# КОМП'ЮТЕРНЕ МОДЕЛЮВАННЯ ТА ПРОГНОЗУВАННЯ РОЗВИТКУ СКЛАДНИХ СИСТЕМ РІЗНОЇ ПРИРОДИ

#### MARITIME TRANSPORT LOGISTICS SYSTEM

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### СИСТЕМА ЛОГИСТИКИ МОРСКОГО ТРАНСПОРТА

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### Resume

Transport shipping is the main area of economic activity associated with increasing level of customer satisfaction. At the same time, this is completed by changing the geographical location of goods, not only within one country, but also from one continent to another, continent located with huge distance.

**Keywords**: logistic system, transport shipping, transport logistics, flow of cargo, means of transportatoin

#### Резюме

Транспортные Перевозки — это основная сфера экономической деятельности, связанная с повышением уровня удовлетворенности клиентов. В то же время это достигается путем изменения географического положения товаров не только внутри одной страны, но и с одного континента на другой, континента на большом расстоянии от нее.

**Ключевые слова**: Система логистики, Транспортные Перевозки, Транспортная логистика, Грузопоток, Транспортные средства

#### INTRODUCTION

Today, the practice demanded the need for modern methods of coordinated process management, even the assignment of a new function. Therefore there was an urgent need to coordinate the work of maritime transport and other related means of transport. This

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coordination primarily gives consideration to the harmonized work of the railways and road transport, and then to the fleet and port, fleet and shipbuilding enterprises.

Taking into account the actual situation, it is natural to use scientific methods of logistics, the potential of which allows solving both current and expected tasks.

At present, independent applied direction was established in the theory of logistics – transport logistics, within the framework of which a systematic organization of logistics management and economic structures of the field is designed, which allows the implementation of the idea.

### FORMULATION OF THE PROBLEM

It is essential to conduct scientific research allowing us to expand the scope of practical application of logistics management through the systematic organization of loading and unloading on maritime freight transport. In this regard, due to the current situation, effective changes should be made on the basis of the existing maritime freight management system. The route of these changes should be directed and provide for the creation of a logistics system that will coordinate the relationship between fleet organizations, ports and shipbuilding enterprises.

The main object of management in transport logistics is the flow of goods. Substantive – this is the flow of goods, which includes goods received for transportation by means of transport. The features of the cargo are of special importance in organizing the movement of freight flow. It is just the thing that is the transport characteristic of the cargo and obliges us to comply with the terms of shipment. Obviously, these conditions include the mode of storage of cargo, the rules of packaging, reloading and shipping, physicochemical assets, technologies of performing reloading work and technical means.

It is necessary to prepare a submission form for transportation before shipment, which is of a crucial importance. The form should reflect the characteristics of the cargo. Obviously, a shipping technology scheme will be developed according to this, which will reflect the mode of transportation, loading and shipping time parameters, the selection of the cargo equipment and the type of cargo vessel.

Consistently, the transport characteristics of the cargo are formed taking into account the conditions of transportation [1]: the cargo is accepted for shipment if it is properly packed, in satisfactory condition (condition) and it is possible to transport it safely. According to the existing transport classification, all types of cargo are divided into 3 (three) categories: general — retail cargo, consisting of separate packed or unpacked space (containers, packages, sacks, metals and heavy metal products, not oversized); Mass — a cargo represented by a certain structural mass (mortar, bulk, timber); And special regime — cargo with special physico-chemical properties, the storage and transportation of which are subject to special (specific) rules.

As we can see, the volume and direction of cargo flow is mainly a quantitative indicator. These indicators determine the means of transport. In addition, the cargo flow has an important qualitative (qualitative) indicator by which navigation conditions should be developed. Navigation conditions are determined by such a qualitative indicator as: destination, which can be local, maritime, oceanic, arctic, tropical, etc.; qualitative composition of cargo, etc. All of these are essential attributes for a safe shipment.

Freight flows are usually formed by cargo receiving operations at warehouses and transshipment points, storage, loading in rolling stock, movement, and transit or warehousing reloading at the receiving port, delivery of cargo to the consignee, and so on.

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As for the formation of freight flows on maritime transport means, it is produced from the flow of vessels and is therefore linked to the process of servicing vessels at the terminal. Freight flows in maritime transport are carried out by the flow of ships included in it, moving to the place of stewardship works, freight services.

Analysis of the conditions for the formation of cargo flows proves that implementation of logistics management special importance is given to the integration (merging) of the infrastructure elements of the maritime transport logistics system and their technical-operational parameters. It involves designing the optimal unloading technology, determining the transport characteristics of the cargo, selecting the terminal and the specialized vessel in such a way that they could process the cargo under the given transport characteristics.

### **CONCLUSIONS**

There are certain prerequisites for transforming existing organizational and technological systems into a freight management logistics system. This is due to the fact that recently the properties of maritime transport have changed dramatically, resulting in [2]:

- Enhancing the specialization in providing cargo flows. Narrowly specialized ships (tankers, carriers, timber carriers, gas carriers, car carriers, container carriers, etc.) and large specialized ships (coal, wheat, ore carriers, universal tankers, roller carriers) are used to transport cargo. (Balkers for car transport, Balkers for timber, oil and gas, multi-purpose cargo liners, combined vessels / oil tankers, oil bulkers, light tankers loaded with tanks).
- ➤ Cargo containerization and packaging, used to transport enlarged seats. Such a tendency develops during the shipment of general cargo (ready-made industrial products, food and industrial goods of wide needs, etc.).
- > Standardization of packaging, taking into account the principle of multiplicity of cargo space, which is important for the transport and the agreed work of the manufacturer, etc.

The analysis of these trends determines the importance of the technological factor that contributes to the transformation of the current system into a maritime transport logistics system and at the same time produces a justification for its relationship with the organizational factor, which is not possible without coordination fundamentally.

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