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“Leveraging Blockchain Technology to Improve Supply Chain management and Combat Counterfeit Goods”

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Introduction

Good morning, Chairman Abraham, Chairwoman Comstock, Ranking Member Beyer, Ranking Member Lipinski and Members of the Subcommittees.

My name is Mike White, and I’m the Head of Global Trade Digitization at Maersk. Before moving to my current role, I was the President of Maersk Line North America for the past eight years, and I have had the pleasure of working in this industry for the past 37 years. Thank you very much for the opportunity to testify this morning.

In a global economy, supply chains are of critical importance. It is estimated that over \$16 trillion worth of goods cross international borders each year and more than 80% of those goods are carried by the ocean shipping industry. Over the past 5 years global container volumes have increased on average by 3.7% per year.

Moving goods from point A to point B involves many parties who are separate from but dependent on one another. Importers and exporters, freight forwarders, customs brokers, ports and terminals, ocean carriers, customs and government authorities, inland transportation providers, financial institutions and others all gather discrete sets of overlapping information which they share using a convoluted web of individualized formats and aging technologies.

This inconsistent flow of information across organizational boundaries hampers the efficient flow of goods, but through a collective, complexity driven inertia, supply chain participants persist in their outdated practices. Perhaps this is because they trust that, as flawed as it may be, the system will deliver a container from point a to point b and they can’t afford to experiment with a system that may fail to do so.

The industry operates today much as it did at the introduction of shipping containers in the 1950s. Many processes are manual, time-consuming and too often paper-based (with transactions still frequently

occurring via fax machine). The cargo on any given container vessel voyage generates a mountain of documents—many of which are sent to the relevant container's destination by some other means. Container shipments can often be delayed in port because necessary paperwork has not caught up with the goods that they carry.

In a Freightos survey recently cited by the Economist 2/3 of respondents said that over ¼ of their deliveries from abroad arrive late. Nearly half said that they spend more than 2 hours on paperwork when arranging a given shipment and the vast majority of respondents had real difficulty tracking goods in transit.

In an industry where Global transport costs are 1.8 to 2 trillion dollars annually, administrative costs can sometimes exceed the end to end transport costs for a given container, and overall inefficiencies are estimated at 15% or higher. The World Economic Forum estimates that by reducing barriers within international supply chains, global trade could increase by up to 15%, boosting economies and creating jobs.

These barriers have proven incredibly difficult to surmount as participants are trapped by the layered complexity of entrenched methods. Everyone agrees that there must be a better way, but no single participant is able to effect change because of an overarching desire to stick with what is known to work (if not very well) over an experiment that could fail with disastrous and cascading consequences.

In 2016, Maersk and IBM began a collaboration with the goal of digitizing the global supply chain. To begin, we analyzed a number of supply chains to understand the current challenges and specific areas of complexity. One of these involved a shipment of avocados moving from Kenya to the Netherlands. This one container involved over 30 different actors or entities, more than 100 individuals and over 200 separate exchanges of information and documentation - the vast majority of which was completely manual, paper based, and extremely time consuming.

We soon realized that no sustainable solution can exist for streamlining this entrenched complexity without unprecedented buy in from the entire industry. In our analysis, an open and neutral industry platform, consisting at its core of a worldwide network of interconnected supply chain participants, is by far the best way to drive efficient, transparent, and secure global trade. The trust necessary to build this network would likely not exist without Blockchain technology.

In January of this year Maersk and IBM announced their intention, subject to the receipt of all applicable regulatory approvals, to form a joint venture to implement this global platform. The platform will follow the flow of cargo from source to destination: as empty containers are provisioned and transported to a warehouse, as the containers are stuffed and transported to a port, as the cargo undergoes regulatory clearance and is loaded onto an ocean carrier, and as the cargo is shipped across the ocean. Continuing on the import side, the platform will follow the flow of the cargo as it is cleared by applicable governmental authorities and transported to the consignee and empty containers returned to a depot.

The platform will do this by leveraging the network of ecosystem participants who both make information available to others and consume information made available by others, a virtuous cycle that will benefit everyone. Blockchain enables this unprecedented collaboration by ensuring the security, trustworthiness, and permissioned accessibility of sensitive participant information even as that information is distributed across heretofore segregated enterprises. Participants will be able to go to

one place to track the real-time status of a container and to locate and transact with up to date, trustworthy trade documentation.

Blockchain is the critical ingredient. Blockchain creates an immutable record of transactions, which enables the ecosystem to track the exchange of critical information – like records of inspection, bills of lading, and customs documents. Throughout a trade, each participant has real-time visibility across the supply chain according to permission levels. Trust is built by validating the participants, authenticating transactions, distributing information, and maintaining unalterable records that are located on or accessible through the platform.

At the end of a given shipment, these immutable records will provide one version of the truth as to how a container transited from beginning to end of its journey. Furthermore, documents submitted to the platform could be actioned and stored using blockchain technology. This means that, once a document has been certified by a government agency, the slightest alteration to that document will be exposed and rejected as different from the original. This will obviously have lasting benefits towards fraud detection and prevention.

The result: a previously unattainable information backbone of the global supply chain encompassing shipping milestones, documents in structured and unstructured form, customs filings, internet of things data, and much more. With access to that information, and the ability to utilize Blockchain to securely and confidently collaborate, the industry is poised to finally realize the enormous potential offered by true supply chain digitization.

Access to this platform will give traders and transportation and logistics providers real-time, end-to-end visibility of, and permissioned access to, information about cargo shipments such as the status and whereabouts of containers, shipping milestones, and trade documentation. As the network grows, its benefits will multiply and it will generate billions of dollars in savings for the industry along with entirely new approaches to global logistics.

Thank you for the opportunity to discuss this vital topic. I look forward to answering your questions and further exploring this topic.