## Копусь К.С., гр. ДМП-M21 THE SIGNIFICANCE OF ONLINE PAPERWORK IN INTERNATIONAL LOGISTICS OPERATIONS

International logistics networks have many important parts, like moving things quickly, be inefficient, and keeping track of everything. But one thing that needs to change is all the paperwork. Doing things like signing papers, sending quotes and bills and putting information into documents is a lot of work and can be easy to make mistakes. These mistakes can cost a lot of money. Using technology to make everything digital can help make things faster and make the workers better. So, I will talk about why we need to make everything digital in logistics and some ways we can do it.

The transportation and logistics industry uses a lot of paper to keep track of everything they do. They have to write down and keep records of everything that happens, like what they have in their ware houses, when they send things to different countries, and when they move things from one store to another. But if they lose or damage these papers, it can cause big problems, like having to cancel shipments. No matter what they do, they have to make lots of papers to show that everything is okay.

Manual inventory entry can be a time-consuming task that requires several hours in put transportation data in to specific fields, which may result in the need for additional human resources. Never the less, automated tools provide a prompt alternative, enabling businesses to efficiently manage inventory and ultimately decrease labor expenses. This allows companies to real locate their resources to different areas and promote accelerated development.

The current state of digital document flow in logistics should be considered according to the following indicators. The e-CMRT he introduction of the e-CMR, a digital version of the CMR, has brought about a significant transformation in digitizing the international logistics network. It consolidates all data exchanges onto a single on line platform, making the process much more efficient. Additionally, the e-CMR allows for real-time tracking of shipment progress, monitoring of cargo movement, and confirmation of accurate delivery times for all involved parties. [1];

b) The Electronic Bill of Lading. To address the challenges posed by paper Bill of Lading (B/L), the industry is actively searching for solutions that can enhance the efficiency of document processing, as well as save time and costs. Since the 1990s, the shipping industry has been exploring different methods to enable paper less shipping operations. The emergence of block chain technology has given new impetus to the development of the Electronic Bill of Lading (EB/L), which aims to replace traditional paper B/L and courier services with digital documents that can be transferred seam less through a cloud-based system. [5];

c) Digital Signatures. A digital signature is a modern way to sign documents, using electronic devices instead of hand writing. It is like an electronic "finger print" that securely connects a signer to a document in a recorded transaction. In the logistics industry, digital signatures also include a time stamp indicating the exact moment of signing. [2];

d) RFID Systems Radio Frequency Identification (RFID) systems are a convenient way for logistics managers to monitor and over see products and assets throughout the supply chain. When combined with Quick Response (QR) codes, RFID tags can bring significant enhancements to cargo handling, both within the confines of a ware house and beyond. These technologies contribute to various functions, ranging from inventory

management to automation. By eliminating the need for hand written documents and the potential for manual data entry errors, they ensure data accuracy.

Furthermore, both RFID tag sand QR codes empower workers to accomplish tasks in minutes that previously consumed hours. By swiftly identifying items and promptly in putting their details into the central computing system, they effectively save time. RFID technology is ideal for the processes of ware houses or distribution centers, as the functions performed in the mare always related to products and goods that have tags with necessary information. With this technology, it is simpler to monitor good sand know their origin and destination, providing major time, efficiency, and safety savings. [4];

e) QR Codes. QR codes, which are commonly referred to as Quick Response codes, are barcodes that can be scanned by electronic devices. Like regular barcodes, they contain data, but unlike traditional ones, QR codes have the ability to hold a large amount of information, accommodating up to 7,089 numeric or 2,953 alpha numeric characters. Incorporating QR code labels on products can greatly benefit the process of tracking inventory and monitoring shipments at various stages of transportation. Moreover, the Google Maps QR Code feature allows delivery personnel to conveniently navigate to the specified destination using their smart phone's mapping application [3].

In conclusion, the logistics industry needs to embrace digitalization to reduce costs, save time, stream line trade processes, enhance resilience, and prevent disruptions in the supply chain. The current state of paper work in international freight forwarding is quite cumber some and time-consuming for everyone involved, and it requires multiple documents and manual procedures, leading to a significant drain on resources. However, there are several ways to make the logistics industry more digital, including the e-CMR, the Electronic Bill of Lading, digital signatures, RFID systems, and QR codes. By adopting these technologies, the logistics industry can become more efficient, cost-effective, and resilient.

Recourses:

1. URL: https://www.globalnegotiator.com/blog\_en/e-cmr-implementation/

2.URL:https://lunarpen.com/blog/how-can-electronic-signatures-help-the-

logisticsindustry/

3. URL: https://searchengineland.com/what-is-a-qr-code-and-why-do-you-need-one-27588

4. URL: https://www.camcode.com/blog/the-ultimate-guide-to-rfid-systems/

5. URL: <u>https://www.withvector.com/electronic-bill-of-lading/</u>

Під керівництвом: доц. каф. Економіки та менеджменту, О. В. Маковоз