



Phaeton

SUPPLY CHAIN



Supply Chain Management (SCM) is the approach to managing the flow of resources, goods, information, and services through converting raw inputs into complete outputs for end consumers. The entire process holds seven crucial elements: information, source, planning, production, inventory, goods return, and Transportation. The components are used to build the fundamental structure of a supplier or manufacturer.

The sector has come a long way in a few years, and today it has a global reach. However, international expansion has brought several impediments. As consumer expectations and trends change frequently, the industry needs to integrate solutions to flourish in the future.

To keep it relevant, Blockchain Technology can offer the supply chain management market abilities as origin tracking and transparency. Blockchain technology is set to change the world economy and how we do business, like the internet twenty years ago. Supply Chain Management will disrupt many industries.

THE PROBLEM

The supply chain problem is growing. A report commissioned by the International Trademark Association and the International Chamber of Commerce states that the global economic value of counterfeiting and piracy could reach US\$4.2 Trillion by 2022. In many countries, consumers cannot even be 100% sure that the products they buy are genuine.

Frontier Economics estimates that by 2022 the global volume of counterfeit products will amount to US\$2.8 Trillion, which is a staggering figure, making up over 3% of international trade as reported by Forbes.

These are significant numbers, which directly impact the bottom line, as the supplier has to compete against the cheaper counterfeit product. In addition, it automatically lowers sales volumes as people may buy the fake version instead of the genuine product.

Despite counterfeit issues, a recent study concluded that 94% of consumers are likely more loyal to a brand that offers supply chain transparency. In comparison, some 73% are willing to pay more for a genuine product. Further research by MIT Sloan found that consumers are willing to pay up to 10% more for products coming from brands that offer a high degree of transparency on product origin. Below are the top problems with the current Supply Chain Management (SCM):



Lack of a Worldwide Database

Despite the global market being interconnected, most businesses do not share their database. As a result, it leads to communication barriers between suppliers which exposes them to exploiters.



Low Traceability of Assets

Tracing assets is difficult in Supply Chain Management despite offering advanced processes and equipment. Therefore, it leads to the exploiters replacing original products with counterfeits.



Unnecessary Costs

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Unanswered Consumer Needs

Keeping up with the latest consumer needs or complaints is challenging and taking viable measures to counter them is even a greater problem.

BENEFITS

Blockchain technology is changing and evolving at a frenetic pace. It will be impossible for people in your organisation to stay abreast of those changes. As a result, companies must follow a specific methodology for education, planning the use case(s), creating a technology roadmap and implementation. We believe that Blockchain will provide a much more significant competitive advantage to early adopters who recognise that Blockchain applications can:

Reduce cost.

Eliminate intermediaries.

Significantly streamline internal and external operations.

Centralise documents and reports required for compliance and regulatory reporting.

Automate transactions.

Provide fraud/counterfeit detection – IP protection.

Transform business processes.

Create a competitive advantage.

THE BLOCKCHAIN SOLUTION

Here are the top six instances of the blockchain supply chain.



Live Tracking

A blockchain-based SCM system is built on a decentralisation system based on transparency. It helps the business monitor every activity in real-time.



Quick Processing Time

Current supply chains handle large and sophisticated databases, and the process is delayed due to too many intermediaries. Smart Contracts can eliminate paperwork and many of the intermediaries.



Improved Traceability

Integrating Blockchain in the supply chain will reduce counterfeit products' supply in the market. With Blockchain Ledger, there is a record of the source which cannot be tampered with, therefore improving traceability.



Higher ROI

With Blockchain, businesses are establishing premium brand prestige, resulting in a higher return on investment.



Enhanced Trading

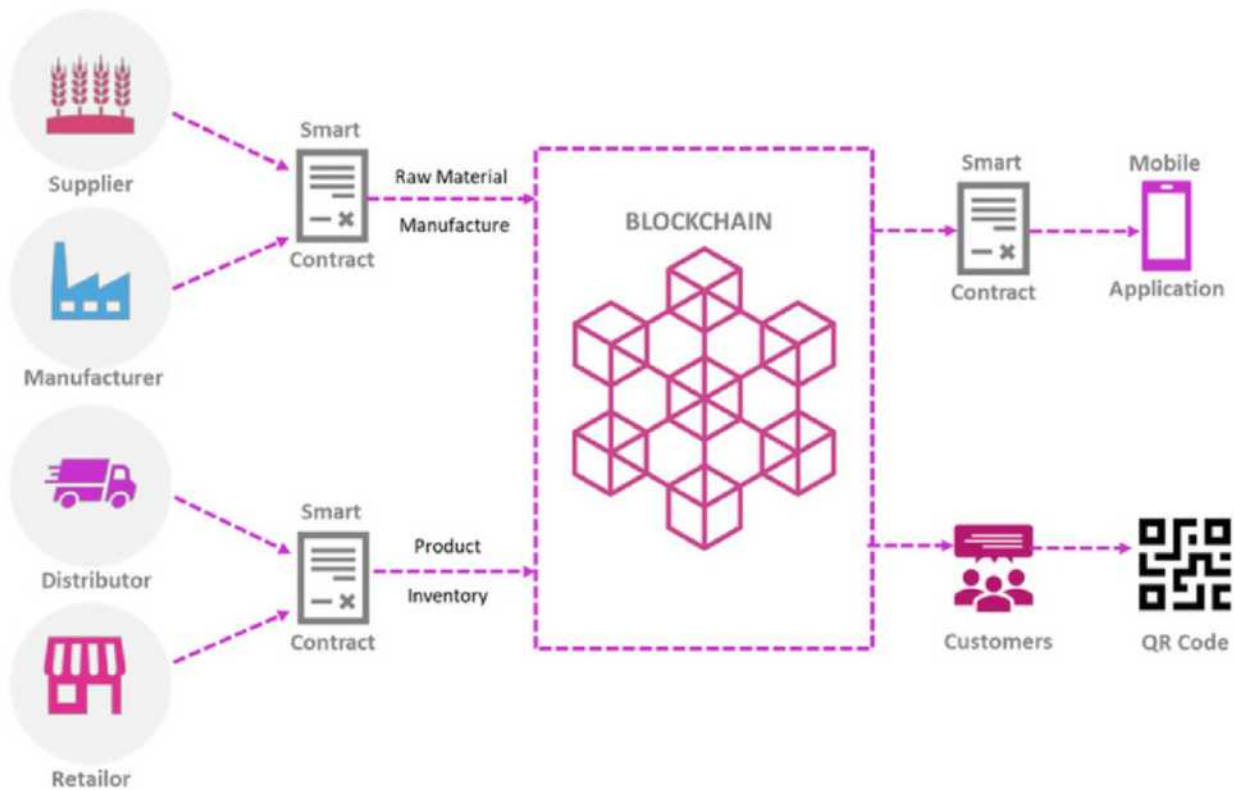
Ownership and licensing evolve a bit with the help of Blockchain. Since every organisation possesses a similar ledger version, they can easily monitor the ownership records.



Healthy Consumer Relationships

Providing the needed product-related information is simple with Blockchain, taking customer experience to a new level. Plus, it allows them to check the product's authenticity.

Supply chain management is slowly gaining prominence globally, but several hurdles are in its path. However, most of these roadblocks can be eradicated with Blockchain, and the blog has shed some light on how.



BLOCKCHAIN SUPPLY CHAIN: USE CASES AND EXAMPLES

Below are ten blockchain supply chain use cases that are increasing revenue and cutting costs for businesses around the globe.

Blockchain for Food Safety

A pilot program was completed in 2017, and Walmart announced that it would require all food products can be traced and origin identified. It takes time to locate the origin of an outbreak, many retailers are often forced to throw out their entire inventories of produce. Walmart hope to increase food transparency and shipment efficiency with blockchain technology. Their efforts are divided into two sections: Walmart with JD.com handle production and shipment of produce, while IBM and Tsinghua University conduct the research and maintaining the Blockchain. Other food corporations are also adopting blockchain supply chain management such as Unilever, Kroger, Nestle, and Tyson Foods.

Blockchain to Streamline Oil Supply Chain

In collaboration with IBM, United Arab Emirate's state-owned oil company, Abu Dhabi National Oil Company (ADNOC) successfully launched a blockchain supply chain system pilot program. The idea is to track oil from well to customers while simultaneously automating transactions along the way. While still in its early stages, ADNOC hopes to eventually expand the chain to include customers and investors, making its business more transparent in the process.

Blockchain for Diamond Tracking

Blood diamonds, or conflict diamonds, have been mined under violent circumstances or in unsuitable conditions. They are heavily produced in Africa, and their sales is often used to fund various conflicts in the region. The world's largest diamond producer, De Beers, has taken steps to end the sale of blood diamonds by announcing its first successful blockchain supply chain program. Through its program, Tracr, De Beers was able to track 100 diamonds from mine to cutter and polisher, then finally to the jeweller.

Blockchain to the Fashion Sector

In collaboration with designer Martine Jarlgaard, provenance is advocating for more transparency in the fashion industry. Their first-ever garment tracked with Blockchain was presented at a Danish fashion show in 2017. The goal is to track every aspect of a garment's life through all the development phases. With more transparency, consumers will always know the clothing they purchase is legitimate and produced in factories providing acceptable working conditions.

Blockchain for Wine Supplies

It is estimated that nearly 30,000 bottles of illegitimate wine are sold every hour in China. Many of these wines are mixed with a variety of dangerous additives that can be detrimental to health. Origintrail, in conjunction with TagItSmart, conducted the first phase of their pilot program, which tracked more than 15,000 unique wine bottles. The eventual goal is to put an end to illegitimate wine using blockchain transparency capabilities. By a simple scan of a QR code that will be placed on each bottle, consumers will know every detail regarding their purchase.

PHAETON'S BLOCKCHAIN SUPPLY CHAIN SOLUTIONS

At Phaeton, we have the technology and products to suit all levels of businesses, be it a large corporation or a small-to-medium enterprise. We believe that each business has its unique business model, and one size does not fit all. No matter what product you have, Phaeton has traceability and authenticity solutions to create a bespoke independent blockchain platform that provides a secure and permanent digital record of your product's origin, characteristics, and ownership across all levels.

CORE STANDARDS

Our solutions are built on advanced technology and deep knowledge of industries rooted in corporate citizenship principles. We work together with partners to increase their value – more responsibly, more sustainably and more efficiently. These solutions are based on three core blockchain supply chain standards.

Security and Trust

We can provide a validated, consensus-driven, and immutable public ledger with the ability to encrypt sensitive data for shipment tracking and event reporting, reinforcing the credibility of your product. In addition, smart contracts ensure the validity and origin of digitalised shipment documents, which reduces paperwork required in document transmission, change of ownership procedures and customs clearances.

Secure, Faster Payment

Payments and clearance processes are facilitated faster and effectively contained in the smart contracts. Therefore, cash flow is increased significantly through a digital currency off-ramp which triggers payments from retailer to shipper and shipper to the transporter. It results in better service and rates from the shipper, while the supplier receives faster payment and increased volumes.

Accurate tracking and traceability

The supply chain and logistics industry have many regulations, especially with goods between countries. A Blockchain Management system gives shippers and transporters a fully integrated solution. It includes managing shipments, planning and consolidating loads, configuring assets and driver resources, tracking and reporting shipment status, and all aspects of inbound and outbound transportation networks for anyone moving regular high volumes of freight.





At Phaeton, we provide the following Blockchain-Based Supply Chain Development Services:

Digital Data Interchange Systems

We build coherent blockchain-powered DDI systems to enable effective, reliable, and transparent multi-level business transactions. With our blockchain smart contract solutions, we can automate transactions to trace and track products across the supply chain network. Our DDI systems transmit contractual information like purchase orders and invoices across the network chain securely and efficiently.

Procurement Management

We offer procurement management solutions software as a one-stop solution for supply chain businesses to manage the procurement of goods and services on the whole. Our solutions combine blockchain smart contracts and supplier data to put payments on autopilot across enterprises. In addition, they enable sharing of supplier data - only after the consent of owners.

Inventory Management

We develop state-of-the-art software that simplifies the inventory management processes to boost business. Stakeholders can check and verify data at every single checkpoint. From conducting payment and audits to tracking inventory and assets, our solutions facilitate greater supply chain efficiency. The benefits include fewer errors, reduced costs and time, and a digitised inventory management process.

Contract Automation

We develop blockchain smart contracts that automate contract executions related to arrivals and departures, shipments, changes of ownership and other supply chain operations. Our smart contracts are automated contracts that use pre-defined rules to facilitate the exchange of goods or services. In addition, they establish real-time auditing for compliant processes and workflows. With smart contract solutions, supply chain managers can automate production, quality control and payments.

Track and Traceability Monitoring System

Our team has formulated the best strategies to build a dynamic tracking application for both consumers and businesses. We enable end-to-end enhanced data accessibility and sharing across the chain with our regulatory-compliant blockchain solutions. Stakeholders can see a product's location, who made it, how it is made, and its expected delivery. They can also track each asset's origin and movements across trade zones in real-time.

CONCLUSION

Blockchain technology and supply chain management systems were built for each other. Therefore, the flaws of current supply chains can be easily mitigated by using blockchain technology. We believe that this supply chain management is one of the primary industries that Blockchain can disrupt and improve for the better. With many companies looking at Blockchain-based applications, it will become the accepted norm in the future.



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