

## Automation in Public Health Decision Making

What is blockchain and how can it help?

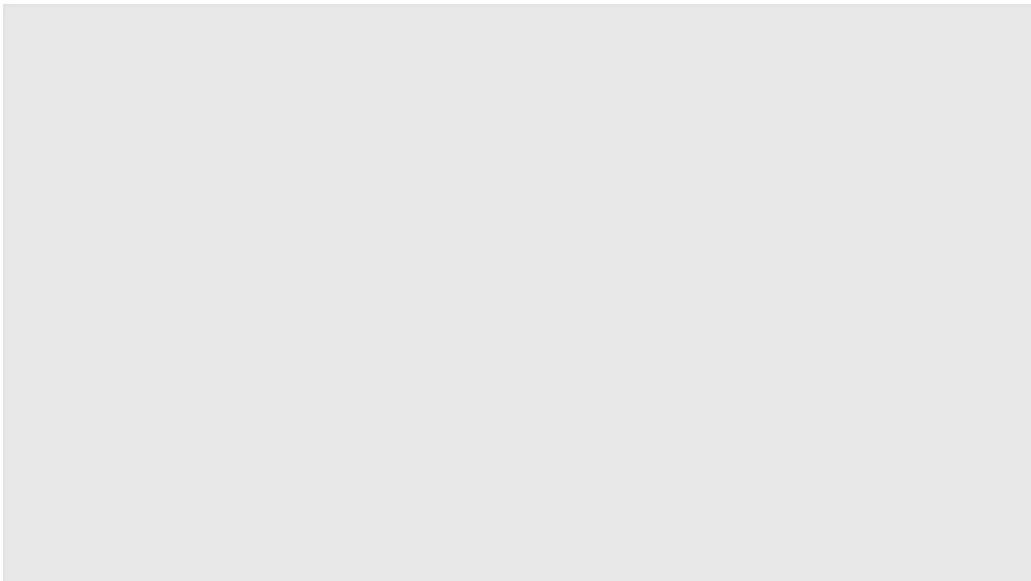
Jim Nasr | [Jim.Nasr@Synchrogenix.com](mailto:Jim.Nasr@Synchrogenix.com)

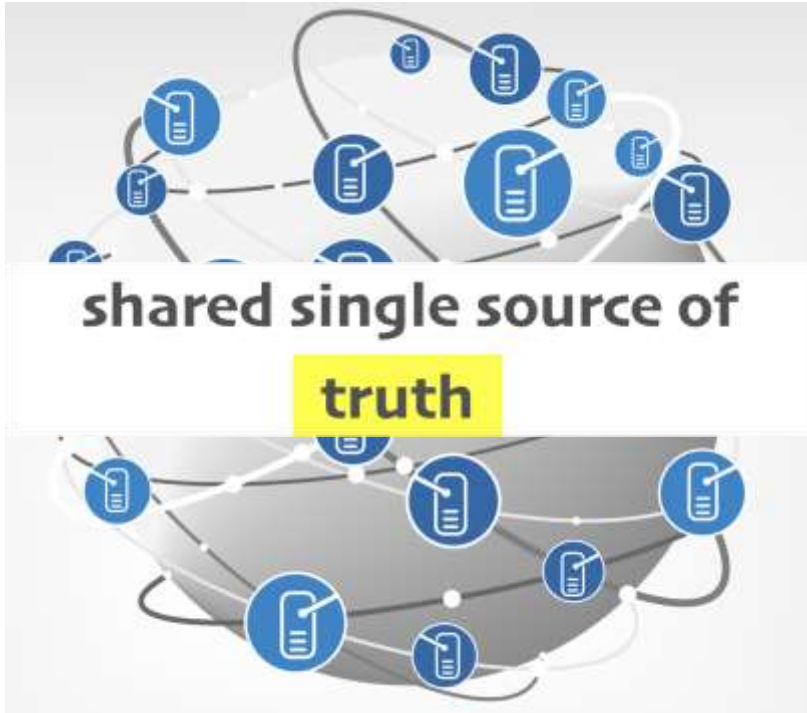
11 November, 2018



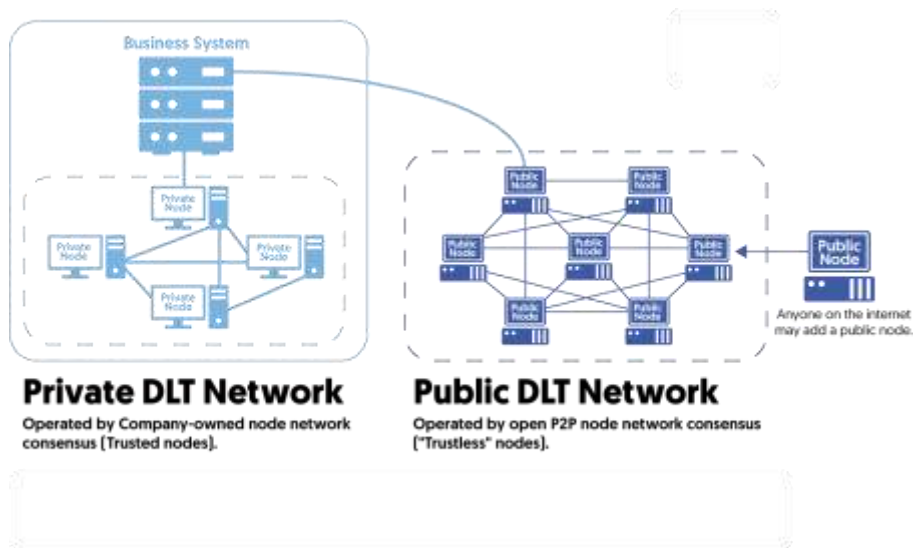
## What is blockchain?

Source: CDC

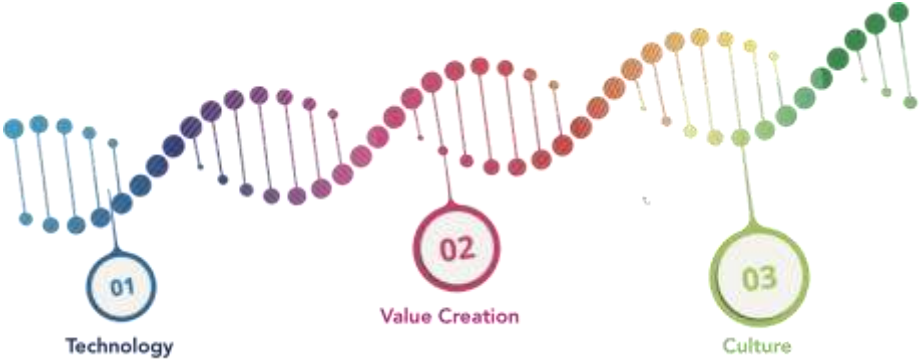




## Private vs. Public Distributed Ledger Technology (DLT)



# DNA of Public DLT



It's a matter of trust.



## Ok...start with trust. Anything else?

**Public vs. Private (is this just a shared ledger?)**

**Network Nodes**

**Tokens**

**Protocols**

**Consensus (mining complexity)**

**Scaling**

**Smart Contracts**

**Key Management**

**On-Chain vs. Off-Chain**

**Partial Ownership, ...**

© Copyright 2018 Certara, L.P. All rights reserved.

7



## But #becraeful!

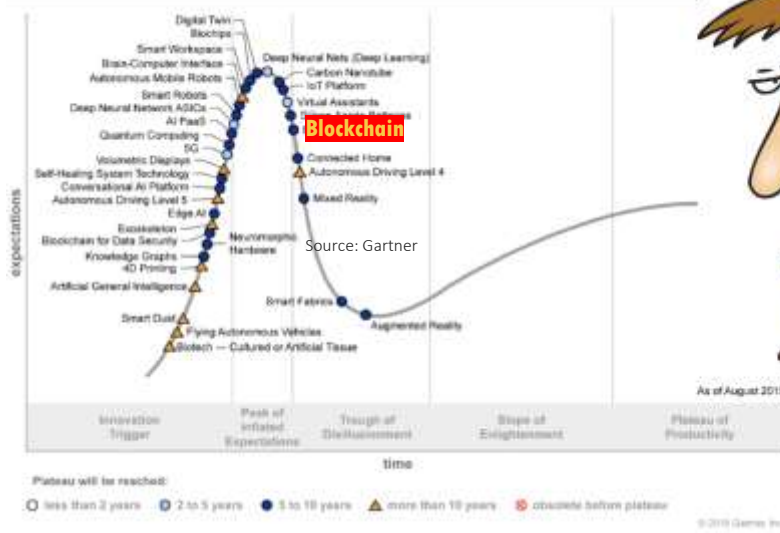
- Garbage in, tamper-proof garbage forever
- Mapping real-world to digital
- Identifying things & people
- Scaling governance
- Legacy (i.e. all) data

© Copyright 2018 Certara, L.P. All rights reserved.

8



# Trough of Disillusionment



Source: Gartner

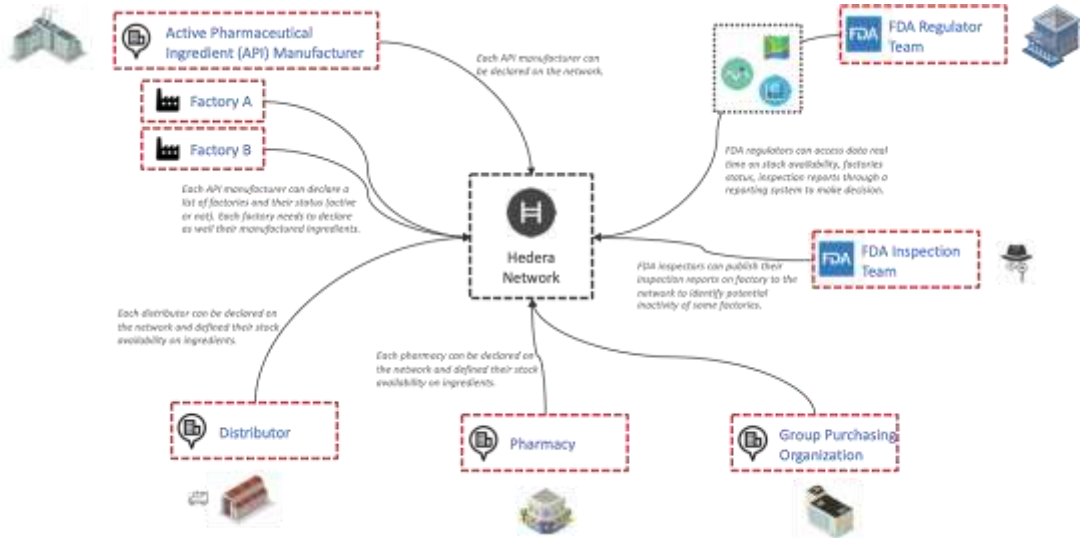


# Public Health and Life Science use cases

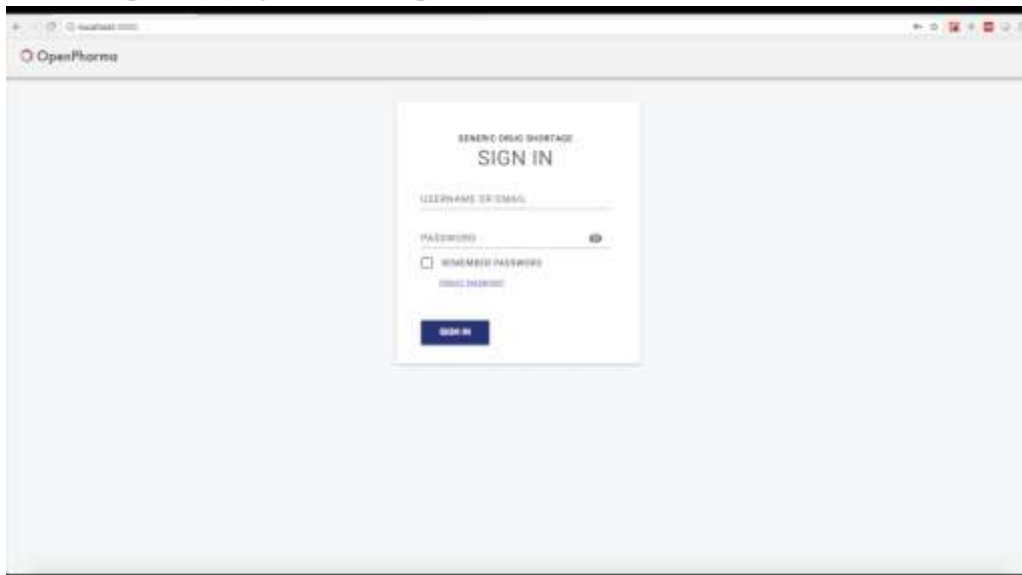
- Emergency Response*
- Aid Management*
- Cash Management in Crisis Relief*
- Public Health Data Surveillance*
- Dangerous Substance Tracking*
- Death Certificate Exchange*
- Opioid Tracking*
- Population Health Management*
- Public Health Communication*
- Inventory Tracking*
- Inter-agency data exchange*
- Counterfeit Drug Tracking*
- Clinical Research Collaboration*
- Generic Drug Shortage***



# Generic drug supply shortage POC



# Generic drug supply shortage demo





## Could've said this at the beginning!

### Blockchain is relevant for public health & life sciences

Think **public blockchain** long-term for many use cases

- Private to public (permissioned to permissionless)
- Think off-chain (what's real-world, where's the data)
- Think tokens to attribute value creation

Easiest use cases to address are **internal supply chain**

**[FIRST]** Compliance & transparency = improvement

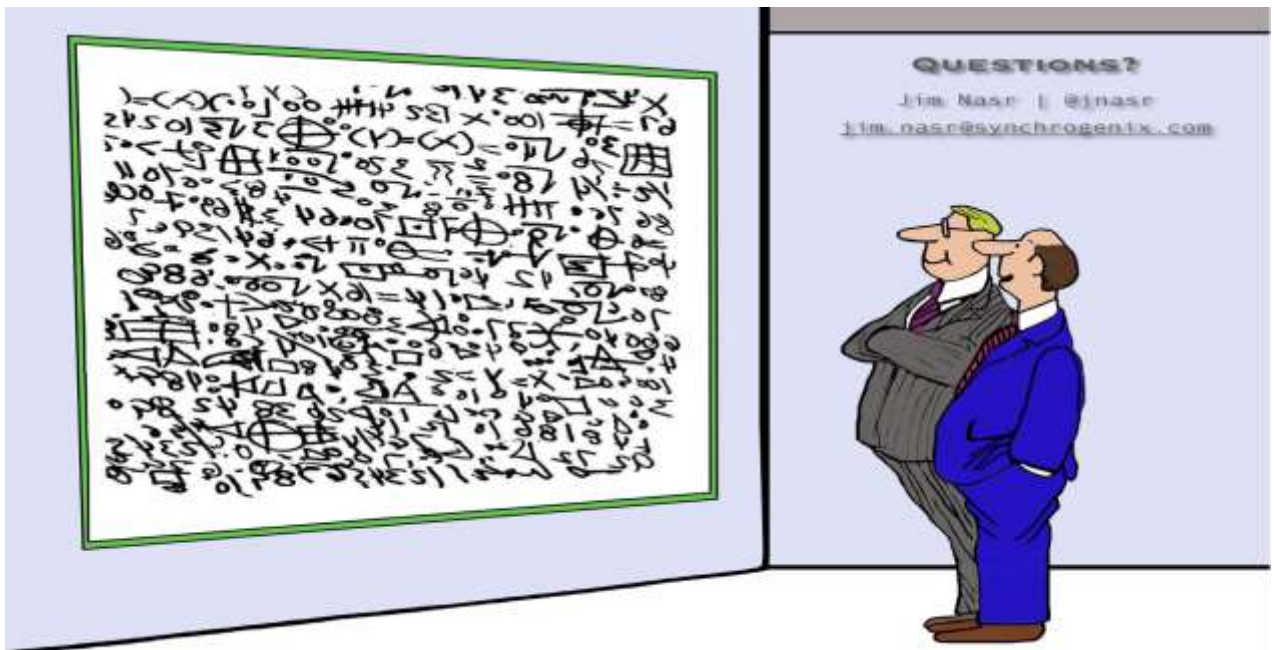
**[LATER]** Automation & disintermediation = transformation

Separate **noise from signal**

- Scaling, interoperability, protocols, performance, ease of use... all evolving at record pace. Don't get hung up here
- Focus on prioritization and continued experimentation

Invest in the **right people**

- Start with right culture, open technologies, DevOps



**“When you put it like that, it makes complete sense.”**