SMART CONNECTIVITY ALONG THE ASIAN HIGHWAY NETWORK IN THE TIMES OF COVID-19

"Transport and trade connectivity in the age of pandemics: Contactless, seamless and collaborative UN solutions"

12. Information systems for the interactions at transport terminals

UNITED NATIONS ESCAP

Overall description

Transport hubs, including sea and dry ports, cargo yards of industrial enterprises, trade and distribution centers, are the most important elements of international transport corridors.

In transport hubs, consolidation or unbundling of cargo lots, pre-processing of cargo, and sometimes the organization of production from incoming raw materials and components is carried out. Transport hubs connect numerous feeder and supply lines and are the starting and ending points of trunk routes.

An important task of transport hubs is to organize and conduct procedures related to ensuring foreign economic activity, including border, customs, sanitary and phytosanitary procedures, technical control of vehicles, emigration control, and others.

In transport hubs, the modality of transportation is changed, including the reloading of goods from one type of transport to another. At the same time, the most important role is played by road transport, which provides delivery of goods on the "first" and "last" miles to and from the transport hub to end users, as well as participates in the main transport of goods between transport hubs.

Overall description

This interaction is associated with the formation of a hotbed for a significant increase in the risks of infectious diseases and the spread of viruses, including COVID-19, on a global scale.

Measures to apply advanced its technologies and digitalize business processes in road transport should be focused on automation and remote interaction of all transport participants in transport hubs, including personnel of transport and forwarding companies, cargo owners, and state regulatory authorities. In this regard, it is necessary to systematize and popularize best practices in implementing information systems for interaction between participants in the transport process at transport hubs, including interaction with other modes of transport.

Expected benefits and linkages to the pandemic response

The introduction of information systems based on the digitalization of document flow and pre-Declaration, online communication in the interaction of participants in the transport process at transport terminals, including interaction with other modes of transport, will allow:

- reduce the number and duration of physical contacts of people during document processing and control and supervision procedures by converting documents to digital format and prior notification, speeding up the procedures for processing transported goods;
- reduce the time spent by drivers and their contacts on the territory of cargo terminals by providing digital directions and navigation through mobile applications, as well as coordinating the time of arrival at the loading/unloading post;

- reduce the costs of transport and logistics services and human contacts caused by downtime due to the duration of manual verification and registration of a large number of transport documents on paper, as well as unorganized arrival of transport and cargo;
- eliminate the risks of interruption of transportation and penalties due to the absence or incorrectly entered information in the accompanying cargo documents, including due to language barriers identified at the time of checking the car that has already arrived at the terminal;

Expected benefits and linkages to the pandemic response

- increase the efficiency of informing cargo owners, transport participants and control and Supervisory authorities of all States on the international route about the results of terminal cargo processing;

- optimize business processes, coordination and efficiency of interaction between business and regulatory authorities of States on Asian international routes by automating the processes of registering the results of terminal cargo handling;
- coordinate interaction and optimal use of personnel and different modes of transport;
- reduce the occurrence of peak situations and congestion by organizing a uniform flow of goods and transport;
- eliminate negative manifestations of the human factor associated with manual processing of data contained in paper documents.
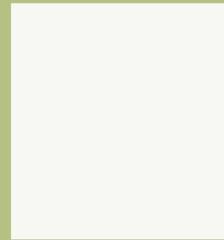
Implementation examples

In world practice, the greatest experience of digitalization of business processes in transport hubs has been accumulated in seaports. Digitalization of transport and logistics business processes in seaports is usually carried out in two directions:

- automation of interaction between transport participants for the purpose of operational current management of the transport situation, coordination of transport and commodity flows in the transport hub;
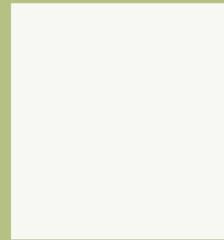
- automation of interaction between transport participants and state regulatory authorities for the purpose of information exchange of information about transported goods and cargo, including in the framework of customs and other procedures.

Initial recommendations for launching/strengthening similar initiative in an interested country/sector (1)

The risk of spreading a pandemic, including COVID-19, directly depends on the number and duration of contacts between people at transport terminals. It is recommended to minimize the number and duration of contacts by reducing the number of paper transport documents processed manually and switching to the use of electronic document management and pre-notification technologies, automating data registration and processing, coordinating and optimizing the actions of all participants.

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Initial recommendations for launching/strengthening similar initiative in an interested country/sector (2)

It is possible to start using modern information technologies and communication at transport terminals in order to prevent the spread of the pandemic, as well as to minimize the negative consequences of the pandemic on the transport industry, in stages, taking into account a number of areas set out in this instruction:

- converting transport documents to digital format;
- remote pre-notification in electronic digital format "single window»;
- pre-electronic Declaration;
- the technology "electronic queue";

- the technology "green corridor";
- use of Web and mobile applications;
- remote medical monitoring;
- navigation of electronic seals and smart containers;
- use of self-driving vehicles and automation of document and cargo processing processes.

The introduction of modern information technologies and communication at transport terminals will require changes in both national legislation and bilateral and multilateral agreements, as well as harmonization at the international level.