International Port Community Systems Association
Press Release: September 2019

During the visit of Israeli Prime Minister Benjamin Netanyahu to Ukraine on August 19, 2019, one of the important topics of negotiation with the President of Ukraine was the development of IT technologies and support for startups. In particular, Mr Netanyahu noted the cooperation of Ukrainian and Israeli IT companies: “Israeli companies work here and we work with tens of thousands, somewhere around 50,000 Ukrainian computer engineers, mathematicians, scientists, those involved in the field of modern technology.”

One of these projects is the cooperation between the Israel Ports Company (the operator of the Port Community System in the ports of Israel) and the Ukrainian LLC PPL 33-35 (the operator of the Port Community System in the ports of Ukraine) on the development of an electronic Bill of Lading based on blockchain technology. The project was presented in Rotterdam in 2018, at the annual meeting of the International Port Community Systems Association (IPCSA) and is actively developing under its auspices.

To date, Port Community Systems from Spain (Portic, Barcelona), Germany (dbh, Bremen) and Italy (Autorità di Sistema del Mare Adriatico Orientale, Trieste), as well as Israeli bank Leumi, and Spanish bank Sabadell, have joined the project together with a number of customs brokers, shippers and consignees, and ZIM, the largest container shipping line in Israel.

The technology partner and platform provider for the project, Microsoft, made it possible to use Enterprise Ethereum with Microsoft Workbench. This solution is attractive because of its high integrability with existing corporate Microsoft products such as Azure and Active Directory; this makes it easier for new participants to join the project, as well as enabling the integration of information systems.

A key feature of the project is the construction of nodes based on existing Port Community Systems. This has streamlined the complexity and technological features of the blockchain project and provided end users with a convenient and familiar interface for information exchange. In addition, this

allows the network to be supplemented with additional operational information regarding the handling of ships and cargo in ports, which improves the quality of services provided to end users.

Blockchain as a technology of distributed ledgers has significant potential for resolving any issues around lack of trust between participants in the trade (and transport) chains at the technological level.

In essence, the blockchain is a cryptographic protocol that allows individual parties to have a common trust in the transaction, since the registry cannot be easily faked (that is, after data is written it cannot be changed). This certainty is created by a combination of factors, including the cryptography used in the blockchain, its consensus/verification mechanism and its distributed nature.

In the case of a public blockchain, the arbiter is the totality of all nodes that decide to participate in consensus. In the case of a private blockchain, the arbiter is a consortium of nodes that are trusted (given permission) to create consensus on the network.

In logistics, blockchain technologies can be used:

- To accompany financial and insurance documents;
- For documents on consignment and shipping;
- For documents on container logistics and Bills of Lading;
- For permits and declarations of national regulatory authorities.

What's next?

There are more and more practical examples of applying blockchain technology in logistics. Every day, new projects appear and existing projects expand the number of services being provided.

At the same time, the active adoption of technology by the blockchain industry has revealed new problems.

The security issues of blockchain as a technological solution are becoming increasingly relevant – it is not without reason that this has become one of the leading topics at the World Economic Forum (WEF) this year. According to WEF forecasts, by 2025 up to 10% of world GDP will be stored in distributed ledgers. In this regard, the impact of technology on the global economy and security issues and the level of confidence in this technology become extremely important.

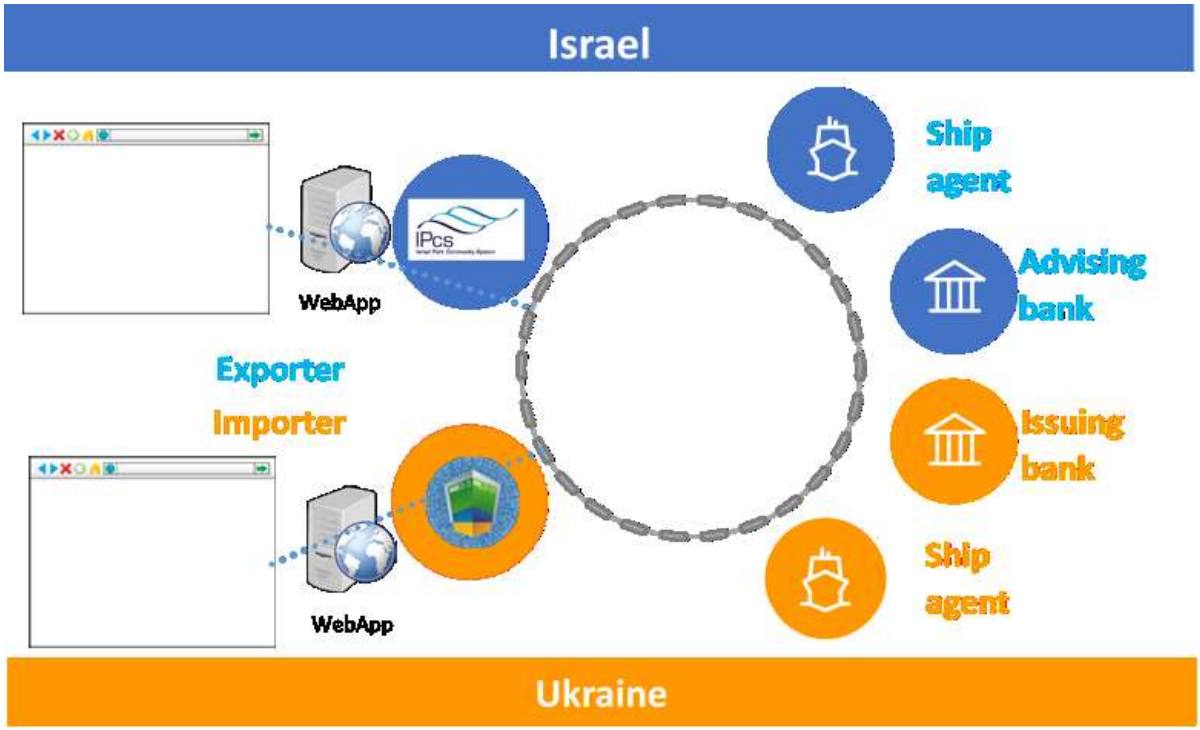
In this context, the Integration and Trade Sector of the Inter-American Development Bank (IDB) and the Center for the Fourth Industrial Revolution (C4IR) of the World Economic Forum launched a unique project in 2018: "A single window of global trade on Blockchain technology as part of the TradeTech Forum initiative to evaluate potential use of Blockchain technology in the trading ecosystem."

International organisations such as the United Nations Centre for Trade Facilitation and Electronic Operations (UN/CEFACT) have joined in the standardisation of blockchain technology.

It can be stated that blockchain technology has passed its youthful heyday, when it was perceived as a fashion trend and attempts were made to build everything on the blockchain, without

relatively to the return from such projects. The leading IT corporations with their proven and trusted platforms have entered the blockchain-based solution market, and international standards are being developed in this area. Thus, the technology is becoming what it should be – a tool that, if used correctly, will increase the efficiency of existing processes and create opportunities for new ones to appear. The key advantage of this tool is the ability to implement interoperability solutions for existing and new paperless systems without the need to coordinate the level of trust between them, a factor which is extremely important in international trade and logistics.

Many experts highlight the significant impact of technologies such as blockchain and the Internet of Things on the development of logistics in the near future. The readiness of participants in the supply chain to embrace these technologies is already bringing concrete results and providing competitive advantages.



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Note to Editors

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The International Port Community Systems Association (IPCSA) was originally founded in 2011 as the European Port Community Systems Association, by six European-based PCS operators. It was relaunched in 2014 as an international association, reflecting its growing membership outside Europe. Membership includes Sea and Air Port Community System Operators, Sea and Air Port Authorities and Single Window Operators.

Today, IPCSA's members operate across the world, exchanging electronic information at more than 250 sea and air ports, rail and inland waterways, and border crossing points. This equates to more than 500 million TEU and 10 billion tonnes of world trade a year, a reach of over 1 million users, and the exchange of more than 30 million messages per day in support of efficient Sea and Air Ports.

IPCSA's membership provides representation in each of the five regions across the world which match those of UN Regional Commission regions. This geographical reach enables it to address the needs of members on a regional as well as international basis.

IPCSA has consultative status at the International Maritime Organization and Special Consultative Status at UN ECOSOC, both providing an important platform for representing the needs of its members and its members' users at the highest level. IPCSA also takes part in international standards meetings including WCO, ISO, UN/CEFACT and IATA.

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