

Thus, the proposed concept of post-customs audit makes it possible to use the resources of customs authorities more expediently and can bring a greater effect.

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**«Information technologies in the field of transport»**

*Research Field:*

*Innovative technologies in international trade.*

Currently, in order to include transport in the logistics system, it is necessary to informatize transport and provide it with telecommunication technologies. For example, in motor transport, the use of video indicators of operational data warning of congestion and accidents along the route, the introduction of a collision prevention system, the use of a navigation system in cars, transport management using satellite communications, which allows to optimize the route, and based on changes in the market – to re-target capacity in a more profitable direction. These information technologies greatly facilitate the organization and management of transport processes. Let's take a closer look at some of them.

1. Satellite transport monitoring systems

Satellite transport monitoring is a mobile object monitoring system based on satellite navigation systems, cellular and/or radio communication equipment and technologies, computer technology and digital maps.

The principle of operation is to track and analyze the spatial and temporal coordinates of the vehicle. There are 2 monitoring options: online – with remote transmission of coordinate information and offline – information is read upon arrival at the control room.

A mobile module is installed on the vehicle. It allows you to transmit data using wireless networks of mobile operators. The received data is analyzed and given to the dispatcher. In the offline version, there is no need for remote data transmission, which allows to use cheaper mobile modules and refuse the services of mobile operators<sup>1</sup>.

The mobile module can be built on the basis of satellite signal receivers operating in NAVSTAR GPS or GLONASS standards. At the same time, in comparison with NAVSTAR

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<sup>1</sup> Kurochkin, D.V. Transport logistics: practice. manual / D.V. Kurochkin. – Minsk: Alpha Book, 2018. – 636 p.

GPS, the GLONASS system still works less reliably and gives a large error in calculating the location of objects.

For additional information, additional sensors connected to a GPS or GLONASS controller are installed on the vehicle, for example:

- fuel consumption sensor;
- fuel level sensor in the tank;
- temperature sensor in the refrigerator, etc.

The cartographic basis plays an important role in satellite monitoring software. The more detailed and high-quality maps are used in the system, the more convenient it is for dispatchers to monitor and monitor the location of vehicles. As a rule, in programs that have a client part, the cards are installed directly on the user's computer. And web systems use online maps, which, thanks to the Web GIS server, are loaded as needed. Web-GIS allows you to simultaneously use maps such as Yandex.Maps, Google Maps, OpenStreetMap, Bing Maps and others.

## 2. Transport management system

The Transport Management System (TMS) is a software package that automates the business processes of transport management, makes them transparent in real time and ensures compliance with specified quality standards.

The transport management system has the following advantages:

- geographic simplification of supply chain processes, for modes and carriers;
- automation of business operations for faster and more accurate billing and documentation;
- improved visibility and increased security, especially during transit;
- ability to track cargo both locally and globally on the same platform;
- improved compliance with import and export regulations minimizes fines and shipment delays;
- improving customer service and increasing customer satisfaction through real-time updates and reducing delivery delays<sup>1</sup>.

Many business entities, realizing the advantages of the TMS system, began to implement this software product. For example, this system was implemented at JSC «Minsk Crystal».

## 3. CRM system 4Logist.com for freight forwarding organizations

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<sup>1</sup> Trotskaya, N.A. Transport in commercial activity / N.A. Trotskaya. – M.: Asmap, 2010.

The system 4Logist.com – this is a universal software for freight forwarding companies. The system is a SaaS solution that allows the manager and employees to be not tied to the workplace, but to promptly solve emerging issues in any place where there is Internet access<sup>1</sup>.

Thanks to this system, it is possible to reliably and easily streamline and optimize absolutely all the processes related to the forwarding activities of the organization.

The system interface is designed to be as simple and convenient as possible. The program consists of blocks. Each block contains the corresponding intuitive functionality that helps to speed up the accounting and order management, information retrieval and execution of other workflows.

To the Director the online system allows to control information about sales, to standardize company processes, to store confidential data, etc; the Manager, for their part, is able to automatically generate documents with customers and carriers, to save time when searching for the right information, to search for transport from the database according to various criteria.

#### 4. Cargo and transport search systems on transport exchanges

Enterprises often face the need to search for carriers (forwarders). Today, the transport exchange can help in this.

The Transport Exchange is an Internet platform for the exchange of data on goods awaiting shipment and idle free transport, which is an integral part of the information and logistics infrastructure and performs the functions of a virtual logistics operator. Exchanges operate in real time.

To date, almost all the transport exchanges are electronic. Advantages of exchanges are:

- up-to-date information updated online directly by market participants;
- easy navigation when searching for information;
- relatively low cost of registration (for paid exchanges).

Currently, there are more than 100 transport exchanges in Europe. They range from small exchanges with a few users to large companies trusted by thousands of users [2].

#### 5. Using the TRANSPark system

TRANSPark is a free electronic application that allows carriers, freight forwarders and those who are engaged in route planning in companies to determine in real time the availability of safe parking lots along the route of the vehicle and book them. In total, the application has

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<sup>1</sup> Kurochkin, D.V., Logistics and supply chain management: practice. manual / D.V. Kurochkin. – Minsk: Alpha Book, 2016. – 784 p.

data on parking in 53 countries around the world. The application provides information about the level of security and amenities available on the territory of each parking zone, and displays the availability of additional services for drivers.

The use of TRANSPark by international drivers makes transportation generally safer, since carriers can use the safe parking areas registered in the application.

It is important to note that the use of information technologies in the field of transport allows organizations to automate most processes, as well as achieve not only maximum profit, but also minimize costs. The introduction of information technologies has significantly increased the efficiency of companies involved in international transportation by facilitating the tracking of international transportation vehicles and planning their safe route.

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### **«Digitalization of customs authorities' activities»**

*Research Field:*

*Customs and Business: Cooperation Challenges*

The accelerated pace of globalization, as well as the intense use of digital technologies, affect the development of modern customs, creating new «impulse» aimed at creating a favorable environment for international trade, the development of customs administration, as well as bringing relations between participants in foreign economic activity and customs authorities to a new level.

The coronavirus pandemic, which emerged in 2020 and brought multi-level quarantines and lockdowns, forced all the world to activate the use of digital technologies. So, today, the concepts such as «distance education», «remote work», «online shopping», «electronic services» and many other terms, that recently seemed unreal to us, have entered our daily life so deeply that they have already become routine.

In this regard, the governments of different states, so that their countries would not be among the «laggards», were forced to pursue a policy of «digital transformation». And, since all spheres of activity of any state are affected by digitalization, then, as in many other areas, there is an increase in digital transformation in the customs sphere due to the creation and implementation of digital technological products and programs. Currently, automated systems of