is logistics operators, air carriers, global freight forwarders and other participants in the transport and logistics market that have begun to actively engage in global supply chains, which are created to ensure organizational, trade, production and investment activities in the context of globalization and transformational changes in the global economy.

2 Literature review

Within the classical management theory, M. Porter [10] studies the progress of the development of dynamic theory of strategic management. The reasons for higher efficiency in a certain period of time (a cross-sectional problem) and the dynamic process of creating competitive positions (a longitudinal problem) are highlighted. Ainuddin et al. [11] studied the influence of key attributes of the resource, such as value, rarity, imitability and organization, on the productivity of the enterprise. Ainuddin et al. believe that international joint ventures as an object of the study are especially valuable for the world practice.. However, if the cost, rarity and indispensability are important factors in the efficiency, then the value, rarity and imitability are critical attributes for organizational capabilities.

Aspects related to the creation of various associations and alliances are also important since it is necessary to reorganize business processes while creating new structural associations. The period of the scientific development of strategic management on its own basis falls on the late 1980s - 1990s, when the resource concept was actively developing and became dominant. There was a division of strategic goals and resources, along with almost complete compliance of the content, process and context of the successful enterprise development [12]. The resource concept is still popular, although its existence is possible only as an integral part of the basis of the new theory of the company. The development of enterprises in the context of globalization has led to the importance of valuable advantages over competitor, the share of intangible assets, the innovation implementation, the effective use of organizational culture as a tool for enterprise management, and the high dynamics of change in the world markets. They formed the basis of the concept of dynamic capabilities.

This concept is characterized by the joint development of both external and internal competitive advantages, full compliance with the content, process, and context of the management strategies, the effective management of resource groups' flows and the effective combinations of them, as well as creating new forms of the enterprise management [12]. The study of Shuen [13] should be considered an interesting continuation of the concept of dynamic capabilities. In particular, Shuen proposed a new paradigm of Web 2.0 strategies for business based on the reconfiguration of outsourcing competencies using the synergy effect. The critical analysis of the paper makes it possible to state that the author has made a significant contribution to the implementation of dynamic capabilities.

In continuation of Shuen's scientific research, it is worth considering a scientific work by Alojairi [14], where the authors proposed a model of the network business innovation cycle, which proves that network capabilities are an important internal factor, positively affecting innovations in business models of Internet sellers and benefits consumers. In accordance with the analysis of the recent researches, the fifth stage in development of the theory of strategic management of enterprises was identified. It is based on further implementation of fundamentally new strategies, providing competitive advantages based on new paradigms of Web 2.0 strategy, implementation of the network business innovation cycle models, bioadaptive management, etc.

At the same time, the updated concept of dynamic abilities based on foresight competencies and other derivatives becomes dominant. Competitive advantages are formed as a result of the symbiotic complex development of internal and external advantages, ensuring absolute consistency of the content, process, and context. This stage was fully formed in the early 2020s although some of its components were successfully implemented in the previous decade. The further development of the theory

of strategic management of enterprises will continue to be based on the concept of dynamic capabilities. The process of strategic management of the enterprise is based on the belief that organizations must constantly monitor events and trends, while the speed and scale of changes affecting organizations is growing sharply. The strategic management process is dynamic and continuous. Changing any of the main components of the model may require changing all its components [1].

The conclusions [15] should be fully supported regarding the fact that differences between firms will deepen, with strategic resources and coordination playing a key role. The tasks of enterprises now include creating strategically valuable resources in current markets and using them effectively in adjacent markets, as well as implementing hybrid strategies [16]. All of these aspects are most fully manifested in the transportation and logistics market. And for logistics operators, the transition to the concept of a SMART provider-integrator of comprehensive logistics solutions in supply chains means a shift from a resource-based to a strategic outlook.

Within the framework of the study [17], the paradoxical aspects of strategic resources were analyzed through a critical analysis of evolutionary trajectories. In particular, they identified conditions when an abundance of resources can make a firm vulnerable, making it potentially weak. It should be noted that this opinion of the authors is fully consistent with the principles of the SMART model of a provider-integrator of comprehensive logistics solutions, in which the desired asset structure is defined as light.

A critical analysis of the scientific literature has revealed that despite the significant contribution of scholars to the development of theoretical and practical aspects of enterprises' strategic management, the problem of creating the foundations for strategic management of transport and logistics enterprises in the context of instability, transformational changes, globalization and intensification of their involvement in global supply chains remains unresolved.

3 Methodological framework

Recent studies outline that commercial enterprises consist of portfolios of idiosyncratic and difficult to trade assets and competencies, that is, resources. Under these conditions, at some point in time, competitive advantages may arise from the possession of scarce but relevant and difficult-to-imitate assets, especially the know-how. However, in the fast-paced business environment, which is open to a global competition and characterized by the geographical and organizational distribution of innovation and production sources, a sustainable advantage requires something more than ownership of assets that are difficult to reproduce (knowledge). It also requires unique and difficult to reproduce dynamic capabilities [18]. One of the components of the concept of dynamic capabilities is foresight competences. The scientific works of Salunke, Weerawardena and McCall-Kennedy [19], D. T Teece [20], Wang and Ahmed [21], Wilden, Gudergan, Nielsen and Lings [22] and others are dedicated to the study of these competencies.

The special feature of such an activity is to anticipate certain events on the basis of specific patterns that are recognized as characteristic of companies, their groups or even entire markets. In modern researches, much attention is paid to the interrelationship between business and society. The classics of modern management Porter and Kramer [23] noted the growing interest in corporate social responsibility. They also stated that business decisions and social policy must adhere to the principle of common value. In accordance with the concept of global innovation networks, which was studied by Kim and Park [24], the company's innovativeness is largely determined by a research and development network outside the country. In general, an effective combination of external and internal factors of knowledge management can be a key factor in the enterprise's success [25]. According to Teece [26], it is possible to fully implement innovations only with a well-developed and consistent business model.

As revealed in the study [27], the impact of governance mechanisms on the relationship between decision-making practices for sustainable strategic investment, industry 4.0 technologies, circular economy methods, and financial performance of companies is becoming a key factor in sustainable value creation and sustainable performance for it.

A number of methods are used to solve the problems of strategic management of enterprises. According to the results of the analysis of recent scientific studies, it is worth noting the active use of expert evaluation and interviewing methods [28], comparative and economic-statistical analysis, ranking [29], and methods necessary for developing a management tool for the company [30].

Ensuring the flexibility and scalability of business models is also extremely important in the strategic management of enterprises [31]. Researches confirmed that the implementation of innovations in several divisions of one enterprise is much more effective in terms of mastering innovations [32]. The concept of open innovations should be considered comprehensive for the general innovation theory [33]. The paper of Arefieva et al. [34] is dedicated to the management of sustainable development of human capital reproduction. It should be recognized that the mechanism of sustainable development management through the human capital reproduction proposed by the authors deserves further development. Conceptual model of economic stability monitoring business processes of the company in the period of sustainable development proposed Arefieva et al. [35].

The model and the method of assessment of the effectiveness of financial processes management in

logistic systems of industrial enterprises were substantiated in work by Bondarenko, Palyvoda and Kyrylenko [36]. Problems of organizing the production activity of network air carriers as one of the most difficult formations in transport and logistics markets are investigated in other works [37-38]. Undoubtedly, these scientific works have made a significant contribution to determining the prerequisites for the transformation of strategic management of these companies.

Thus, all of the above proves the need to make changes to the strategic management of companies in the transport and logistics sector, which is the focus of the study.

In implementing the research, the authors used the following methods: generalization and system analysis, abstract and logical method - in creating a scheme for implementing a new paradigm for the development of enterprise strategic management theory; systematic approach, analysis and synthesis, graphical - in systematizing the principles of effective strategic management of an enterprise; induction, deduction, comparison and systematization - in determining the prerequisites for transforming carriers of unique and oversized cargoes into 3 PL operators; expert analysis, sample observations - when determining innovative principles of strategic logistics management of 4 PL (Fourth Party Logistics) operator.

4 Results

It should be highlighted that, in line with current trends and as noted earlier, companies are actively integrating into Industry 4.0, which focuses on ensuring the creation of new business models and information transformation. Whereas, in the case of Industry 5.0, which has been actively implemented in developed countries, including the EU, the key transformation should be full integration with the green course, leading to better sustainability and circular economy, as well as improving the resilience of value chains and ecosystems to new challenges [39].

In view of this, it can be argued that the main reasons for the importance of changes in the strategic management of transport and logistics companies, including in the methodology, should be the need to

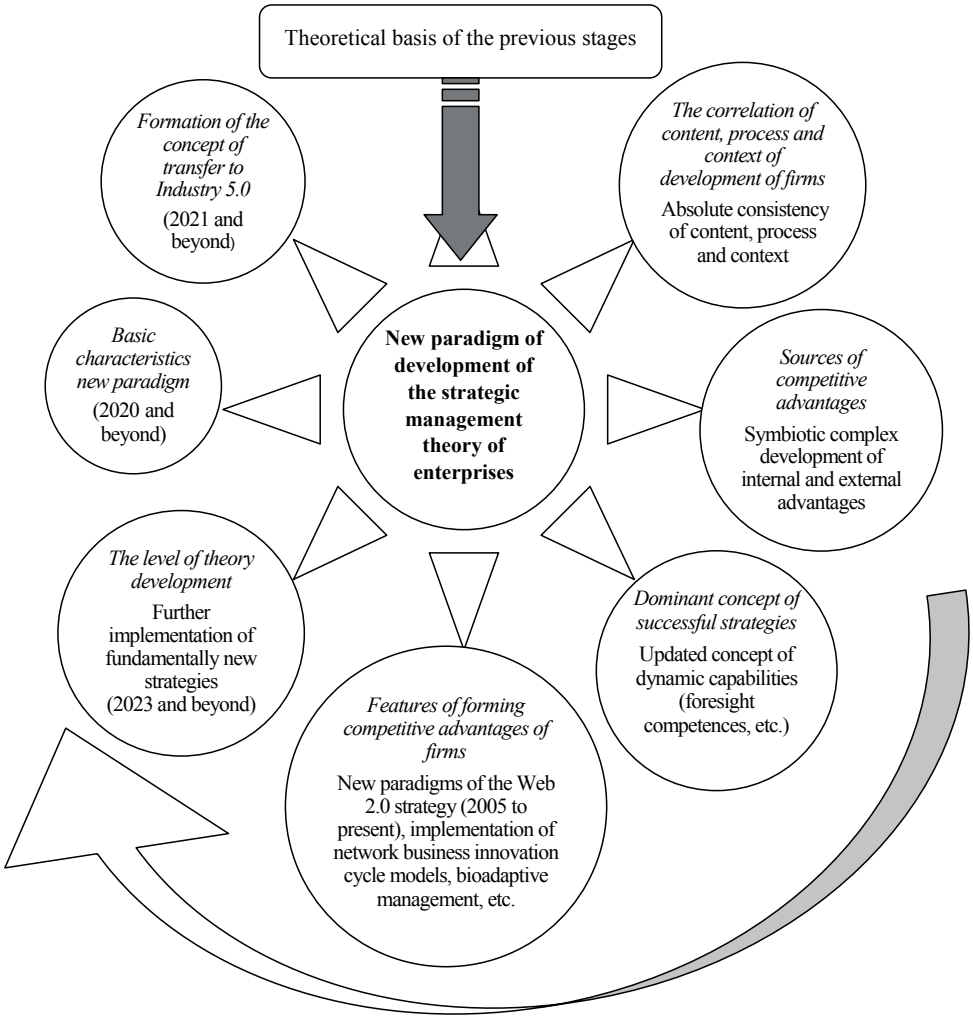

Figure 1 *Scheme for the implementation of a new paradigm of development of the strategic management theory of enterprises*

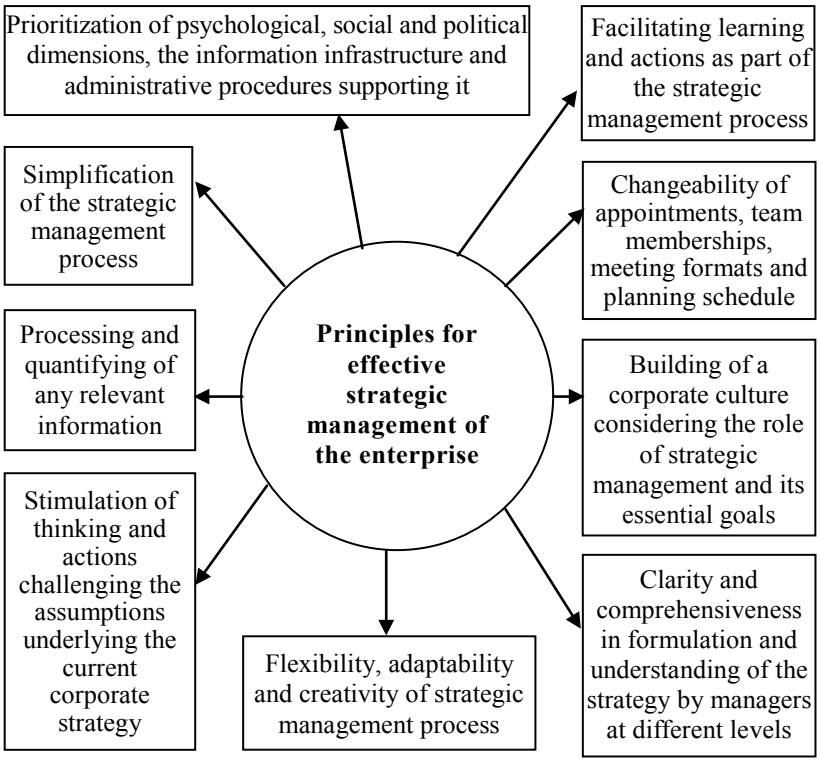

Figure 2 *Principles of effective strategic management of the enterprise*

meet the growing demands of customers, increased competition, energy and resource efficiency, and ultimately the vital need to integrate as full participants in global supply chains.

Thus, according to the recent trends described above, the following scheme for the implementation of a new paradigm of development of the strategic management theory of enterprises can be designed, Figure 1.

The principles of effective strategic management of the enterprise, proposed by Lenz [40], were systematized and graphically represented in Figure 2. The success of transport and logistics enterprises largely depends on the stable development of the national economy and international relations. The service industry around the world is more susceptible to the negative effects of crises than, for example, manufacturing. These schemes complement the theoretical foundations of strategic management of enterprises and can be useful for scholars, postgraduates, and doctoral students.

It should be noted that the formation of a new paradigm for the development of enterprise strategic management theory became possible with the direct implementation of generalization processes and the use of system analysis tools, as well as the application of the abstract and logical method.

To systematize the principles of effective strategic management of an enterprise, the authors used a system approach, the method of analysis and synthesis, and the graphical method for visual presentation of the results.

Participants in the transport and logistics market can be divided into three major groups as follows: suppliers of logistics services, subcontractors and consumers of the services. When creating innovative business models with the help of the relevant concepts of strategic management, systemic and situational approaches has become the norm for Western companies.

Therefore, the use of these principles when building systems of domestic transport and logistics market participants will significantly improve the quality and adequacy of these systems. For instance, Ukrainian leading companies are still only on the way to the full implementation of innovative strategic management principles. Leading foreign logistics operators, such as Kuehne+Nagel, ECOL, DB Schenker, GEFCO and others becomes the engine of innovative changes in the transport and logistics markets excluding OECD countries.

The active digitalization of the world economy has been one of the key trends of recent decades. The trend has come to developing countries, including transport and logistics companies. A cross-cutting information system becomes an integral part of a successful business. The abandonment of fragmentary information solutions is a key requirement of the market in modern conditions. It was noted that conceptually the information system of participants in transport and logistics markets should consist of two components, namely the external component, including tools that provide the information system settings, and the internal component, including object and subject of management, tools for resource management, planning, optimization of company's

activities and management of logistics processes. It was also found that the external component has lower productivity and lower quality than the internal one.

The development of informatization of participants in transport and logistics markets should be aimed at creating the information environment including not only a set of information systems and applications, but also mechanisms, models, factors, processes, resources, etc. The concept of informatization should be focused on solving problems related to the organization of cargo delivery, ensuring interaction between the participants in the delivery process and the full satisfaction of cargo clientele. It should also be kept in mind that carriers usually perform only part of the transportation, while the delivery process itself is provided by logistics companies or freight forwarders. So, the task of such an information system is the cross-cutting digitization of delivery processes of different participants to ensure the reliability and timeliness of delivery with a high level of coordination.

The concept of informatization of participants in transport and logistics markets should provide for constant updating of information systems both through the introduction of new information systems and the creation of new mechanisms, tools and instruments to implement information solutions. In accordance with the theoretical foundations of information systems and environment for enterprises of different economic sectors, the information environment of participants in transport and logistics markets should provide high-quality horizontal and vertical integration of all components, information security, compliance with certain criteria and standards. In addition, there is a need to develop a number of highly specialized techniques, guidelines and recommendations that would ensure the effective operation of this environment and its painless change if needed.

A unified information system is the main component of the information environment of participants in transport and logistics markets, as mentioned above. However, it cannot exist without meeting certain requirements and the availability of tools for its implementation. This toolkit should consist of the methodology, the mechanism and the system of effective implementation of the information system of participants in transport and logistics markets. The methodology should reflect the suitability of the chosen concept of informatization with the choice of the appropriate set of methods and approaches to solving the problem, while the mechanism should include a number of tools and instruments to resolve the problem.

A set of schemes should be used to control the management and the organization of relationships between the centers of responsibility and business processes of participants in transport and logistics markets that are involved in the implementation and improvement of the information system. It should be noted that the requirements for the environmental component of the logistics business are growing constantly. Based on the classification of logistics operators, it can be argued that after the currently classified five levels of PL operators, the next one will be a level related to the environmental aspect of the logistics service. However, the currently classified 5 level PL "virtual logistics operator" can be considered quite environmentally oriented compared to previous levels.

5 Discussion

In most countries of the world, port and warehouse logistics operators are in a winning position. Due to the increase in the cost of the entire supply chain and as a result of attracting more expensive cargoes, port and warehouse logistics operators were able to increase tariffs. Moreover, these companies did not face the need to change the strategic management principles of their activities, involving radical restructuring of their business models in view of the COVID-19 crisis, which affected other participants in the transport and logistics markets. However, domestic port operators continue to address the challenges they faced earlier. It is now clear that they need to improve their financial stability through increased competitiveness and to ensure customer-oriented principles in operation. In Ukraine, the warehouse logistics market is developing in a wave-like manner, while the demand for smart warehouses, fulfilment services, solutions for separate storage of perishable goods, etc. are increasing.

As for the transport companies, the specifics of transforming their strategic management principles should be analyzed in detail. There is a large number of them and the principles of their management are completely different. Some of cargo carriers should be classified as companies with a high level of profitability, while others develop their business models based on the benefits of high business turnover. These circumstances are determined, primarily, by the markets in which these companies operate. It is worth noting that at present the vast majority of traditional air cargo carriers perform only the functions of transporting goods from airport to airport, without performing any additional functions, which is quite justified. Usually, when structuring the air transportation market, traditional and low-cost airlines are distinguished as two poles of development, which is not entirely true. In addition, such a gradation is carried out on the principle of forming a route network, which is also not entirely correct. There is a need for a comprehensive analysis of business models of air carriers as part of the strategic management.

A quantitative assessment of the global air network is an extremely complex and non-trivial task. The qualitative analysis, which involves clustering and scenario modeling of the global air transport system, allows to identify its vulnerable elements under different operating conditions, to determine peripherals up to

95% of air transport network nodes, to form a simulation model to study the air network redevelopment using a multilayer structure paradigm, and to understand the effectiveness of the perspective air traffic networks. The structure of the airline network is formed on the basis of a multifactor model. It means the analysis of factors influencing the existence and configuration of the structure of large network airlines' systems in hub airports. There are four basic business models of air carriers, which are formed in accordance with existing trends in world air transport markets. Analyzing the conditions of air carriers' operation for these four models, there is a number of characteristics that are inherent in each of them.

The classic network model, in which cargo is transported by reloading cargo to a passenger's aircraft, is the most common. Thus, all large passenger carriers operate in this segment. On its basis we have proposed most of the theoretical and methodological developments. These tools can also be applied to other business models of air carriers, but they must be significantly redesigned, depending on the characteristics and conditions of their usage. In most research, classic business models are analyzed, focusing on the passenger component. The situation with the spread of COVID-19 dramatically changed the balance in the air transport markets. It was the network airlines among cargo carriers that suffered the most, especially those that organized the delivery of goods in the cargo compartments of passenger aircrafts. With the cancellation of passenger flights in the spring of 2020, these carriers were put on the brink of disaster. They could not fully fulfill cargo contracts, the demand for which even increased during that period, as the delivery of goods on passenger planes was financially unprofitable. The strategic management principles of these airlines began to change sufficiently. They actively abandoned the purely network model and began to operate on a point-to-point basis, which was considered an outdated model of doing business in early 2020. The transformation of the strategic management principles of such airlines continues.

By mid-2021, one can note the systemic nature of changes and the fact that the situation is gradually improving. However, adaptive quarantine measures around the world, mass vaccination have not become a panacea and failed to restore passenger flows to pre-crisis levels. Consequently, network air carriers are forced to hybridize their business models and use both network business principles and point-to-point flights. The performance of purely cargo flights has also dramatically increased for such carriers. This is due to a number of factors. The main one is the presence of unsatisfactory effective demand in most markets, which has led to an increase in tariffs by 200-400%. The lack of transportation capacity has changed the model of doing business, making network carriers less customer-oriented.

The hybridization of an airline's business model refers to the process of combining individual aspects of activity from a variety of existing carrier types within a specific company, while maintaining an optimal level of efficiency to ensure effective production and economic performance.

The business model of express freight transportation has gained popularity in recent decades and is developing extremely rapidly. A typical business model of the express transportation market are companies that have an air carrier in their structure, while other structural units perform functions of supplying chain management, handling, ground delivery of special cargoes with temperature restrictions, etc. Such companies as Federal Express, UPS and TNT are recognized leaders among express carriers. FedEx Corporation includes FedEx Office, FedEx Express, FedEx Ground, FedEx Freight, FedEx Custom Critical, FedEx Supply Chain, FedEx Trade Networks and FedEx Services. The role and tasks of each FedEx division are limited to its area of responsibility within the global business. Therefore, no transformational change in the production and logistics activities of FedEx Express can take place. The same can be noted about other market participants.

The combined business model can be regarded as independent cargo divisions of large corporations of carriers. The most striking examples are Lufthansa Cargo and Emirates Cargo, which are part of the most diversified airlines Lufthansa Group and Emirates Group respectively. The effectiveness of aviation business diversification can vary, but a well-organized diversification strategy can ensure reliable cross-functional benefits and provide significant value for both the parent organization and the subsidiary. Charter transportation of goods can be carried out according to different schemes and principles. This component of the world cargo market, in turn, is divided into a number of segments, each of them being characterized by its own specific features. Charter air carriers operate in specific markets where they are forced to expand the range of provided services. The market for the delivery of oversized and heavy cargo by air is also one of the specific ones. In this case, the carrier should create a product that is radically different from the product of traditional air cargo carriers.

First of all, the specific characteristic of the product created on this market by air carriers is the need to take into account the compliance of infrastructure and unique parameters of cargoes with the parameters of service devices at different stages of delivery and processing. This should involve at least one other mode of transport (for instance, road), the use of unique loading and unloading equipment, special customs clearance of goods and obtaining all permits for transportation. In addition, the carrier of oversized and heavy cargo very often solves a complex problem, that is, to develop projects for the delivery of these goods on one of the key principles of logistics - "door to door". Considering the air transport markets of unique and oversized cargo, they are largely

evolving into a kind of global markets for the delivery of such cargo on a door-to-door basis, i.e. the air carrier becomes a logistics operator and organizes delivery. Consequently, it does not perform exclusively functions of the carrier.

When transporting monocargoes, one of the main conditions for successful transportation is to ensure complete safety of the cargo, the condition of absolute preservation of the cargo properties and the speed of delivery. Integrated logistics systems and cargo movement control systems based on global satellite systems are very relevant information tools for optimizing the delivery of cargo units. Such systems are now being actively implemented in the international and domestic freight markets. The use of these systems allows to determine the coordinates of geographical objects anywhere and anytime. They are also actively used on road vehicles and ships to solve the problem of navigation dispatching. It is possible to use these systems to optimize the route of transportation, organize work and ensure the safety of vehicles.

At the same time, the delivery of oversized and heavy cargoes requires carriers to develop their own techniques of transportation. The delivery of heavy and oversized cargo requires consideration of a number of risks, ranging from delayed delivery to non-compliance or incomplete compliance with customs and legal formalities. The analysis of air carriers' operation in this market is also complicated due to the performance of transportation in a mixed way with the use of air transport by airlines-operators. This type of services is no longer something unique, and airlines are actively developing it to ensure the delivery of heavy and oversized cargoes on the "door to door" logistics principles. The aircraft in the air transport market of unique and oversized cargoes has unique characteristics and is able to carry specialized heavy monocargoes. Initially, the entry into the world commercial aviation market of the military transport aircraft An-124 was perceived skeptically by Western experts at that time. However, the successful certification of transport modification of the An-124-100 plane allowed to testify to the beginning of a new era in air transportation.

Until the early 1990s, the transportation of turbines, rockets and generators was the prerogative of almost exclusively maritime transport, while the use of aviation to transport such cargoes, even on a permanent basis, seemed a real utopia. However, from the very beginning the airlines-operators of An-124-100 aircraft (and its subsequent modifications) were able to impose competition on maritime carriers and to prove that the transportation of unique and oversized cargoes by air has a number of serious advantages to a solid cargo clientele. The main ones are the speed of delivery, the provision of a high level of cargo safety and the absence of the need to divide it into separate parts, in the case of monocargoes. The strategic management of such companies has changed significantly. In times of crisis, on the contrary, the need for transportation of special categories of cargoes is growing.

It should be noted that despite such a variety of companies engaged in the organization of delivery of oversized cargo, ensuring its multimodal delivery with the involvement of air transport remains unresolved. There are several air carriers engaged in the delivery of oversized cargo on the world market, including Volga-Dnepr and Antonov Airlines. These carriers often faced the problem of the disruption of the aviation part of the multimodal delivery of oversized cargo due to the fault of the delivery organizer or companies responsible for delivery by other transport modes. For the air carrier, this immediately resulted in significant financial costs (the standstill of the An-124-100 aircraft and its subsequent modifications costs up to $150 thousand per 24 hours). It could rarely be reimbursed in full as the cargo owner pays only the delivery cost. Of course, such risks can be pre-insured but this is not a panacea. Apart from that, airlines were forced to face inflated prices for the oversized cargo delivery initially by air, which made them consider the possibility of developing such projects on their own. At present, Volga-Dnepr and Antonov Airlines already have significant successful experience in planning projects for the delivery of oversized cargo by air. The next step was the development and successful implementation of similar projects in multimodal connections by airlines.

In view of the above-mentioned circumstances, air carriers have gradually begun to take over some of the functions that are related not only to the aviation component of the oversized cargo delivery. Undoubtedly, the performance of additional functions that are not typical to carriers only, i.e. 2 PL (Second Party Logistics) operators, makes such carriers higher-level operators. Since in this case the carrier of oversized cargo assumes a number of functions that are inherent in 3 PL operators, namely designing and applying special information solutions, vehicle management, consolidation of shipments, repackaging and labeling, providing a set of loading and unloading works, it can be considered so-called "basic 3 PL operator" (Third Party Logistic) or the Integrated Logistics Service Provider. The prerequisites for the transformation of unique and oversized cargo carriers into 3 PL operators are presented in Figure 3.

These aspects of strategic management include the development of methodical tools and practical recommendations on strategic management of enterprises and can be useful for employees of transport and logistics companies, airlines, government officials and employees of local governments. The best practices of companies were actively used in their development.

The transformation of the strategic management principles of unique and oversized cargo carriers in the crisis period was insignificant and determined by the general redistribution of cargo flows. The scientific literature identifies main types of risks including the

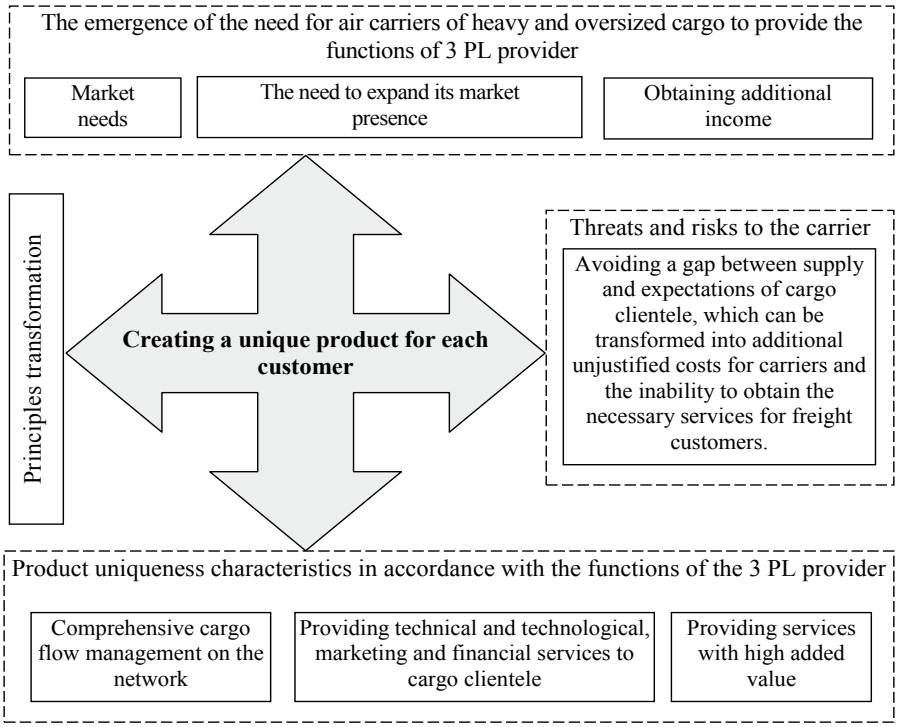

Figure 3 *Prerequisites for the transformation of unique and oversized cargo carriers into 3 PL operators*

risks associated with the transportation of cargoes. Regarding the delivery of special categories of cargoes, transport risks also increase significantly. The delivery of dangerous, perishable goods and live animals requires a number of precautions to reduce risk levels. These risks are more related to the physicochemical properties of such goods than to the transport process. Procedural aspects in the delivery of these categories of special goods by air are clearly regulated by international documents such as International Air Transport Association (IATA) Dangerous Goods Regulations, Live Animals Regulations, Perishable Cargo Regulations.

Determining the prerequisites for the transformation of carriers of unique and oversized cargo into 3 PL operators was based on the use of induction, deduction, comparison and systematization methods, with the obligatory incorporation of practical experience.

Other organizational and legal forms of air carriers are less popular for domestic air carriers. Federal Express, UPS, TNT and others are engaged in cargo transportation on specialized cargo planes. The combined type of cargo transportation in both luggage compartments on passenger aircrafts and on specialized cargo aircrafts is carried out by cargo air carriers established as subsidiaries and in addition to the passenger air transport business (Emirates Cargo, Lufthansa Cargo, etc.). The transfer of a specialized cargo aircraft as a complete package of cargo services (including team and maintenance) under the wet leasing scheme (e.g. Aircraft, Crew, Maintenance and Insurance - ACMIs) is also actively practiced in world markets. This model was actively implemented in the market of heavy and oversized air cargo transportation 10-15 years ago. Currently, the concept of "green airport" as an environmentally safe participant in the urban transport cluster is being actively promoted. Although the concept of "green airport" is relevant not only for business models of urban airports, it is the environmental factor in the city that becomes indisputably essential and should be addressed in the first place.

Relevant decisions have already been made at the level of the International Civil Aviation Organization (ICAO) requiring appropriate changes in the national legislation of the participating countries, including Ukraine. The intensification of a competition in the logistics market is caused by the strategic principles of the development of a number of leading logistics operators. These are usually the previously mentioned divisions of leading foreign logistics companies, such as Kuehne+Nagel, ECOL, DB Schenker, GEFCO and others. The transition to the principles of integrated logistics and complexity of logistics solutions is also expressed in the strategy of leadership by the product, a full customer orientation, the availability of a value proposition and the network principle of forming logistics operator's business model. In general, the innovative principles of strategic management of the logistics 4 PL operator are presented in Figure 4.

The definition of innovative principles of strategic logistics management for 4 PL operator was based on the use of expert analysis and a number of sample observations.

A competence approach as dominant in such conditions is provided by an integrated quality

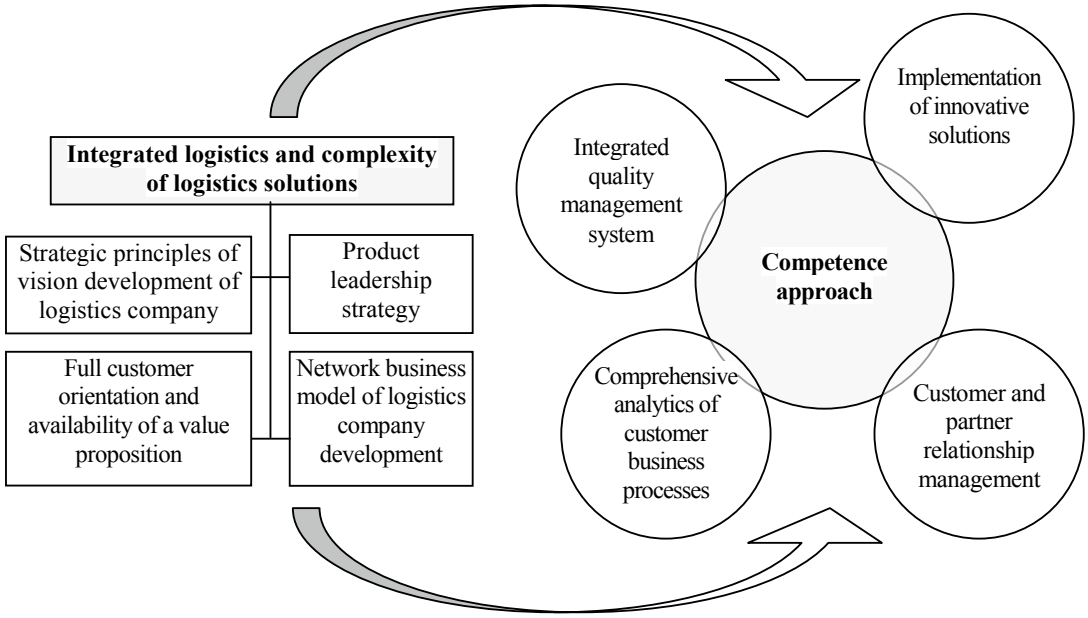

Figure 4 *Innovative principles of strategic management of logistics 4 PL operator*

management system, the comprehensive analytics of customer business processes, the implementation of innovative solutions and customer relationship management.

6 Conclusions

A critical analysis of the evolution of scientific views on the strategic management of enterprises allows to claim that the term "strategic management" should not be equated with the term "strategic planning", as the latter was a preliminary stage in the evolution of scientific opinions. Having studied the stages of the development of the strategic management, the fifth stage of development of the strategic management theory was formed on the basis of further implementation of fundamentally new strategies, providing the development of competitive advantages on new paradigms of Web 2.0 strategy, the implementation of the network business innovation cycle, bioadaptive management, etc. The weak implementation of innovative principles of strategic management of domestic participants in transport and logistics markets was noted, while foreign logistics operators are likely to become the leaders.

The key trend of recent decades is digitalization which is also actively implemented in the transport and logistics market. The concept of informatization of participants in transport and logistics markets should be implemented in the integrated information environment with the mandatory use of adaptation mechanisms and models. The greening of the logistics business is facilitated by the decisions of relevant international institutions and the desire of companies for business recycling. The transformation of the strategic management principles of transport and logistics companies in the context of the crisis has been successful. While port and warehouse operators have not felt these negative effects of the crisis, network airlines are ones of the most affected. This is primarily due to the intersection of cargo and passenger flows in these types of carriers and the organization of joint business for the delivery of passengers and goods, which has had serious consequences for the freight segment caused by a catastrophic drop in demand and a ban on passenger traffic.

Other airlines suffered much less which can be explained by the separation of cargo flows. The strategic management principles of unique and oversized air cargo carriers such as 3 PL operators have been changed. This is slightly related to the COVID-19 crisis and has much deeper consequences for the evolutionary transformation of the business model of these types of carriers. Similarly, the change in the strategic management principles of the logistics 4 PL operator cannot be considered a consequence of the companies' response to the crisis. The preconditions for such a transformation are long overdue and have reached the market in full only now.

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Conflicts of interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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