

Leveraging the

# Blockchain in Healthcare

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# Agenda

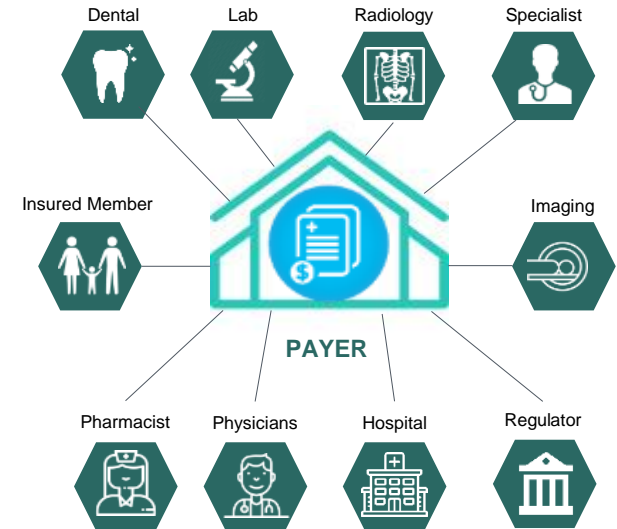
- Leveraging blockchain to orchestrate transactions in the payer eco-system
- Leveraging blockchain to streamline and increase authenticity for pharmaceutical supply chains

# Moving Payers From Transaction “Processors” To “Orchestrators”

## ► Current State

### Payers Operate as Processing HUBs

- Each party must communicate and transact through the Payer
- Heavy IT burden on the Payer
- Lack of “operational awareness” across entities within the ecosystem
- Inefficiencies, including paper and varying degrees of transaction interventions

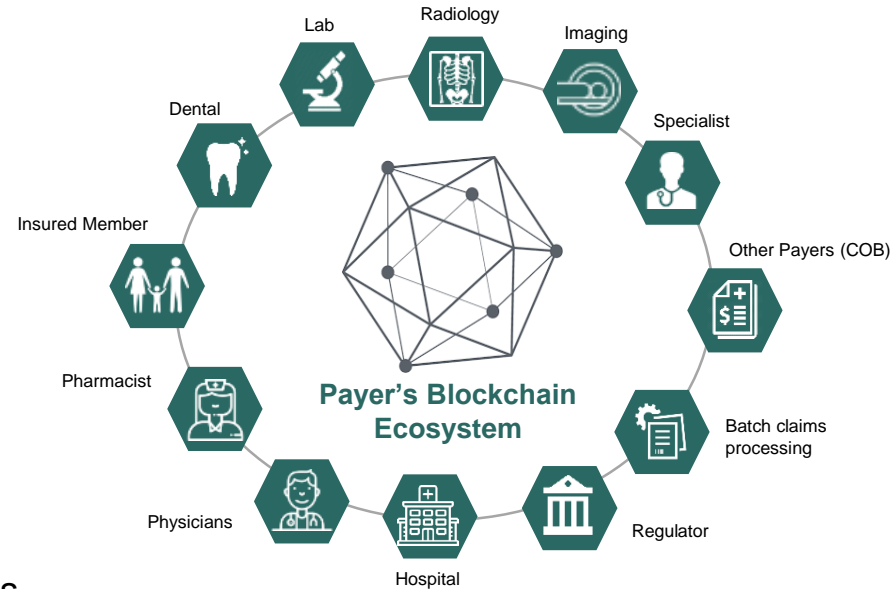


# Moving Payers From Transaction “Processors” To “Orchestrators”

## ► Future State

### Payers Establishing Rules and Orchestrating Processing

- Parties communicate and transact directly via blockchain smart contracts
- Transactions are captured via distributed ledgers for audit and reporting purposes
- Reduced IT burden for the Payer
- Establishment of rules and orchestration of transactions across the ecosystem



# Blockchain Accumulator Solution

## ► Why We Focused on a TPA?

Our client's TPA business presented an excellent opportunity to introduce the new processing paradigm for the following reasons:

- **A TPA is an intermediary**

Decentralization is a prime direct benefit of blockchain

- **Manageable number of members (4 Million Members)**

When compared to other business segments, reducing risk

- **Isolated systems**

- No enterprise dependencies which also reduced risk

- **Lack of current real-time accumulator capabilities**

Providing a real need and immediate benefit to the implementation of blockchain

- **Manageable ecosystem**

Approximately 25 Partners (PBMs, Behavioral Health, etc. ) allowing for controlled exposure without mass integration

- **Attractive customer base given higher probability of membership with dual coverage**

Opportunities for expansion to COB

# Solution Overview

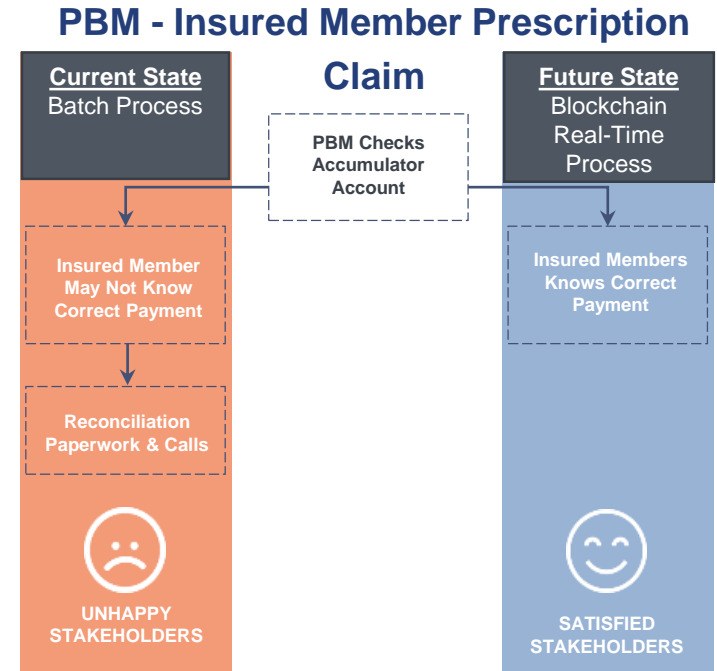
- ▶ **Background** – The team isolated and advanced a Proof of Concept meant to test viability of Blockchain Technology on the practical problem of providing accurate near-real-time updating of an Insured Member's Accumulator Account.

## Prime Direct Benefits

- All parties have access to the same, accurate, synchronized and validated data
  - Less paperwork and manual reconciliation, lower or no reconciliation events
  - Lower or no cost for reconciliation events
  - Improved customer experience – Higher Net Promoter Score (NPS)

## Other Potential Benefits

- No disruption to medication adherence
- Near-real-time data for Plan Sponsors
- Better Payment Liability Estimation (PLE) for Insured Members
- Marketing value as a recognized pioneer
- Readily extendable to other EHB services

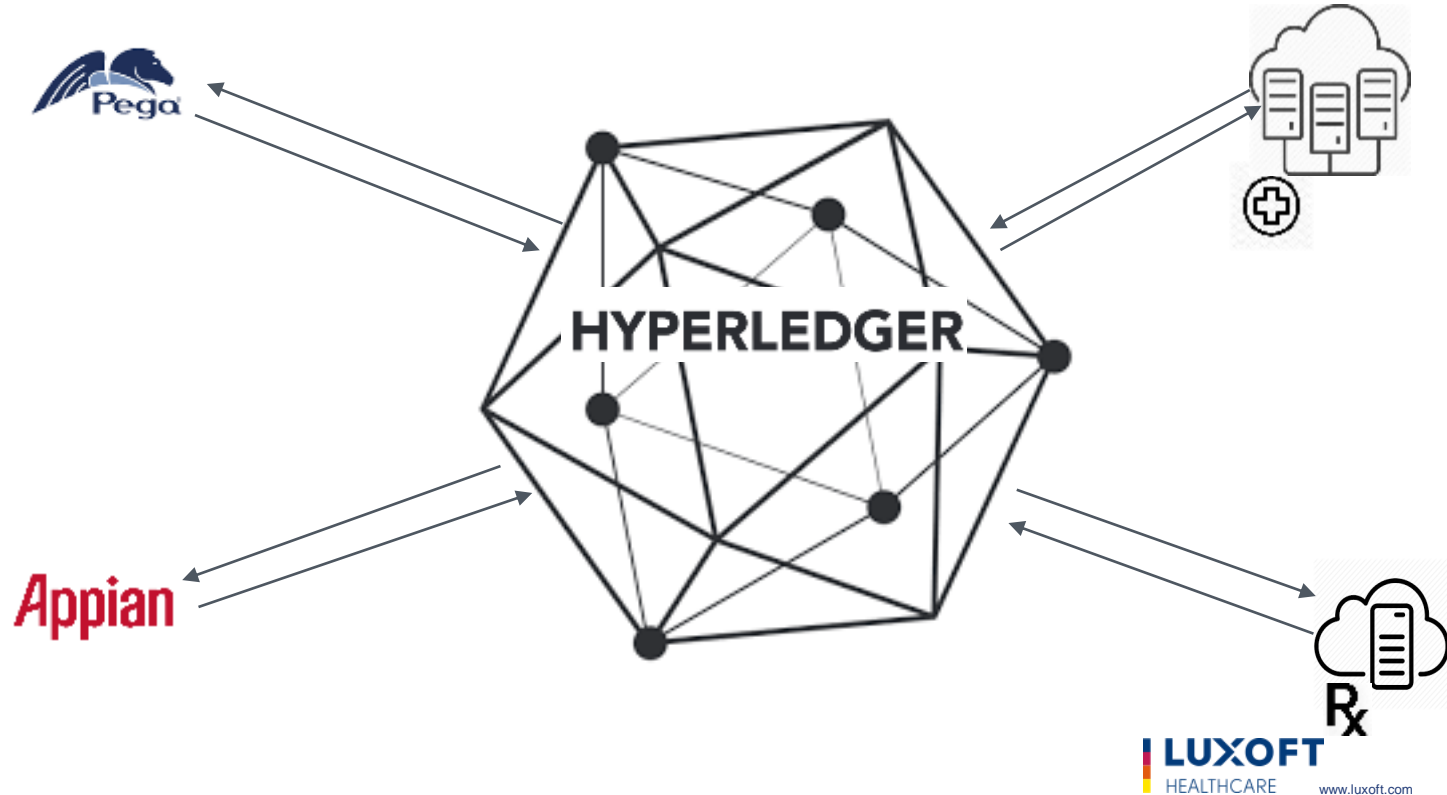


# Results & Lessons Learned

► POC completed in 7 week's - High Value delivered over short duration

## Results

- ◆ All functional acceptance criteria met
- ◆ All code and deployment packages delivered
- ◆ Blockchain provides single definitive source of accumulator
- ◆ All parties can see "current" value
- ◆ Anticipated reduction for reconciliation efforts





# Enabling Transparency in the Pharm Supply Chain

## ► Current State



## Manufacturer to Dispensary Challenges

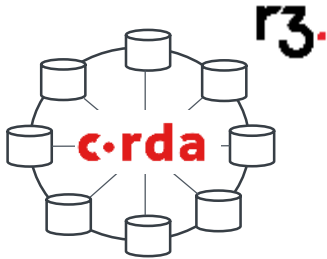
- High cost of pharmaceuticals leads to high potential ROI for nefarious individuals
- Counterfeit pharmaceuticals that are identical in appearance to real medications
- Once product leaves manufacturer, chain of custody can be easily manipulated
- Inability to easily verify the provenance of pharmaceuticals

# Pharma Supply Chain

## Certification Issuers



Authority creates ClaimDef and issues Claims to legitimate Suppliers..



Corda Flows orchestrate supply chain by Executing claims and proofs and recording the results

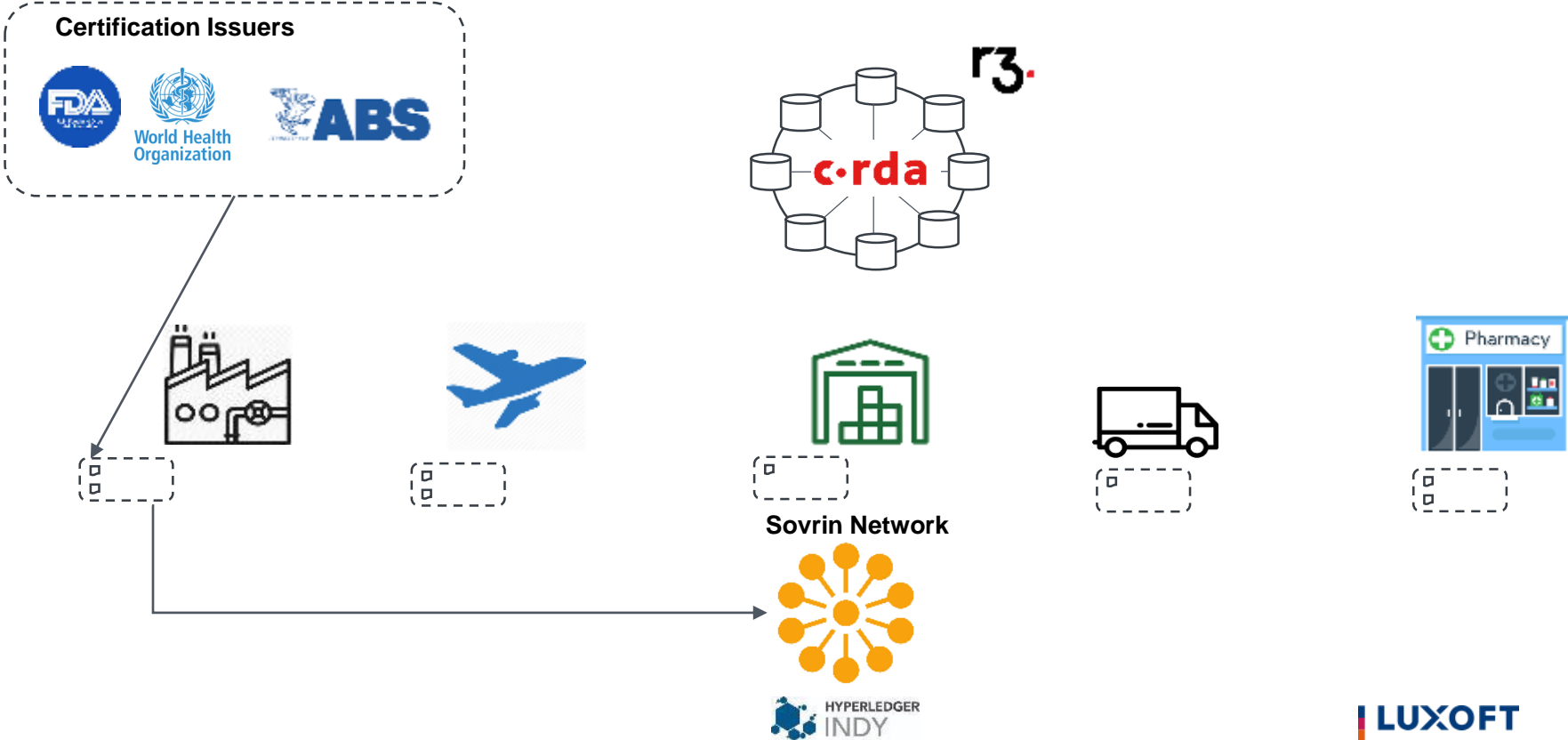
## Sovrin Network



Holds IDs, keys, public attributes, claim definitions, issuer keys, revocation lists.

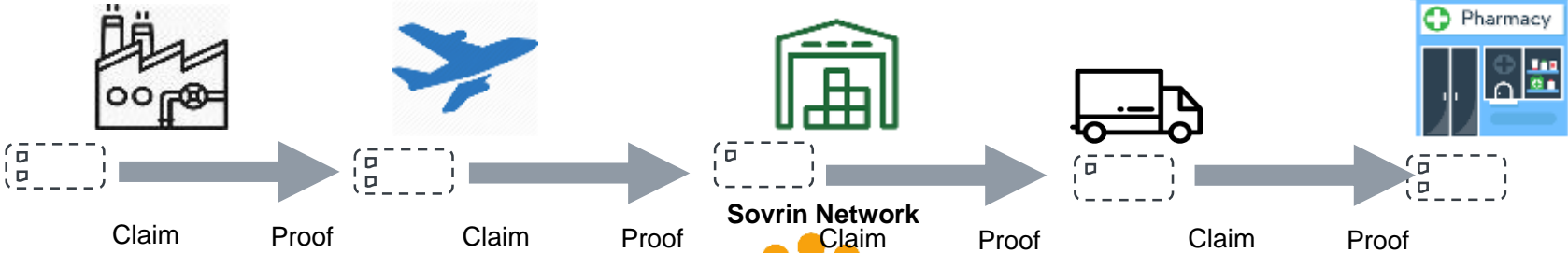
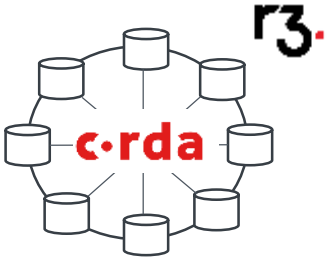


# Pharma Supply Chain



# Pharma Supply Chain

## Certification Issuers



# Thank you

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