Healthcare Working Group

Meeting 1
22nd of August 2017

General Information

Hosts: Emily Vaughn

Kyle Culver

Marta Piekarska

Dates: Tuesday, August 22

Tuesday, September 19th

Tuesday, October 17th

HYPERLEDGER
BLOCKCHAIN TECHNOLOGIES FOR BUSINESS

Emily Vaughn
Business Development
Gem

Kyle Culver
Solution Architect
Humana

Marta Piekarska
Director of Ecosystems
Hyperledger

HYPERLEDGER
BLOCKCHAIN TECHNOLOGIES FOR BUSINESS

"

The Hyperledger Healthcare Working Group encourages adoption of blockchain technology by contributing to the unbiased discovery of new opportunities, the development of reference code and best practices, and the education of change agents who seek to transform healthcare.

Our aim is to understand the specific needs of the healthcare industry by socializing novel applications, gathering feedback from subscribers, and exploring new topics and opportunities together. Ultimately, we hope to contribute recommendations to the Hyperledger Technical Steering Committee based on best practices for Health IT.

– Mission Statement

HYPERLEDGER
BLOCKCHAIN TECHNOLOGIES FOR BUSINESS

Goals and Objectives

1. **Evaluate what is state of the art of the healthcare industry**

2. **Identify, discuss, analyze and prioritize use cases.**

3. **Roadmap next year**

HYPERLEDGER
BLOCKCHAIN TECHNOLOGIES FOR BUSINESS

Preferred Outcomes

Reading Materials

Implementations

Use case definitions
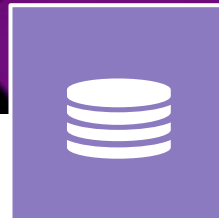
Whitepaper

Demos

Framework Proposals

Solution Showcase

Presented by Dr. Robert J. Panetta
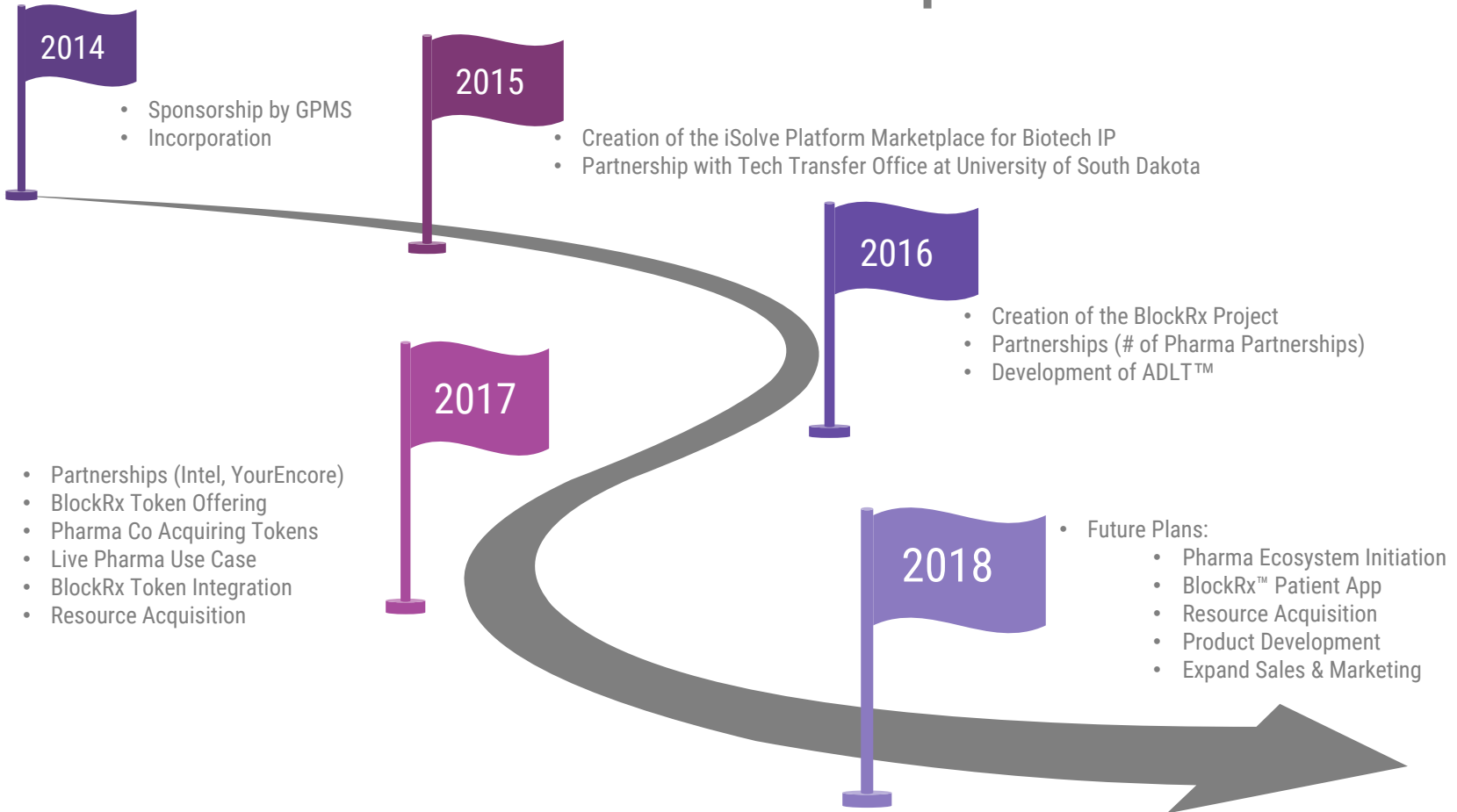Director of Pharma Solutions @ BlockRx

The BlockRx Pharma Ecosystem

Operates on Sawtooth; the BlockRx Utility Token for Blockchain entries and data exchange; and Advanced Digital Ledger Technology (ADLT) to integrate legacy systems with the Blockchain. The platform can be used in a wide variety of applications, from R&D, supply chain, post-marketing surveillance, clinical trials, intellectual property acquisition, and other services throughout the drug development lifecycle including direct patient interaction.

iSolve Roadmap

2014
- Sponsorship by GPMS
- Incorporation

2015
- Creation of the iSolve Platform Marketplace for Biotech IP
- Partnership with Tech Transfer Office at University of South Dakota

2016
- Creation of the BlockRx Project
- Partnerships (# of Pharma Partnerships)
- Development of ADLT™

2017
- Partnerships (Intel, YourEncore)
- BlockRx Token Offering
- Pharma Co Acquiring Tokens
- Live Pharma Use Case
- BlockRx Token Integration
- Resource Acquisition

2018
- Future Plans:
  - Pharma Ecosystem Initiation
  - BlockRx™ Patient App
  - Resource Acquisition
  - Product Development
  - Expand Sales & Marketing

Pharma Use Cases

Where help is needed

Drug Supply Chain

Visibility
The Global Network of Pharma Trade Partners are unable to view internal and external product data due to systems that do not communicate with each other

Regulations
Track and Trace Legislation (e.g., DSCSA) has been introduced in most countries; the industry is not prepared and compliance is costly

Traceability
The ability to trace drug products from supplier to patient and establish provenance

Patient Support

Engagement
Patient Engagement is key to bridge gaps in drug development, clinical trial recruitment, drug safety, and the opioid epidemic.

Costs
The average patient struggles to maintain a balance between healthcare costs and effective outcomes

Privacy
Patient data sharing frameworks are subject to strict data privacy laws (e.g., HIPAA), and the price for non-compliance is extremely high

The BlockRx Pharma Ecosystem

Three parts to make Pharma Work

Hyperledger Sawtooth by Intel®

A high performance, modular platform to build digital ledgers and can support smart contracts, 100K transactions per day, and digital tokens

Advanced Digital Ledger Technology by iSolve™

Integrates legacy systems with the blockchain to ensure any ERP, IoT device, or digital record can be placed on the blockchain
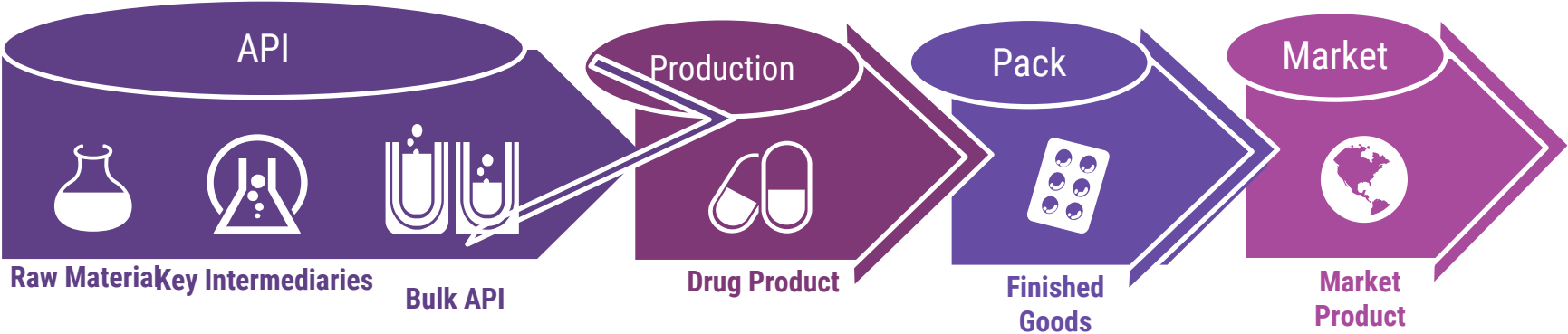
BlockRx Digital Token

Incentivize participation by trade partners by offsetting the burden of compliance; Incentivize patients to share data in exchange for cost-reducing benefits
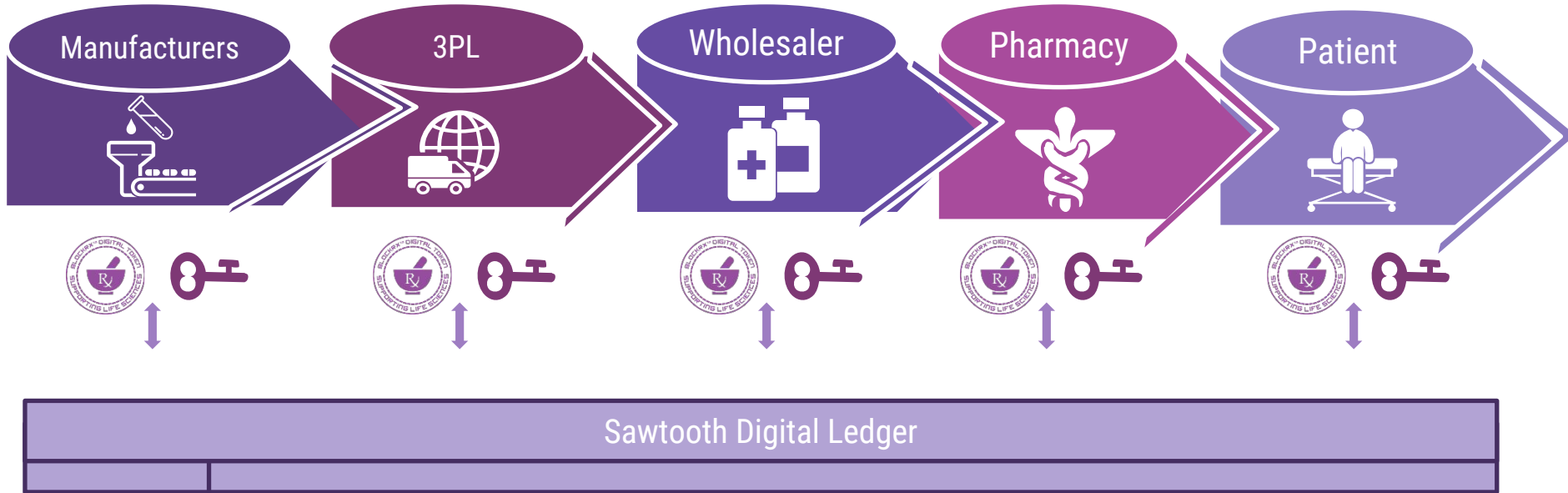
The BlockRx Pharma Ecosystem
Managing the Drug Supply Chain

Manufacturers

3PL

Wholesaler

Pharmacy
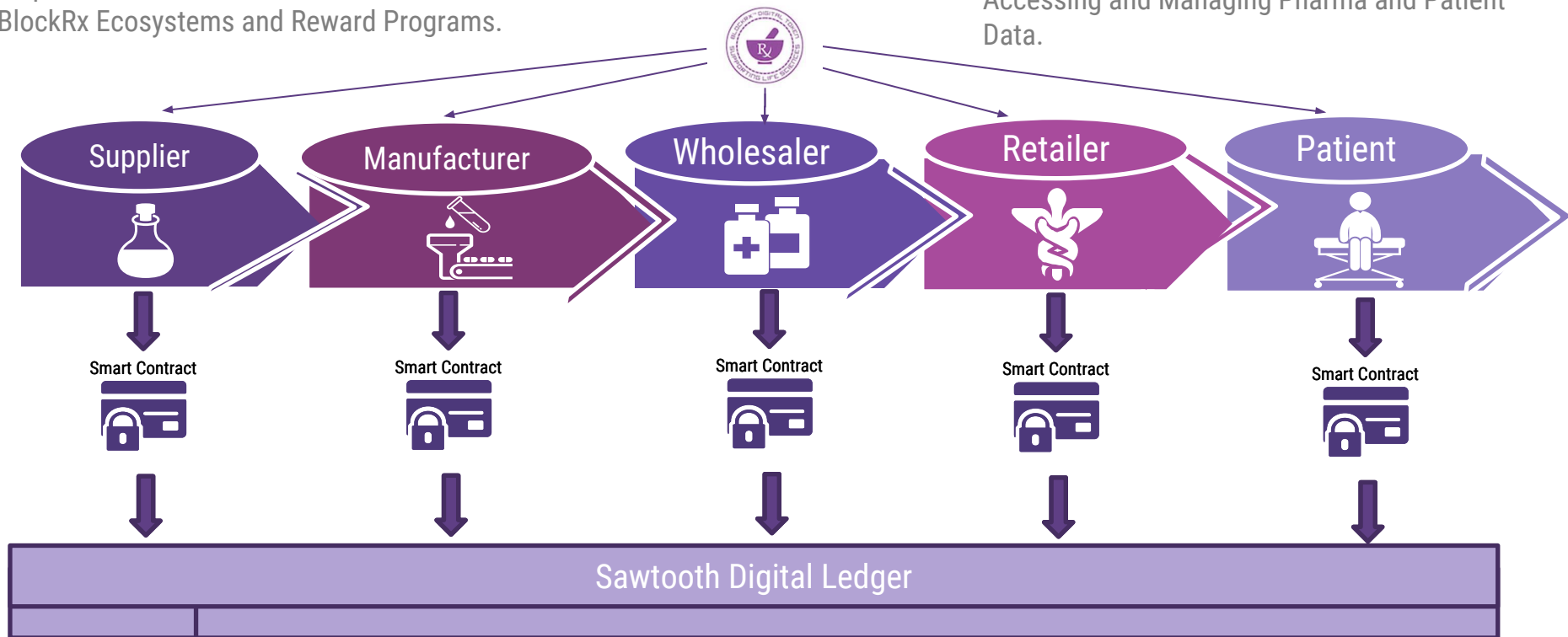
Patient

Sawtooth Digital Ledger

The BlockRx Pharma Ecosystem

BlockRx Token Functionality

Pharma companies and Patients must acquire BlockRx Tokens for access to the BlockRx Ecosystems and Reward Programs.
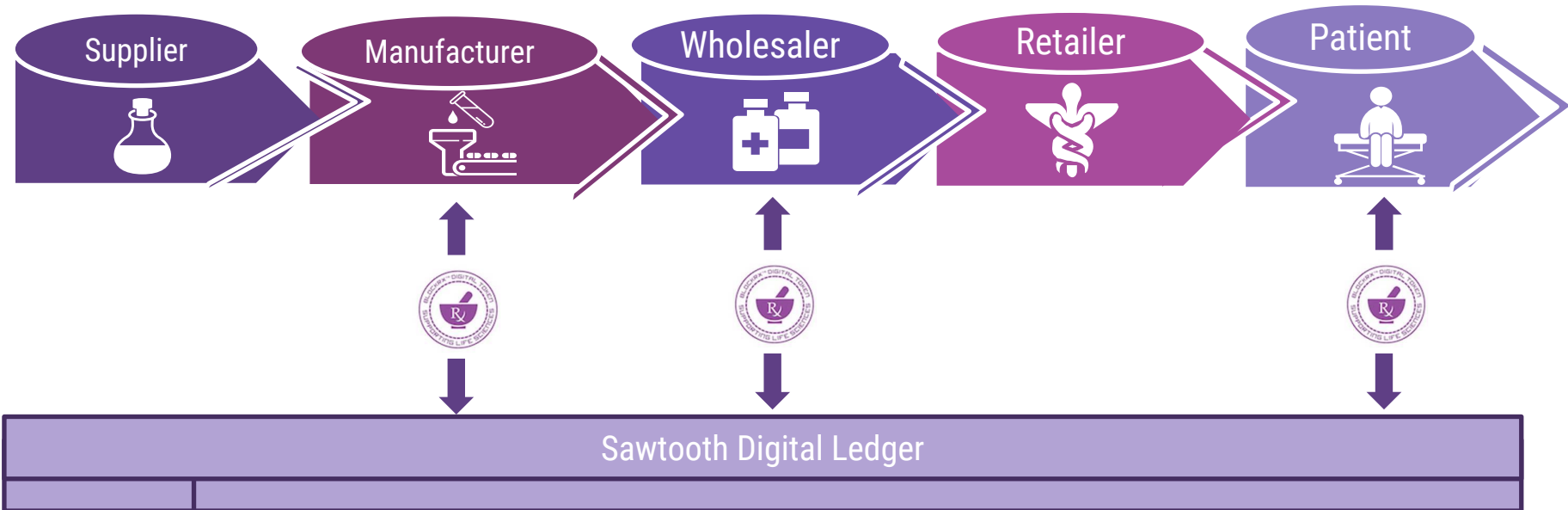
The BlockRx Tokens will also be utilized for Accessing and Managing Pharma and Patient Data.
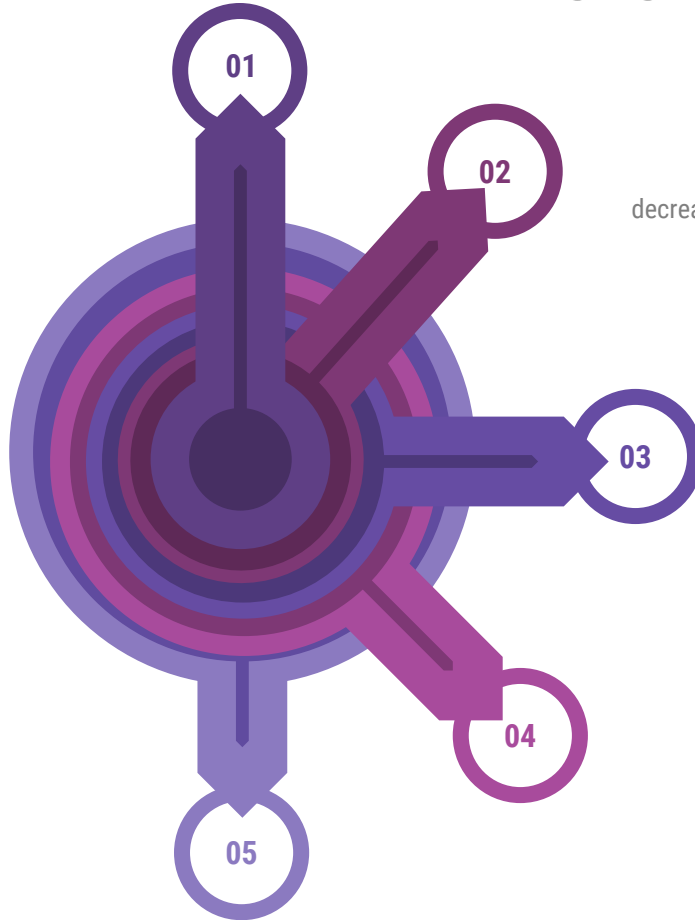
Supplier	Manufacturer	Wholesaler	Retailer	Patient

Smart Contract   Smart Contract   Smart Contract   Smart Contract   Smart Contract

Sawtooth Digital Ledger

The BlockRx Pharma Ecosystem

Incentivizing the Trusted Participants

The BlockRx Token provides built-in value for incentivizing Trade Partners and Patients to become participants in the BlockRx Ecosystem. The Token is acquired by Pharma companies and Patients for Blockchain access and trade. The Trade Partners can in turn use the tokens earned or purchase additional tokens, to incentivize their downstream partners and patients.

Benefits of Utilizing BlockRx Token

Token Value
As the BlockRx Token is utilized by Trade Partners, Operational Costs can be decreased and Product Channels can be implemented to provide additional Value to the Organization for increased margins.

Regulatory Readiness
By leveraging the BlockRx Token within disparate systems, organizations may now be able to better integrate Regulatory deliverables and submissions with enhanced functionality.

Time to Market
Due to the Integration of BlockRx Token, Operational, Administrative and Deployment time can be reduced to expedite business and regulatory processes.

Decrease Operational Expenditures
By leveraging the BlockRx Token as a vehicle of Exchange for providing data, Operational Expenditures may be reduced and streamlined for cost efficiency. .

Patient Level Data
As additional information and data is captured by ADLT™ , more information about the Patient can be leveraged to better understand the Patient and improve outcomes.

.

Targeting the Trusted Participants

Identifying the Participants for the Blockchain

Suppliers
Suppliers will greatly benefit from understanding the status of inventory and API's as well as traceability.

Data Provider
Information can be customized, packaged and secured to help support cost reduction from operations and inventory.

3PL
ADLT™ will provide greater visibility into packaging and logistics which can help reduce redundant overhead costs.

Patients
Incentive Programs may be offered and managed through BlockRx thus allowing for mutual benefits and savings.

Trade Partners
ADLT™ will provide greater visibility into Brands and Products and can leverage Smart Contracts for offering rebates and reducing payment time

Partner Value Program

Benefits for Trusted Participants

Global Inventory Data
Trusted Participants may now have visibility to Global Inventory to support operational efficiency and enhanced forecasting.

Patient Level Data
Patient Level Data can now be available for the upstream partners to attain Patient and Product Adherence.

Improved Outcomes
With greater visibility and transparency into Patient Adherence, partners can now develop solutions for better outcomes.

Improved Recall Process
As Provenance is established throughout the Blockchain with ADLT™, the Recall Process can be improved with improved traceability.

Reduced Term Payment
With the use of Smart Contracts, Payment Terms may be reduced as settlement id executed on the Blockchain.

Partner Collaboration
By established a Secure and Distributed Network, Partners will able to better collaborate with additional Trading Partners.

The BlockRx Pharma Ecosystem

Services provided by iSolve

Software As A Service
Increased Revenue with Service Offerings and Transactional Revenue

Global Inventory
Improved Inventory Visibility and Management

Recall Management
Enhanced Recall Management Process

Global Traceability
Product Traceability from Provider to Patient

Data Provider
Data Subscription Service for Trade Partners

Data Acquisition
Incentivize Trade Partners with improved Data Analysis

Q&A

Next Meeting: September 19th