

GREEN TEAM

- RxTransparent
- Systech International

PILOT: “Blockchain: A viable end-to-end solution for the pharma supply chain”

Overview

Systech and RxTransparent represent both ends of pharma supply chain manufacturers and dispensers, respectively. With their unique industry insights and perspectives, they came together as a team to build a pilot platform that demonstrates blockchain as a viable solution for compliance with upcoming DSCSA interoperability system requirements.

Team’s vision

The Green Team’s Proof-of-Concept (PoC) Pilot is based on the fundamental principle that an interoperable DSCSA platform will utilize blockchain as a component of the overall industry solution by harnessing blockchain’s strengths and avoiding the technology’s weaknesses.

Target audience

The presentation is designed for a broad audience of stakeholders across the entire life sciences and healthcare spectrum including manufacturers, wholesalers, dispensers, regulators and logistics providers.

DSCSA focus

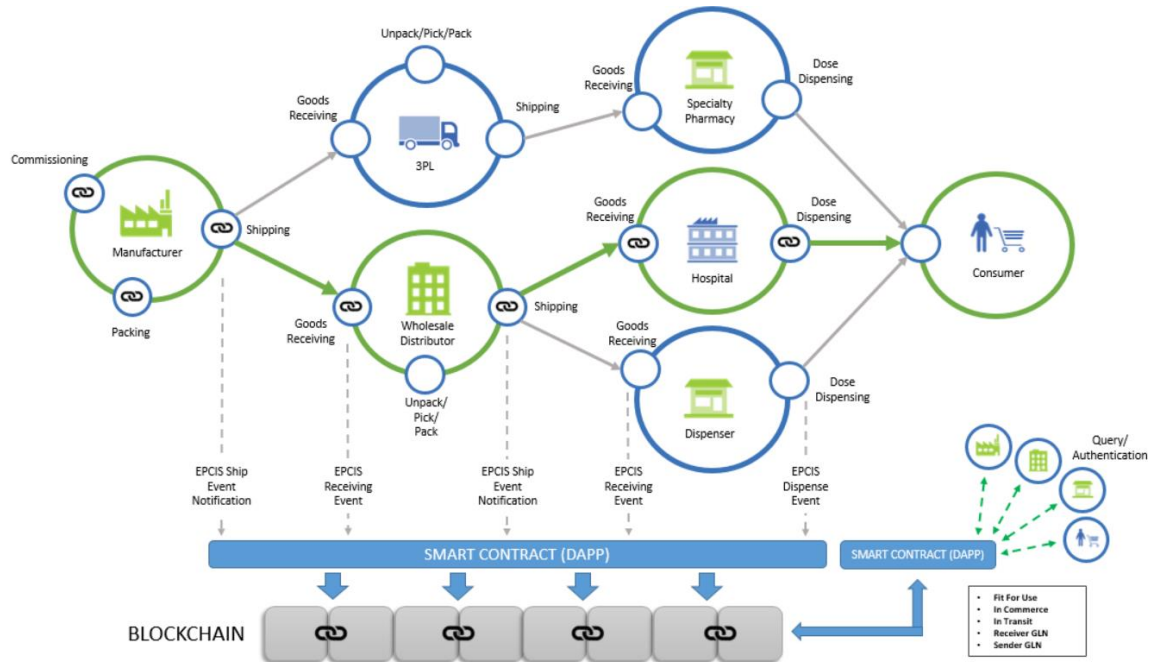
The pilot will provide a framework for:

- Blockchain provisioning
- DSCSA Transaction Processing Manufacturer - > Dispenser
- DSCSA Transaction Exception Handling
- Defining future capabilities of the platform beyond DSCSA regulatory compliance

Pilot will demo:

- End-to-end supply chain data movements/shipping events
- Returns and exception processing
- Governance model (smart contracts) to onboard trade partners
- Using public/private key sets as permissioned criteria for data exchange with blockchain
- Product-centric ReferenceModel w/product owner updating product and data pool GLN owner
- ReferenceModel similar to product (Serial/Number) status and last-known location service
- System’s ability to publish a secure repository that can be queried for status of a product at a serial number level and last known data owner
- Product metadata held off-chain, via a master data repository
- Posting of transaction data to the blockchain
- Posting of queries for serials to the blockchain
- Practical limitations of blockchain in the context of the US pharma supply chain

Green Team Pilot



Technical features

To create the pilot, Systech generated sample EPCIS transactions and development teams from both companies collaborated on the technical effort. To demonstrate the PoC's capability for end-to-end transaction visibility from a track and trace platform, the team integrates Systech's UniTrace™ platform with the RxTransparent cloud-based solution.

This platform will use the product-centric ReferenceModel #3 (developed in "DSCSA & Blockchain: Phase 1") to hold a minimum amount of product-centric data "On Chain". Additionally, the team addresses data governance and ownership issues using public and private key encryption on a permissioned, semi-private blockchain environment.

- Smart contract trade partner onboarding governance
- Smart contract processing of EPCIS data payloads
- Smart contract processing of serial number queries
- Key based permissions for system access

The pilot is built on a Quorum (Ethereum Variant) environment and hosted on Microsoft's Azure platform.