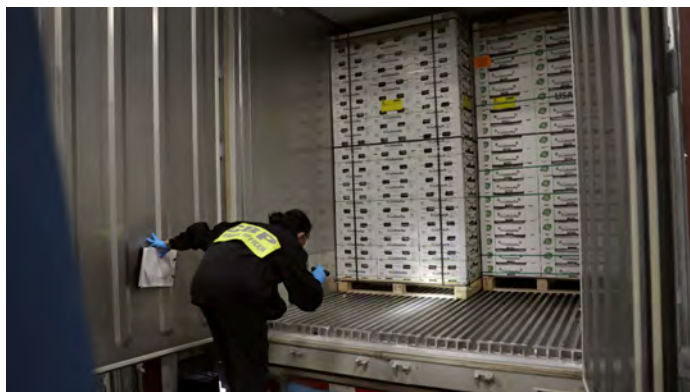


Transforming Trade and Ensuring Global Supply Chain Security with Blockchain

THE GLOBAL SUPPLY CHAIN

U.S. Customs and Border Protection is responsible for enhancing the Nation's global economic competitiveness by enabling trade and travel. Each year, CBP processes over 30 million entries and collects around \$44 billion revenue (duties, fees, and tariffs). A critical element to consider when facilitating legitimate trade is maintaining the security of the supply chain.

Global supply chain is a sophisticated ecosystem with many stakeholders (*e.g.*, exporters, importers, origin/destination agents, Customs bonded warehouses, financial intermediaries, ports, shipping lines, insurance companies, brokers, Customs, and border related regulatory agencies). The complexity results in enormous challenges in maintaining the flow of the supply chain information, data, and documents, and severe problems in terms of supply chain efficiency, visibility, and transparency.



Current opportunities within the existing process:

- Data fragmentation and limited interoperability
- Unstructured and uncorrelated data embedded in the trade documents
- Manual document processing and reconciliation of databases
- Limited trustworthiness of data entered into the system

RE-ENGINEERING THE ENTRY PROCESS

Distributed ledgers, the technology and process also called Blockchain, holds the potential to improve efficiency in the global supply chain, facilitate data sharing and data exchange among stakeholders including regulatory authorities and Customs, ensure compliance with the trade laws, and facilitate legitimate cross-border commerce.

Specifically, for the entry related process, there are opportunities to integrate with or apply blockchains at each phase of the entry data collection process:

- Registration of Authorized Economic Operators
- Managing accreditation, certification
- Supply chain data collection and exchange
- Advance sharing of commercial data
- Declaration/Report
- Post release compliance verification

The re-engineered entry process could result in faster processing, enhanced data reliability and quality, improved revenue collection, more effective use of government resources, improved timeliness of communication, more effective interagency data management, and effective cost sharing.

There still remain technical and non-technical challenges to the adoption of distributed ledgers by the global supply chain community. In particular, there is uncertainty of legal status of electronic trade documents, cross jurisdiction coordination, strategies for blockchain consortia, public-private dialogue required, technology neutrality, the need for open standards, and data privacy and security concerns. Success in applying distributed ledger technology to the Customs entry process hinges on joint and collaborative efforts between the trade community, government stakeholders, regulators, policy makers, and academics.