CONCEPT PAPER
ON

NEXT GENERATION BORDER CLEARANCE THROUGH DISRUPTIVE TECHNOLOGIES

Future Cross-Border Facilitation Vision

The Global Express Association, which represents the three global express delivery carriers DHL, FedEx and UPS, sees tremendous potential in the application of the newest technology, in particular distributed ledger technology (DLT), to overcome many of the current challenges faced by Customs and other border agencies with regard to revenue collection, combating illicit trade, including counterfeit, safety and supply chain security.

The GEA and its members are committed to support the development of next generation border clearance models that leverage these technologies and lead to enhanced, automated and paperless cross-border trade facilitation and clearance thanks to:

- Authorized economic operators that are able and willing to provide access to end-to-end secure supply chain data for account-based upstream clearance processes.
- Seamless integration of Distributed Ledger Technology (DLT)-driven blockchains for reliable and trusted access to digital and digitized trade documentation (PULL) within existing Electronic-Data-Interchange-based IT systems for the effective and efficient submission of high-volume and time-critical trade information;
- Increased quality and accuracy of trade information in legitimate supply chains through the use of blockchain technology for better revenue collection, safety and security;
- Open and interoperable standards for blockchain and other emerging technologies to enable secure and seamless access to blockchains across supply chains, including trade data and identity management standards;
- The use of IoT-based (Internet of things) sensor technology in combination with blockchains to identify, manage and control legitimate supply chains and secure and protect their integrity and authenticity;

Current landscape

The digitalization of cross-border processes in international trade, in particular that of customs/border clearance, is not new. The introduction of electronic data interchange (EDI) and digital signatures in recent years has brought about significant improvements in the

clearance of goods crossing international borders by increasing efficiency, improving data quality and reducing cost.

However, EDI has not - or not yet - provided the solution for supporting documents such as invoices, bills of lading, certificates of origin and many more documents in form of licenses, certificates and permits necessary to be presented together with the goods declaration. More and more often, governments accept such documents electronically (in the form of scanned copies) and only require their submission based on risk-based selectivity. However, current technology does not allow for the verification of the authenticity and accuracy of such documents, which can lead to disputes and delays.

In addition, other facilitation measures such as pre-arrival processing, Authorized Economic Operator status and other account-based Trusted Trader programs are not yielding their full potential. Border formalities, including the payment of duties and taxes, are still often paper-based and completed only after the arrival of the goods in the country of importation.

Benefits of Disruptive Technologies for Cross-Border Trade

Technologies that increase the authenticity and accuracy of information associated with cross-border transactions, as well as on the flow of the goods itself, will help goods move across borders.

Blockchain

Distributed Ledger Technologies (DLT) such as Blockchain (BC) have enormous potential to improve the efficiency and speed of cross-border supply chains by simplifying processes and reducing the need for human intervention in a number of transactions. They can also expand international trade by reducing friction at the border and the cost and complexity of cross-border transactions, for both customs and shippers, especially import and export operations.

This can be achieved in particular by:

- allowing multiple trusted actors in the supply chain, both in the private sector (manufacturers, retailers, carriers) and the public one (customs and other border authorities), to share electronic data through immutable, auditable, tamper-proof records, whose authors are clearly identifiable; which will result in more expedited release and clearance through better data quality and more effective, targeted interventions by Customs, and
- using so-called smart contracts that self-execute automatically when certain conditions are met to reduce the need for manual intervention, e.g. generating permits and licenses or automated release processes.

For instance, all the necessary information required for a shipment to cross a border could be securely distributed to those who need to know. Information such as the data that are today contained in a customs declaration (value, description) could be provided electronically by

parties who are best placed to do so, and in some cases generated automatically if the shipments meet given requirements (e.g. phytosanitary and origin compliance). Smart contracts could automate the clearance process by automatically releasing shipments that match import criteria.

This could lead to substantial reductions in the cost of cross-border trading, and an expansion of international exchanges as a consequence, with positive effects on economic development and growth. At the same time, it would reduce the burden of control authorities and improve revenue collection efficiency.

Internet of Things (IoT) in Logistics

IoT will provide the next generation of track and trace through smart sensors that enable visibility on the location and movement of cargo and item-level monitoring of the current condition and integrity of the cargo.

Call for Action

The effective development and roll-out of this future concept will require a multi-stakeholder initiative at the global level. In turn, this should lead to new developments in the regulatory framework that enable change management and direct capital investment. Technological innovation requires a regulatory framework that facilitates and provides incentives for industry-wide collaboration and levels the playing field for all parties willing to invest.

Regulatory:

- Full, harmonized and consistent implementation of the WTO Trade Facilitation Agreement, in particular where the agreement allows for the use of IT as 'best endeavors' (it should be treated as a binding commitment, not an option)
- Legislative changes to ensure acceptance of artificial-intelligence-based classification and valuation processes.
- Legislative changes to accept the authentication of information by means of DLT or other such technologies.
- Legislative changes to accept digitalized documents (not only scans) and electronic payments.

Data and Technology:

- Development of open standards and interoperability protocols to make sure information can be shared seamlessly across Blockchains;
- New or improved regulatory data standards (such as the WCO Data Model) for the exchange of transport and trade information through blockchains that is open and agreed upon across the globe and defines data that will be input to the Blockchain. We need standards around how data is written (some type of open smart contract

protocol/language) to the Blockchain, which will in turn help drive the interoperability issues we face today.

- Open and interoperable standard for security and identity management of Blockchain users. We need a standard way to manage identity of the participants reading/writing to the Blockchain network.

<u>Pilot Project</u>

- The GEA and its members recommend that a multi-country pilot project be initiated with the support of express delivery carriers. This pilot project should initially focus on specific aspects and problem areas in international trade, such as verification of the declared value of the goods, which is currently hampering rapid release and clearance in many countries around the world.

Role of the GEA and the Express Delivery Industry

Through the Global Express Association, express delivery carriers could contribute to the process by:

- Informing governments and international organizations - in particular the WTO, WCO and OECD;
- Promoting the use of innovative technologies, such as the concept of a blockchain ecosystem for international trade.
- Identifying, developing and promoting, in combination with other industry bodies, open standards and interoperability protocols to support supply chain management
- Identifying, developing and promoting, in combination with relevant regulatory agencies, open standards and interoperability protocols for the exchange of information necessary for importing and exporting goods.
- Identifying and promoting the necessary regulatory changes to make the above points possible.

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