

INFOSYS BLOCKCHAIN PHARMA SUPPLY CHAIN SOLUTION

The pharmaceutical industry around the world is facing regulatory pressure to bolster its ability to track and trace the drugs, including specialty drugs and medical devices, which are manufactured and shipped to pharmacies and hospitals. The centralized applications and point-to-point interfaces open the risk for diversion, counterfeiting and a trust gap between the siloed systems.

The Pharma Supply Chain Network uses Blockchain to enable item-level traceability of serialized drugs by tracking the operational milestones, critical supply chain events and documents against the production batch and to the individual serialized drugs.

A blockchain-based decentralized track and trace system can ensure end-to-end traceability of medicines or medical devices from source to shelf. This can help to avoid product recall, which in turn will protect the commercial goodwill of the manufacturer.



Solution overview

Infosys Blockchain Pharma Supply Chain solution prevents counterfeit drugs from entering the pharmaceutical supply chain, by increasing visibility and transparency across multiple stakeholders in the network, hence reducing the probability of misinformation and data inaccuracy in the supply chain.

Implementation of blockchain technology to the industry operations would help realize revolutionary benefits. The ability to track and trace the drug supply across multiple stakeholders ensures adherence to item level traceability requirements by Drug Supply Chain Security Act (DSCSA). The implied transparency also leads to accountability amongst the partners and helps perform targeted dissemination of recall information to distributors and pharmacies. Infosys is dedicated to realizing the potential of Decentralized Ledger Technology (DLT) in the Life Sciences supply chain. To empower its members, Infosys provides value-added services such as network development, system integration, scalable infrastructure, technology support, and regulatory guidance services.

Life Sciences Industry Challenges



References: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4105729/>
<http://www.news-medical.net/news/20100128/Over-825-of-medical-devices-in-circulation-arecounterfeit-WHO.aspx>
<https://deqode.com/blog/blockchain-drug-recall>

Infosys Blockchain Pharma Supply Chain Solution is poised to rewrite the rules of competition in the life sciences industry by streamlining operations, enabling seamless data sharing with external stakeholders, and disrupting traditional business models and intermediaries.



Preventing Drug-Counterfeit



Cold Chain Logistics



Item Level Traceability



Enable Targeted Recall



Pluggable & Modular Architecture



Quality Inspection

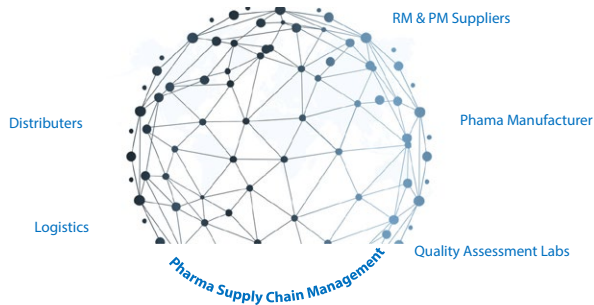


Regulatory Compliance



Audit Readiness

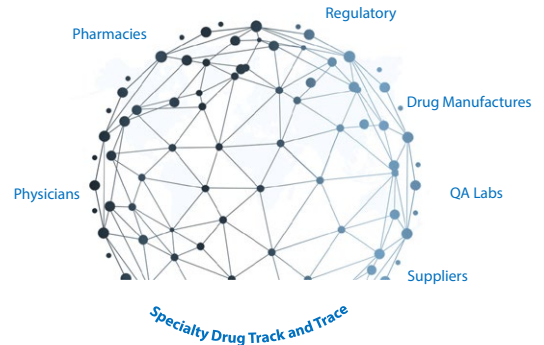
Pharma Supply Chain



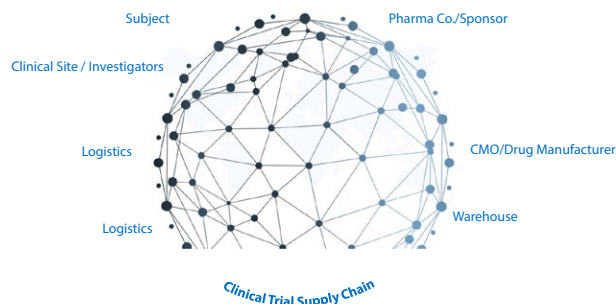
The Pharma Supply Chain (PSCM) Minimum Viable Business Network uses blockchain technology to ensure drug provenance, medical device provenance, while tackling the challenge of targeted recalls, counterfeit drugs and medical devices, that could lead to huge losses recorded in disparate systems. The intent of PSCM solution on a blockchain is to build a track and trace model enabling the chain of custody visibility across stakeholders in a decentralized multi-party ecosystem on Decentralized Ledger Technology (DLT). This platform is aimed at streamlining operational inefficiencies, reducing costs, ensuring provenance in medical products and faster targeted recalls for pharma manufacturers across the supply chain.

Specialty Drug Track and Trace

The Specialty Drug Track and Trace Minimum Viable Business Network aims to improve upon the special handling required for specialty drugs. In order to retain their efficacy, they need to be maintained in a controlled environment. The cost of such drug refills is significant, and they also cater to vulnerable patients. The use of blockchain technology ensures tracking the chain of custody of the specialty drug packages throughout the supply chain along with the environmental parameters enabling an end-to-end traceability of the drug from production to consumption bringing about complete transparency. Autonomous actions such as – refill, discard, replace are made available using IoT in a decentralized multi-party ecosystem on DLT, that maintains accountability across the stakeholders.



Clinical Supplies



The Clinical Supply Chain Minimum Viable Business Network uses blockchain technology to tackle the challenge of data management and the physical supply of clinical drugs with special handling conditions to the trial subjects. Consent collection is an issue due to inefficient process for recruit, enroll and retain volunteers along with a security challenge to prevent data leak/abuse. The stakeholders face additional costs and losses pertaining to lack of trust, transparency and process inefficiencies. The intent of Clinical Trials Supply Chain solution on a decentralized multi-party ecosystem on DLT is to improve data consistency between stakeholders while also providing regulatory and compliance management simplified immutable audit trails.

If you are interested in a live demo to understand more about the Infosys Blockchain Pharma Supply Chain solution, please reach out to us at: Blockchain@infosys.com

For more information, contact askus@infosys.com

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