



Grant Thornton

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Supply chain traceability using Blockchain





Introduction

Supply chain is at the core of any business, and it is no surprise that in today's time of disruption and uncertainty, successful businesses are those that have an efficient supply chain. Also, with both businesses and consumers equally focused on sustainability and accountability, leveraging technology to optimise the supply chain has become the need of the hour.

Challenges facing today's supply chains

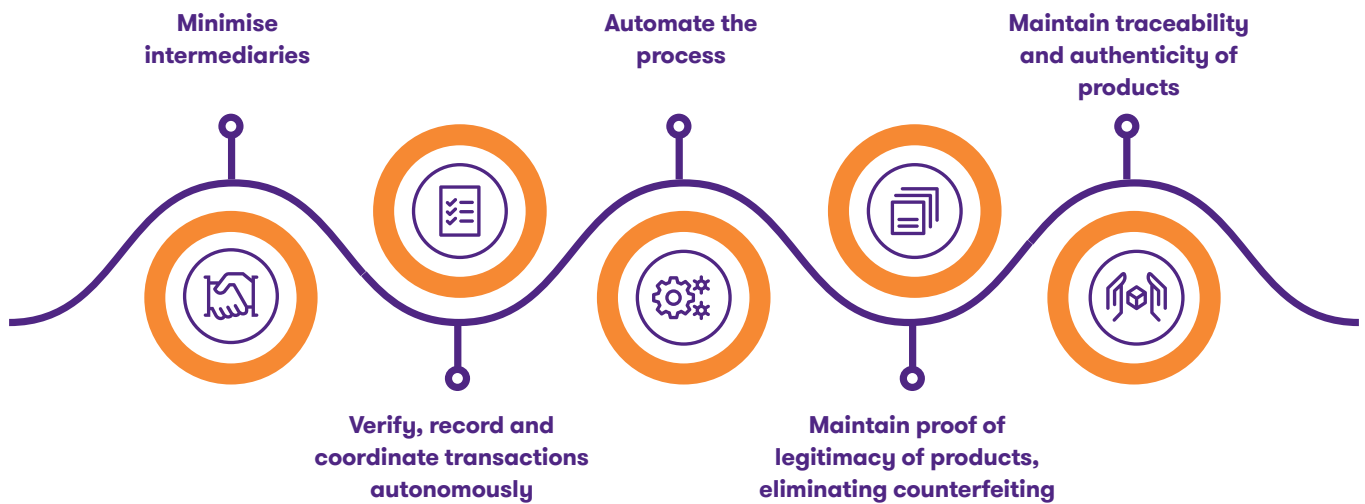
The total cost of counterfeiting around the globe reached USD 1.2 trillion in 2017 and is expected to reach USD 1.82 trillion by the year 2020. Some of the major challenges facing supply chains today include:

- No traceability
- Lack of visibility
- Demand volatility
- Increasing complexity due to global operations

Blockchain is the game-changer

Blockchain can be a game-changer for supply chain management by bringing in more connectivity, reliability and visibility in the process. It can help create a permanent record of a product's or any asset's journey through the supply chain, bringing in more trust and transparency in the process.

Benefits of Blockchain for supply chain



Our solution

Our smart supply chain traceability solution keeps supply chain partners completely up-to-date with all volumes of sustainable products passing through supply chain. This allows products to be traced back to the source at any time and easily identify related material movement.



QR code generation

- Each purchase order is associated with a unique QR code which provides a real-time audit trail of the material movement
- Material movement is registered on a Blockchain network



Dashboard for real-time traceability

- Our solution provides a dashboard with real-time traceability of the materials
- End B2B customer can easily monitor the timeline of orders and address delays and deviations



Chain of custody

- This feature allows the customer to trace back the product to its sustainable source
- Throughout the supply chain, the yield of sustainable source is captured at every processing point
- The supply chain players can take necessary actions on deviations found against industry standard
- Relevant supply chain players are notified of any deviations



Inventory management

- Users get an overview of the raw material inventory available for manufacturing
- The inventory gets updated dynamically based on incoming and outgoing shipment



Configuration and localisation

- To populate their data with relevant information, businesses can add information related to their supply chain. Translations can be added for multi-lingual viewing

Our approach

Understand business context

- Laying out the current state of supply chain
- Identification of value chain partners
- Understand as-is business processes
- Identity Blockchain applicability in the to-be state

Identification of digital asset

- Identify digital asset for provenance and traceability
- Identify ecosystem players who would be interacting with the system

Outlining of material characteristics

- Define attributes of the digital assets which will be visible on the Blockchain network
- Define permission matrix for value chain partners for role-based data entry

Implementation and deployment

- Design and develop Blockchain infrastructure
- Develop smart contracts based on business case
- Deploy code artifacts

Benefits: for businesses and customers

This solution is designed for efficient tracing in industries such as **textile, food and beverage, agriculture, pharma, auto and real estate**. Some of its benefits include:



Increased transparency by allowing each party in the supply chain to access information about the products



Protects brand reputation by avoiding counterfeiting



Allows traceability to detect diverted goods and stolen merchandise



Single record of every transaction across all vendors and suppliers in the entire network as everyone is adhering to the same smart contract



Ownership of transaction gets distributed and not held centrally



Allows **rapid traceability** analysis in crisis situations such as recalls



Facilitates more **effective audits** by having full information at hand



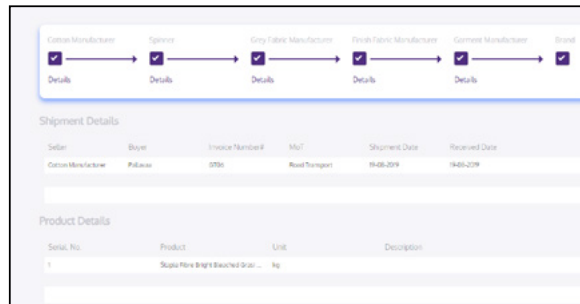
Easy vendor/supplier onboarding

A glimpse of the tool

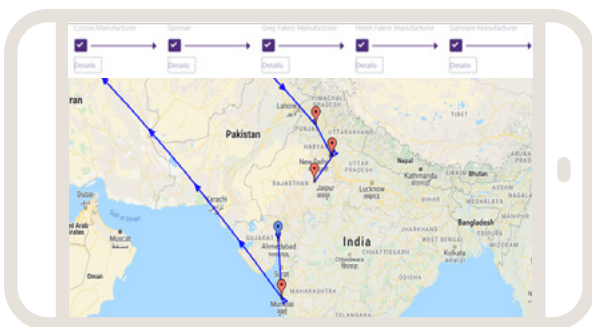
Company details

Orders

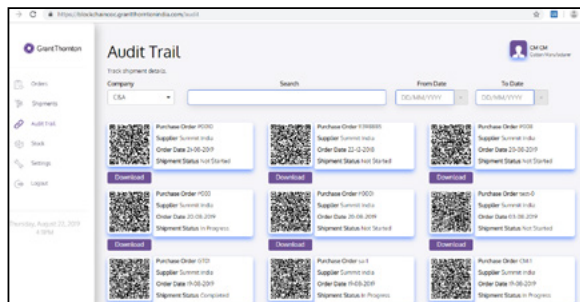
Shipment



Audit trail



Mobile audit trail



QR code

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