IPCSA Information Sheet: May 2018

The International Port Community Systems Association (IPCSA) and its members constantly focus on innovation in order to move forward and provide customers with the advanced solutions they need in the demanding world of shipping and trade.

Logically, Blockchain is a new area of focus.

Discussions around adopting Blockchain in the shipping and trade sector often suggest that today's supply chains are all about paper and that Blockchains are the technology that could change this.

However, the electronic networks and services provided by Port Community Systems already enable between 90% and 99% of all import/export processes to be paperless transactions – it is the remaining 1% to 10% that is the most difficult to implement.

Hence, when IPCSA members set in motion a Blockchain project, having analysed the challenges, opportunities and processes that Blockchain can help to deal with, they agreed that merely switching an existing digital process to Blockchain technology would deliver no significant benefit.

The decision was taken to focus on a paper-based process and, after some consideration, Bills of Lading was the chosen target.

The IPCSA Blockchain working group is led by Gadi Benmoshe, CIO of the Israel Ports Company. He says: "We were not looking to prove if Blockchain works or not. Blockchain works, and that is a fact. However, there is a lot of hype surrounding Blockchain – and for IPCSA, it was important that we use Blockchain to elevate what we offer to our customers."

Clear advantages

A number of Blockchain pilots and trials are ongoing, relating to Bills of Lading. However, there is no service that actually works today.

Port Community Systems have a lot of strengths and advantages that will bring the IPCSA Blockchain project to a successful outcome. The IPCSA project is not a university study or theoretical project; it is about the needs of customers, and it is being built from the bottom up.
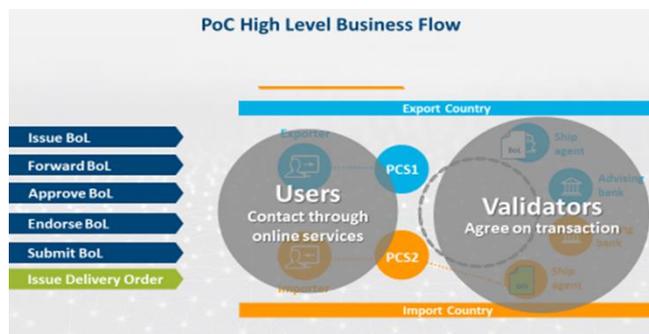
PCSs are already providing integrated electronic exchanges of information to stakeholders across the maritime and air freight supply chain. Each PCS provides

these services in the ports or regions they serve; but through the IPCSA family, they can exchange and complete international solutions.

• PCSs are trusted networks for process harmonisation and integration

• PCSs bridge different technology adoption levels

• PCSs are a gateway to government authorities

• IPCSA members, working together, provide a gateway for local and global networks

• The IPCSA Blockchain BoL provides advantages for freight forwarders, banks, ship agents, transport operators, ports, Customs and other government agencies.

Blockchain solution for Bills of Lading: IPCSA project prepares to go live

• High level and detailed design complete

• Demo successful

• Phased implementation to start in June 2018 with pilot project run by Portic, Barcelona

• Second phase will see more Port Community Systems (PCS) join the project and handle Blockchain Bills of Lading

• As trusted third parties, PCSs are uniquely placed to integrate Blockchain Bills of Lading into their existing network systems

Blockchain BoL implementation

Having finished the high level and detailed design and completed a successful demo, the IPCSA Blockchain BoL solution is now in the final stages of development. and in June it will be ready for phased implementation, starting with a pilot project with IPCSA member Portic in Barcelona.

In the next phase , more PCS providers will join the project – operated by IPCSA members in Odessa, Le Havre, Bilbao, Marseilles, Trieste and Valencia.

"Handling such a large international project with all 35 members of IPCSA would be difficult, so we are starting with a few and will roll it out from there," says Gadi Benmoshe.

"There is one solution, one Blockchain, one format; each PCS will develop and integrate the Blockchain BoL into their system."

The IPCSA project already has a number of banks, shipping lines, forwarders, importers and exporters involved.

Transparency in the supply chain

The IPCSA Blockchain Bill of Lading delivers transparency across the supply chain.

Where PCSs have previously converted processes from paper to paperless by transforming from paper form to digital file, this new project transfers the process to a common ledger – a distributed database that all authorised players see at the same time.

In traditional digital exchanges, as a file moves from 'A' to 'B', it isn't yet visible by 'C'. In the Blockchain model, 'C' knows the file is on the way – everyone sees the information as it moves through the Blockchain.

"Any information that goes into the chain is transparent to all authorised players at the same time," says Gadi Benmoshe.

A real solution

The IPCSA Blockchain Bill of Lading:

• Harnesses the value of existing Community Systems

• Reduces the need for a 'paper chase', saving the time and cost of using couriers

• Streamlines the supply chain – cargo can be released much earlier, also saving on storage costs

• Provides increased security in the supply chain, reducing the risk of loss, forgery or delay

• Offers the potential to add insurance, phytosanitary and other documents into a Blockchain solution

Further Information

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