



Blockchain Technology can it address the Origin needs of the future for Trade & Customs

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Introduction

Blockchain technology has witnessed a **growing interest** within the **Supply Chain industry** due to its potential to **revolutionize** and bring **innovation** to the **traditional supply chain operations and processes** and its potential to **modernize the international trade & customs processes**

In this presentation we will highlight some of the **new innovations driven by** Blockchain technology in the **supply chain, trade and customs** environments and test if the technology can address the Origin needs for both Trade and Customs in the future



Introduction

- Blockchain technology has found **applications** across a **wide variety of aspects** in the supply chain, trade & customs environments
- The ongoing development & maturity of the technology has also greatly improved with the addition of solutions like “**smart contracts**” and enhanced security and speed of processing which has lowered the overall cost structure
- There has also been failures like the **discontinuation** of the Tradelens initiative that was enabled through a partnership between IBM and Maersk
- **Substantial new innovative initiatives** has highlighted the strength and potential of the technology

Agriculture and Food Supply

AgriDigital

- Agricultural commodity management platform provider and supply chain financier
- Verification system based on Blockchain technology
- Organic and **Origin** status of products along the supply chain



Intel – Connected Logistics Platform

- Collaboration between Intel and independent blueberry distributor
- Auditing and tracking of environmental conditions from harvesting to storage and delivery
- Temperature, humidity and light are controlled in real-time, ensuring freshness of product
- Battery-operated smart wireless sensor devices
- **Origin** status of the products along the supply chain



Agriculture and Food Supply

Techrock

- Smart packaging of infant formula to ensure reliable source (eliminate risk of for example melamine poisoning and **confirm origin and manufacturing process**)
- Verification tag on product is controlled by Hyperledger-based Blockchain
- Enables smartphone verification for parents to confirm that products are authentic



Walmart – IBM Foodtrust

- Collaboration with IBM to secure food supply and monitor condition of food across large supply chain
- Enables efficient tracking of food provenance & **origin**
- Connects participants across the food supply to increase food safety, reduce supply chain efficiencies, minimize waste and enhance consumer trust



Pharmaceutical

Pfizer

- Collaboration with Chronicled, a Blockchain-powered supply chain solution
- Aim is to improve security, traceability and **origin** of pharmaceutical products
- With each activity from manufacture to distribution and dispensing being recorded on the Blockchain, the possibility of **counterfeit drugs** entering the supply chain is prevented
- Ensures legitimacy of medication provided to end customers
- The integrity and authenticity of high-value drugs can be maintained throughout the supply chain
- Sensitive data is protected through access control and encryption mechanisms
- In instances where medicine is required to be **recalled**, Blockchain ensures faster identification of affected products



Other Industries

De Beers – Diamonds - Everledger

- Adopting Blockchain technology to keep track of stages of diamonds along the production process and supply chain
- This initiative aims to prevent the introduction of blood diamonds into the market
- Verify the provenance (**origin & authenticity**)



Martin Jarlgaard & Fashion Innovative Agency – Fashion

- Collaboration between fashion designers to monitor garment supply and provenance
- Garment is tracked through all phases of development and **origin** until being presented at a fashion show
- Combination of emerging technologies and their application to the creative industry and which
- Forbes described as ‘the first example of truly beautiful wearable tech’

Other Industries

LVMH, Cartier and Prada – Aura Blockchain Consortium

- First global luxury blockchain
- Each product has a unique digital identifier
- Customers can access the history of the product
 - **Origin**
 - Components & composition
 - **Environmental & ethical information**
 - Proof of ownership, warranty & care instructions

The world of trade & customs progressively overlaps more and more as the consumer needs also includes the customs requirements for example origin and composition or components

International Trade & Customs

- **CargoX** is an innovative platform that leverages blockchain technology for **document transfer** in the **logistics** and **supply chain** industry
- Its **Blockchain Document Transfer (BDT)** solution eliminates the need for traditional paper-based documentation by facilitating secure and transparent digital transactions
- Earlier this year, was awarded the **Most Inspiring Solutions in Digitalization Award** at the **2023 Transport & Logistics Middle East** awards ceremony
- Using blockchain, CargoX ensures the **integrity** and **immutability** of documents throughout the transfer process
- Every transaction is recorded on a **decentralized ledger**, making it tamper-proof and easily auditable
- This eliminates the risks of **fraud**, **loss**, and **delays** associated with **physical documents**

International Trade & Customs

- CargoX allows participants in the supply chain, such as **shippers, carriers, freight forwarders** and **customs agencies**, to exchange and authenticate various documents, including **bills of lading, certificates of origin, invoices**, and other essential **trade documents**
- These documents are transformed into **secure digital smart contracts**, ensuring their validity and authenticity. With CargoX, the document transfer process is **streamlined, efficient, and cost-effective**
- It reduces the reliance on **intermediaries**, such as couriers and banks, by providing **direct** and **instant** document transfers between parties. This significantly speeds up the overall trade and logistics operations
- Furthermore, the CargoX platform is built to be **user-friendly** and **compatible** with existing systems, ensuring seamless **integration** into the existing logistics infrastructure
- It supports various **file formats** and allows for easy sharing and verification of documents, reducing the administrative burden and improving the overall supply chain efficiency

International Trade & Customs

In summary, CargoX's blockchain-based platform for document transfer revolutionizes the logistics and supply chain industry by providing a **secure, transparent, and efficient** way to handle **trade documentation**

Through the use of **smart contracts**, it simplifies processes, eliminates fraud risks, and accelerates the flow of goods by digitizing and automating document transactions.



A Customs World Perspective

- Technology has the ability to simplify and enhance the **origin determination & verification** substantially
- Solutions based on blockchain can significantly improved the capacity for risk analysis and targeting thereby contributing to **greater trade facilitation**
- Can equip Customs with the necessary tools to tackle **problems of compliance** as it provides and unbiased tool essentially designed for uploading and sharing of information between unrelated parties
- Assist with the end-to-end integrated supply chain management in a transparent & trusted manner
- **Can also assist with the following :-**
 - Inter- agency cooperation & exchange of information
 - Electronic certification and verification – good example is digitization of the certificate of origin declarations
 - Compliance management and improvement in the overall **quality of the data**

A Customs World Perspective

- In the Customs World the adoption of the technology is in infancy stage, but growing substantially
- Most of projects are being implemented in Europe, Asia/Pacific, Americas and Caribbean region
- Only two administrations have full deployment :
 - Argentina
 - Uruguay
- Ongoing projects to note
 - Italy – TRICK – certification of high quality manufactured products
 - Georgia – preferential Certificates of Origin
 - China and Singapore Customs – International Trade Single Window Interconnection Consortium Blockchain – exchange of information, improve port business environment & trade facilitation
 - CADENA Project – Customs Bolivia, Chili, Colombia, Costa Rica, Ecuador, Gautemala, Mexico and Peru – registration system for AEO

Conclusion

- In conclusion, Blockchain technology brings unprecedented **transparency, trust and efficiency** to supply chain, trade & customs operations
- Its application in various areas of the supply chain, trade & customs, from **tracking and authentication** to **payments and financing**, is driving new **innovations** and **transforming** traditional supply chain, trade & customs practices
- As the technology continues to evolve, further advancements are expected, leading to a more **secure, sustainable, and interconnected** supply chain ecosystem, transforming the way in which supply chains, trade & customs operate
- Ultimately the question remains around collaboration and partnership between the Trade & Customs worlds to allow for greater collaboration, data sharing and trust





G T S

g l o b a l t r a d e s o l u t i o n



innovative solutions transforming global supply chain