

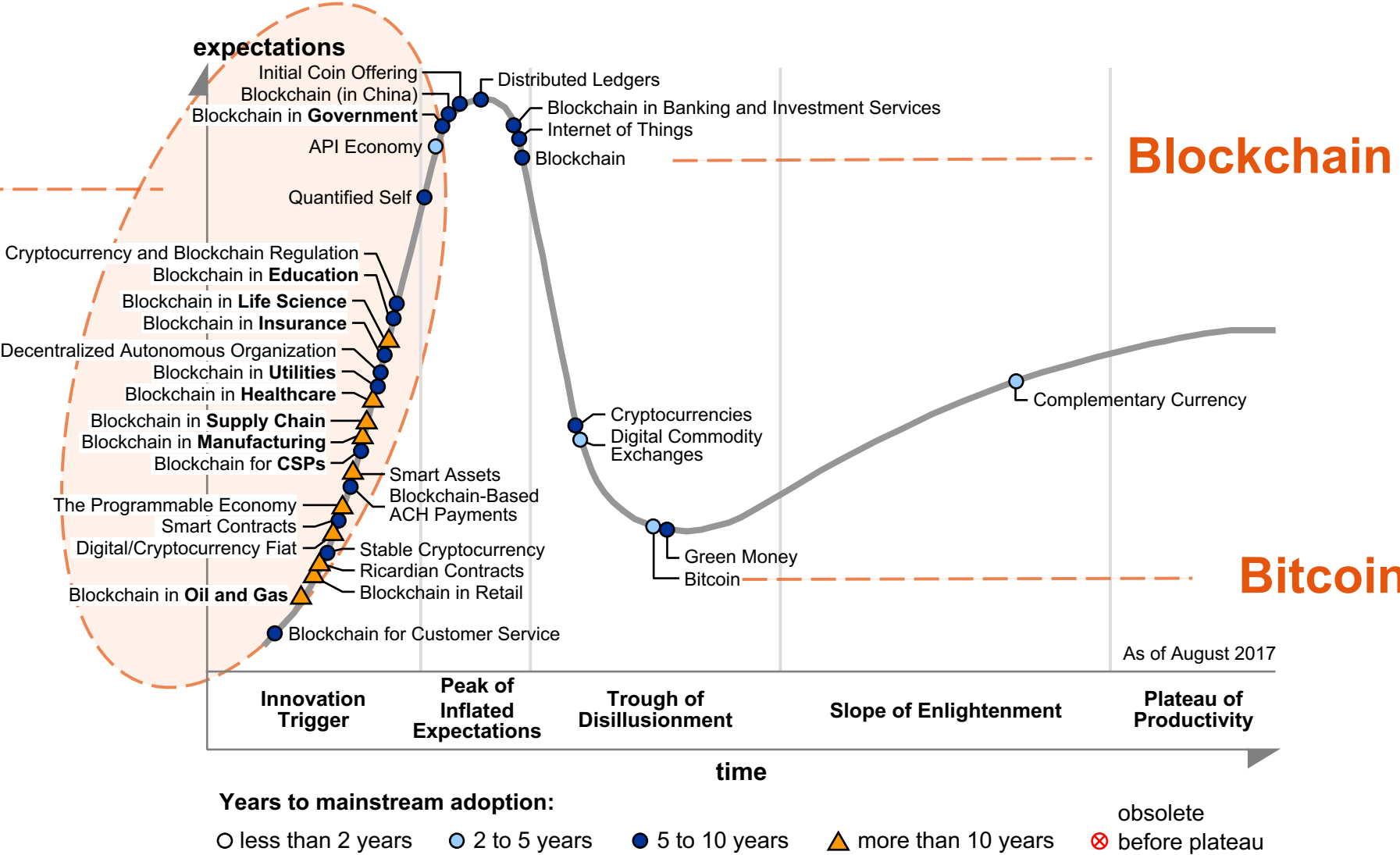
# How to Make the Best of Blockchain — Types of Blockchain Projects and How They Add Value

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@mikejwalker

By 2022, a blockchain-based  
business will be worth  
**\$10 billion.**

# Blockchain — Still at Mega Hype?

Industry Hype Is Increasing



From "Hype Cycle for Blockchain Business, 2017," 10 August 2017 (G00332628)





**Most of the  
blockchain  
projects in  
enterprises  
focus on  
yesterday's  
business  
models**

**Gartner®**

# Key Questions

3



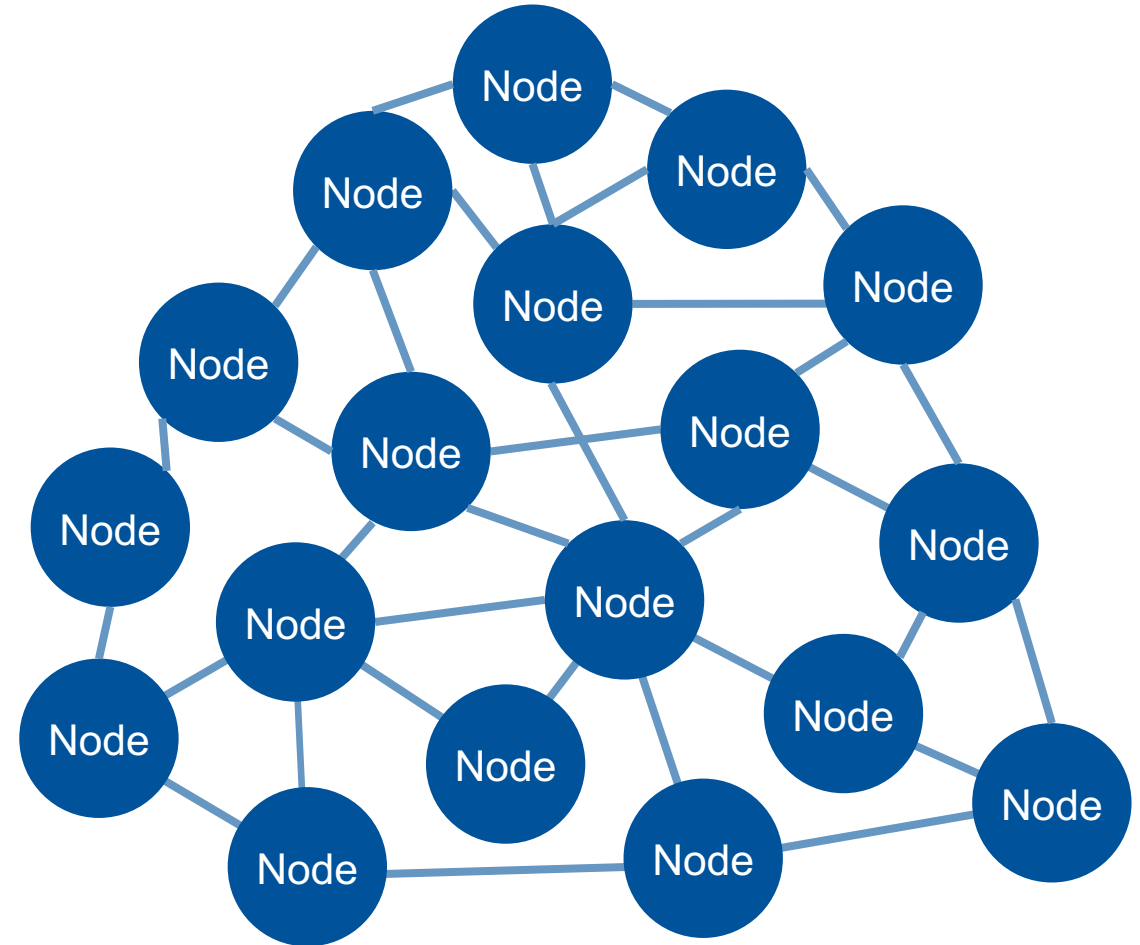
Why is blockchain the best option?

# What is Blockchain?

1

## Distributed Ecosystem

**Always up due to not one central point of failure in the blockchain**

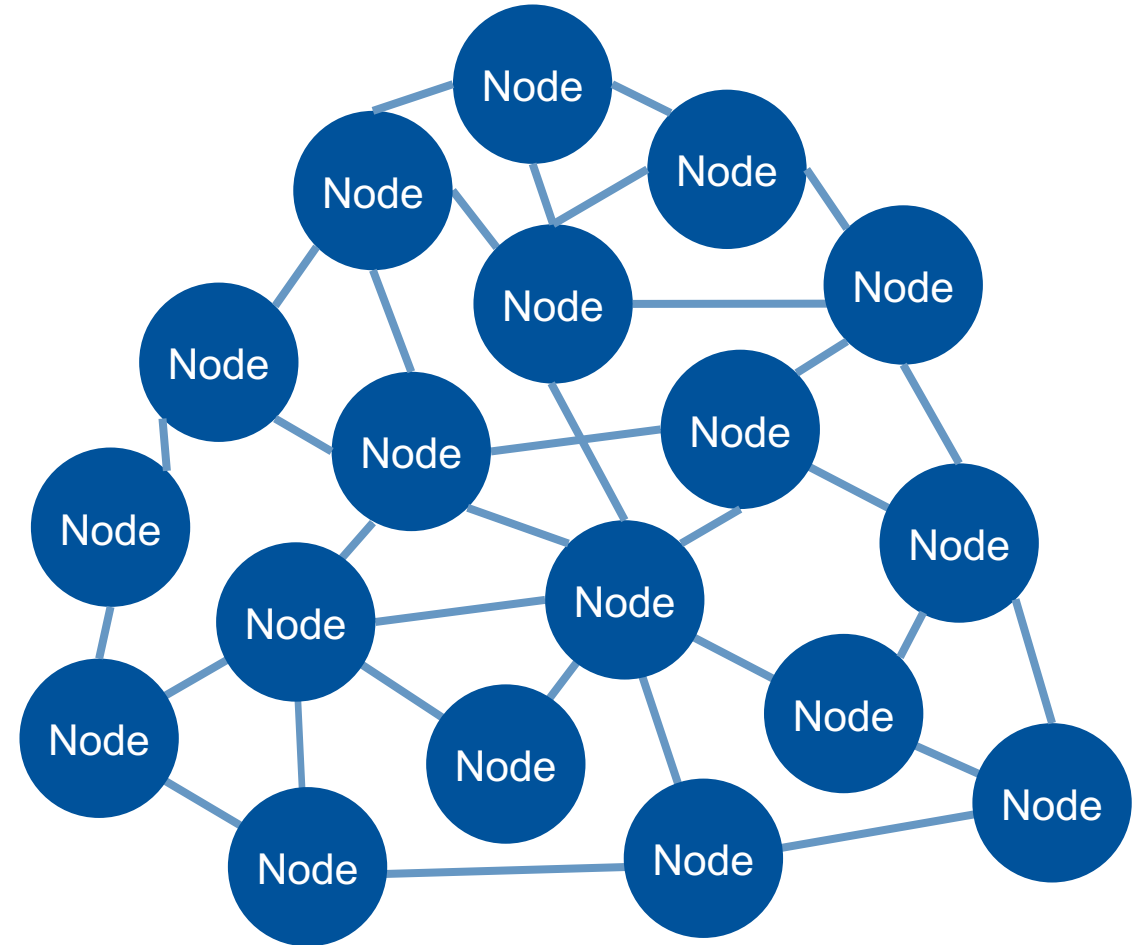


# What is Blockchain?

2

## No Intermediaries

**Breaks down traditional barriers** enabling new market entrants to **create new business model innovations**

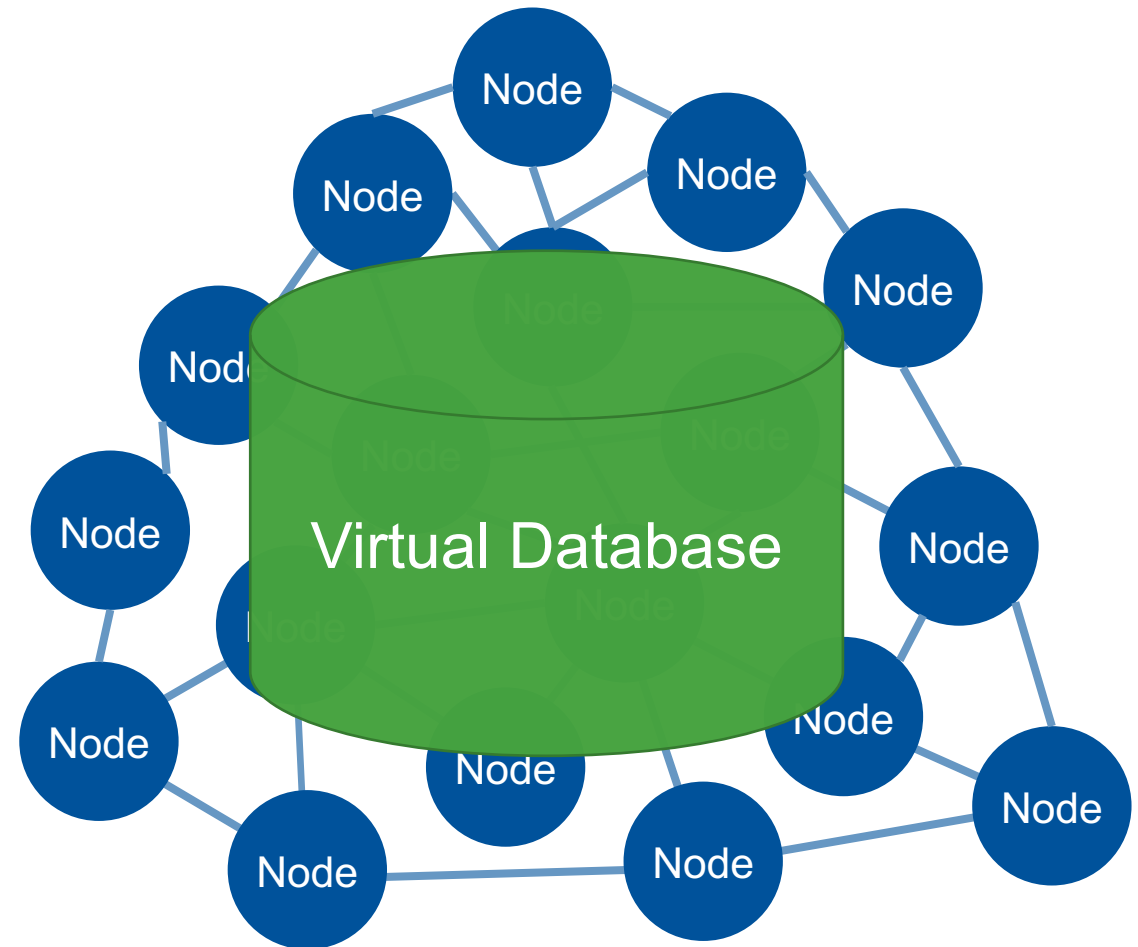


# What is Blockchain?

3

## Transactional Database of an Ecosystem

Creates the facility for an **irrefutable record** while also **providing massive potential cost-savings**.



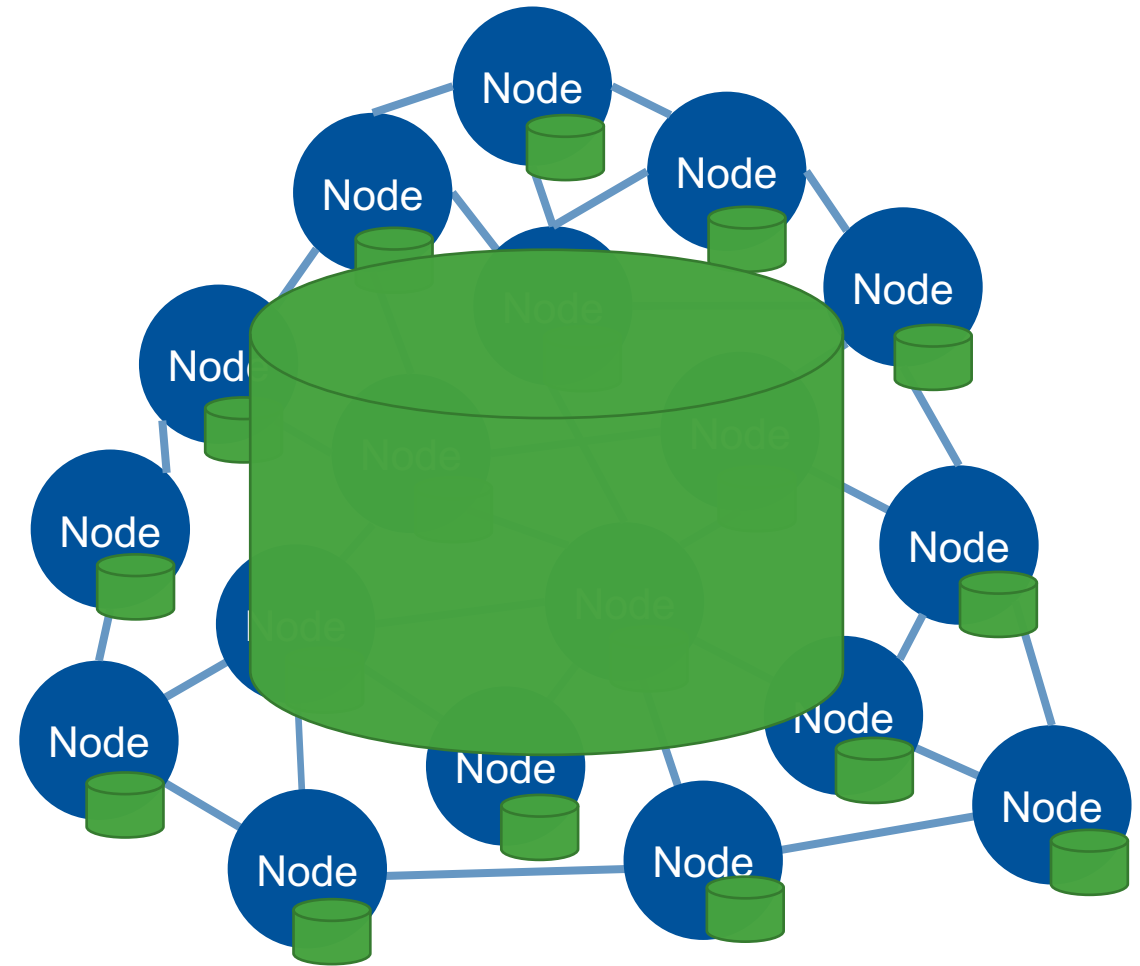


# What is Blockchain?

4

## All Blocks Replicated Across Ecosystem

Transparency achieved through algorithmically driven replication of blocks across network

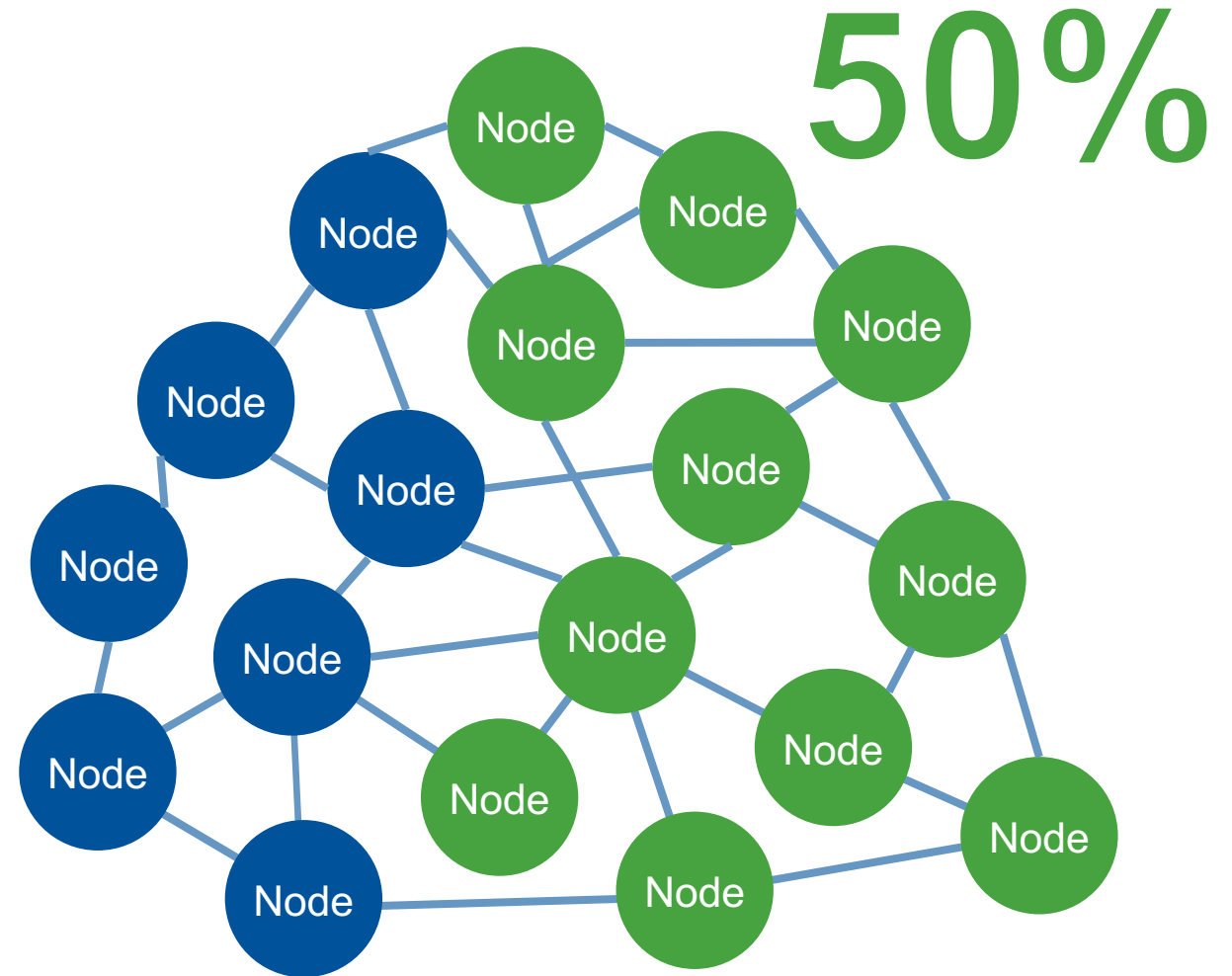


# What is Blockchain?

5

## Algorithm Driven Authentication

Data **trustworthiness** ensured through an AI challenging protocol.

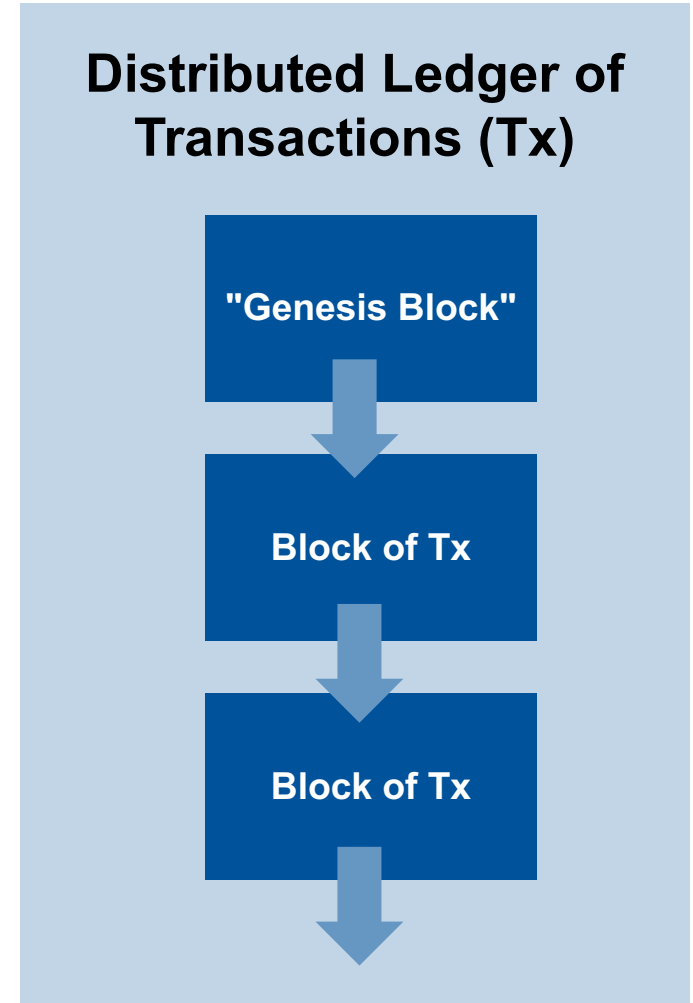


# What is Blockchain?

6

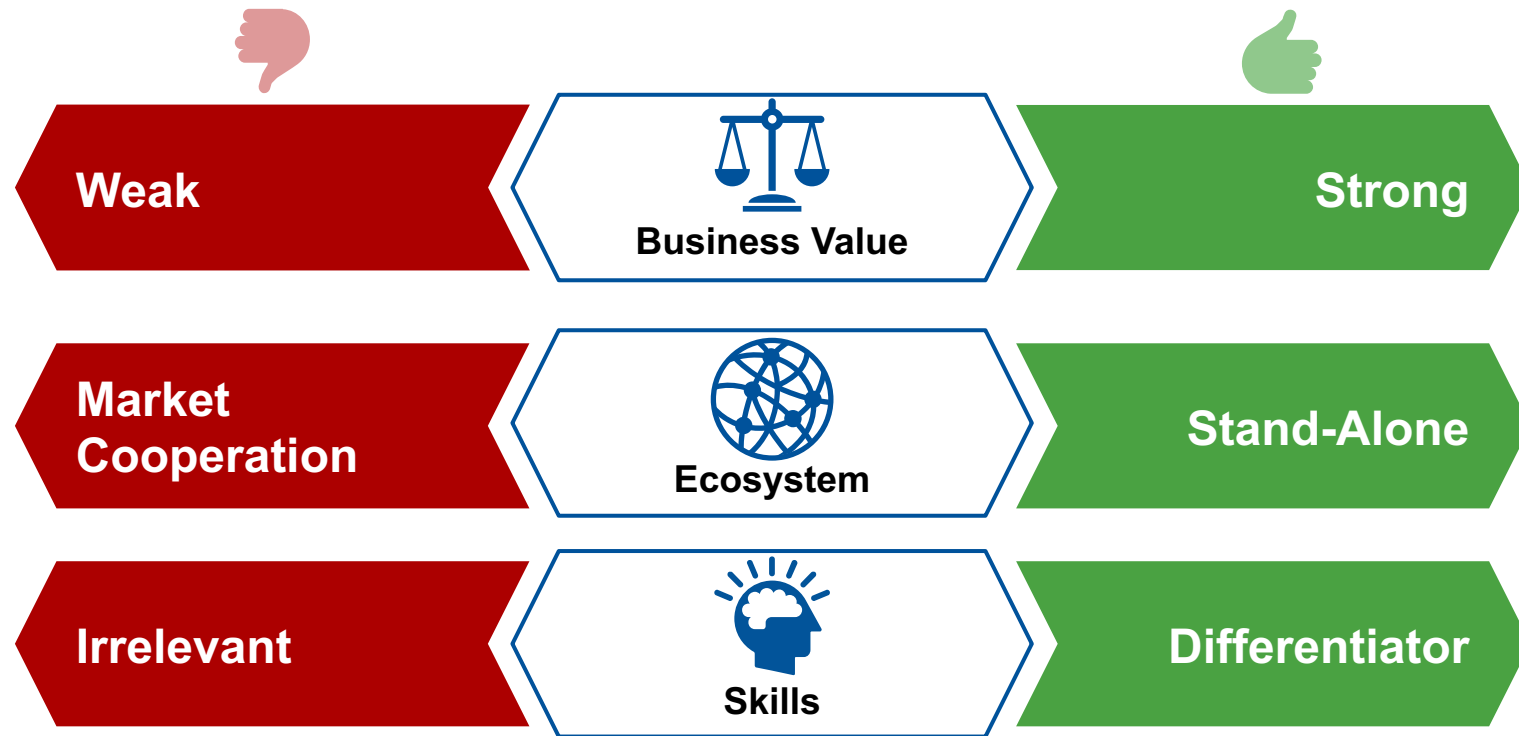
## Transactional Database of an Ecosystem

**Tamperproof architecture** requires alterations of transactions to rewrite all subsequent blocks. **All Tx history** is within each block.



# Recommendation #1:

## Start with the Business Case NOT the Technology

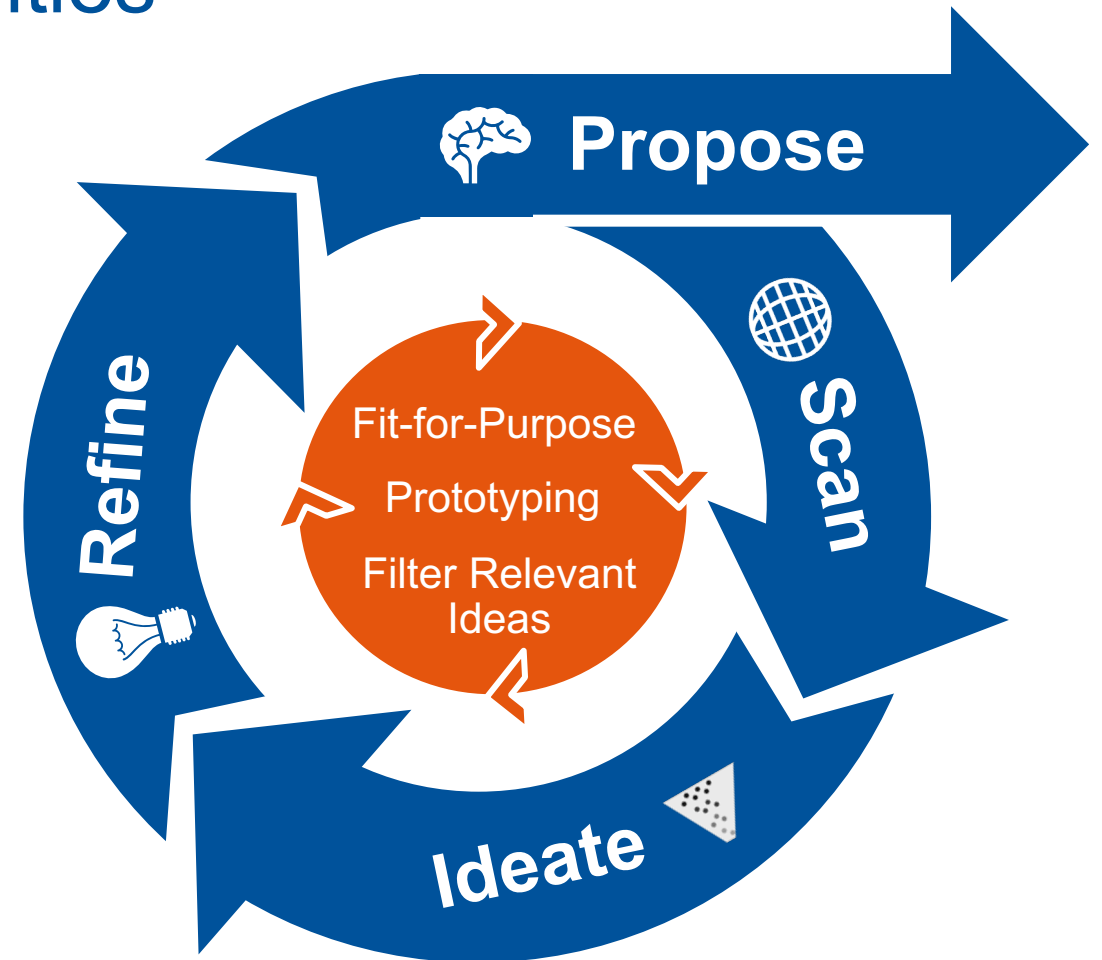


### Checklist:

- ☐ Agree whether a use case exists.
- ☐ Determine if success needs other firms.
- ☐ Be realistic about the technology.
- ☐ BUT: Invest in skills for the future.

## Recommendation #2: Discover New Business Opportunities

- Conduct Ideation Workshops with Business Partners
- Compare and contrast what others within or outside your industry
- Gain Inspiration and Leverage Blockchain Use Cases Library



# Key Questions

3



Why is blockchain the best option?



What blockchain style will enable value?

# There Are Four Types of Blockchain Initiatives



Blockchain as the Disruptor



Blockchain as the Digital Asset Market



Blockchain as the Efficiency Play



Blockchain as the Record Keeper

# There Are Four Types of Blockchain Initiatives



## Blockchain as the Disruptor

New businesses that rely on a blockchain foundation. Business model may not be new.



# Toyota's Partnership with MIT for Blockchain Auto



# Other New businesses that rely on a blockchain foundation. Business model may not be new.



Prediction Market



Content



**Open**Bazaar

E-Commerce

# There Are Four Types of Blockchain Initiatives



## Blockchain as the Digital Asset Market

New markets based on digital assets formed from nondigital ones (physical and virtual).

# Real World Scenario: Counterfeit Pharmaceuticals

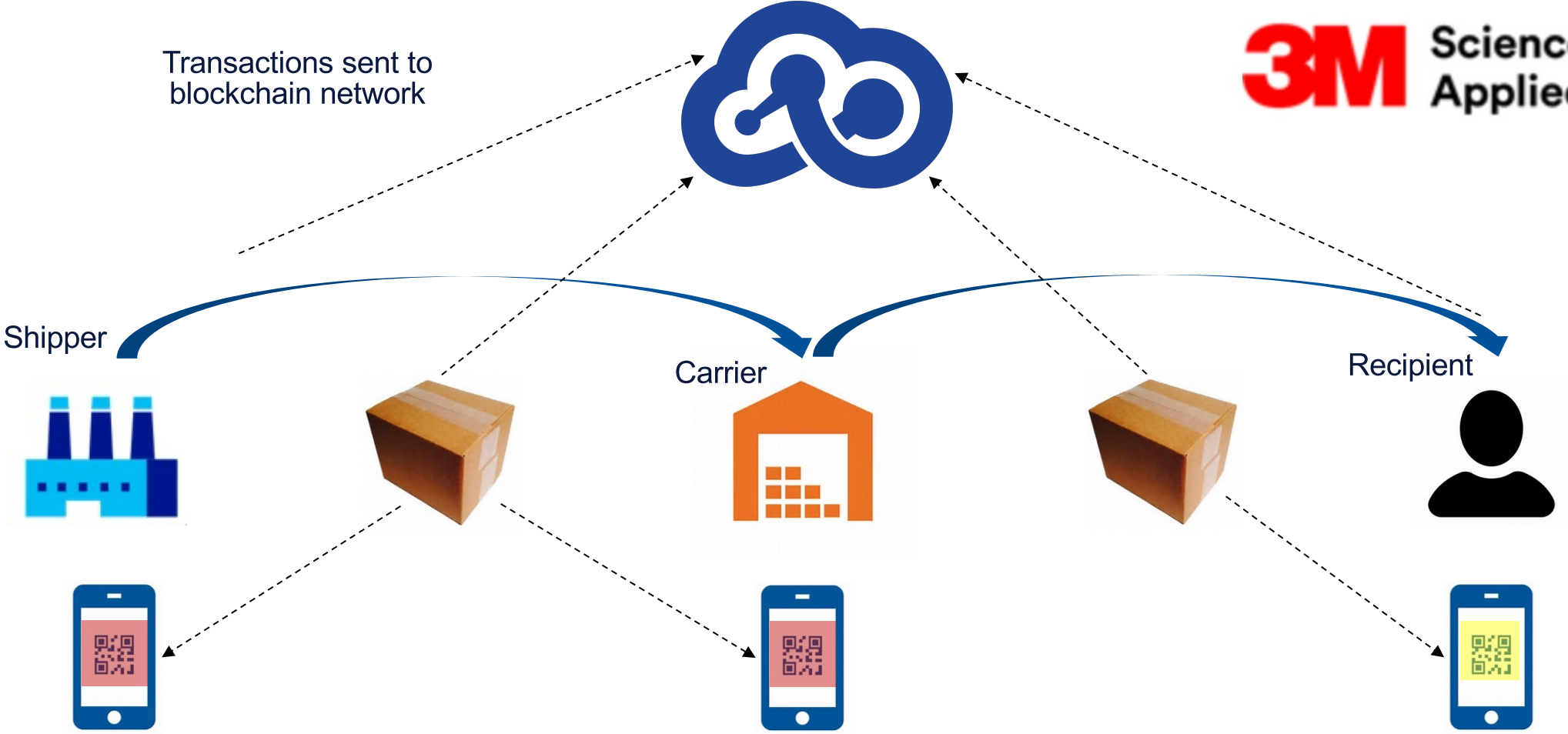
**10%-30%** of drugs sold in developing countries are counterfeits.

**80%** of the counterfeit drugs consumed in the US come from overseas.

The global market for counterfeit drugs is **\$200 billion dollars**.



# 3M DoubleTrust Blockchain Solution





# Other new markets based on digital assets formed from nondigital ones (physical and virtual).



NYIA X

Advertising Contracts



Digital Gold



Carbon Credits



# There Are Four Types of Blockchain Initiatives

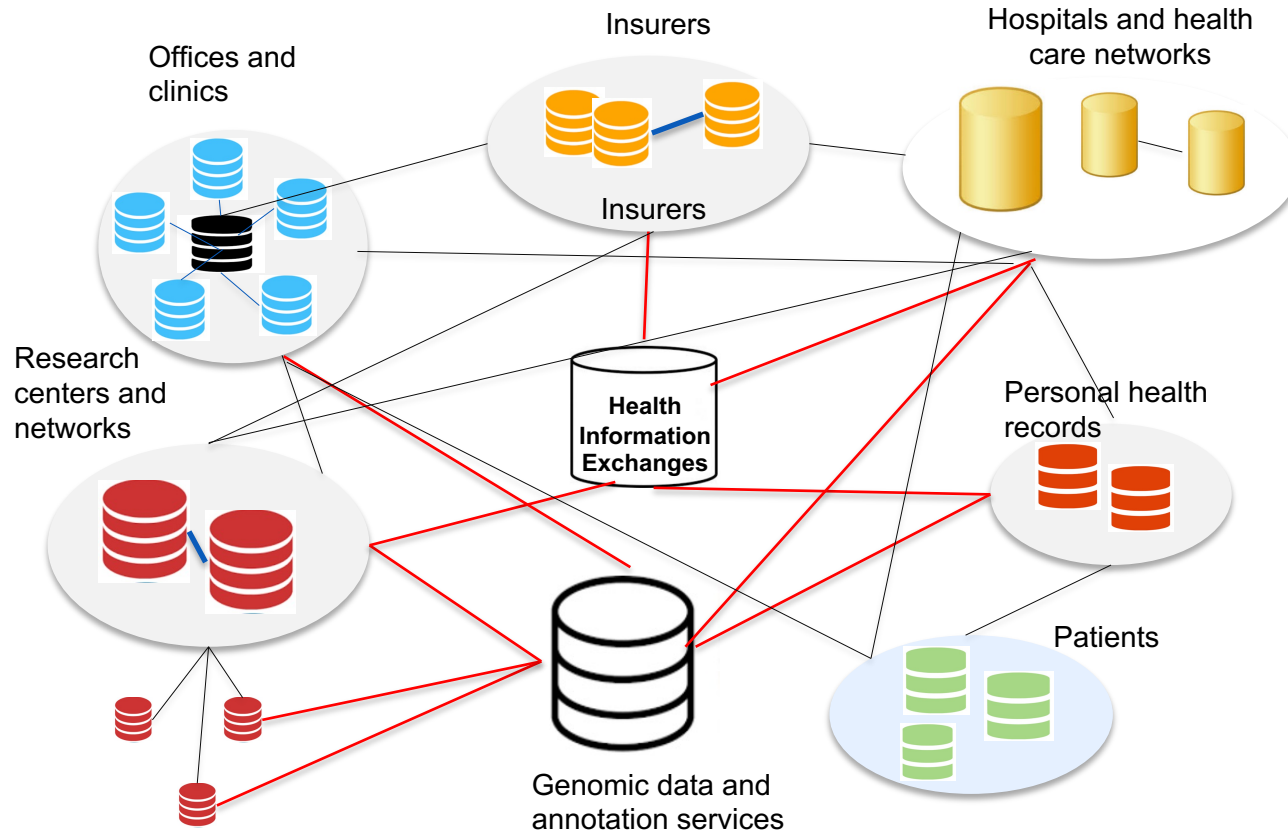


## Blockchain as the Efficiency Play

Efficiency improvements in transactions, interactions and tracking provenance of assets.

# Blockchain Solving Healthcare Challenges

Challenge: Health Information Exchanges leverage intermediary to establish point-to-point sharing and “book-keeping” of what data was exchanged.

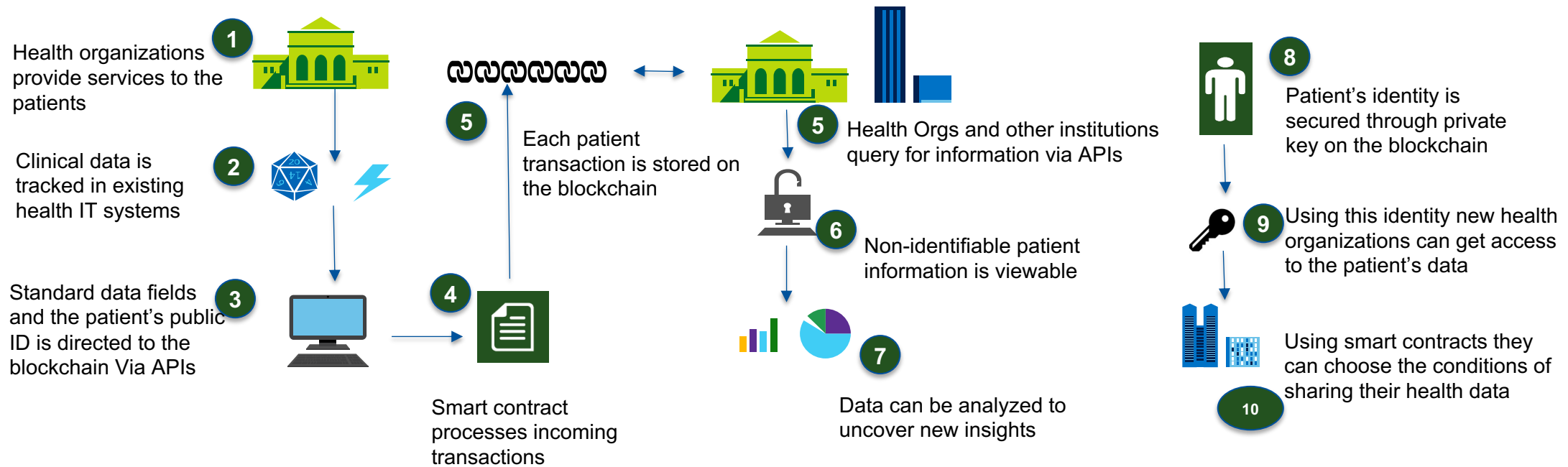


- **One version of the truth.** Inconsistent Rules and Permissions inhibit the right health organization from accessing the right patient data at the right time.
- **Data privacy.** Risks arise as multiple patient identifiers exchange data.
- **Expensive integrations.** Varying Data Standards reduce.
- **High Cost Transaction Costs.** Low transaction volumes, reduces the business case.



# Nationwide health information interoperability

Providing an ubiquitous and secure network verifiable medical data, and participants have complete control over access to their data.



# Efficiency improvements in transactions, interactions and tracking provenance of assets.



Supply Chain



Container Shipment

**DTCC**

Clearing and  
Settlement

# There Are Four Types of Blockchain Initiatives



## Blockchain as the Record Keeper

Records management by one entity, for self or for a community.

# Records management by one entity, for self or for a community.



REPUBLIC OF ESTONIA  
E-RESIDENCY

Digital Identity



Shareholder Lists



Land Titles



# More Blockchain Activities in Public Sector

## Singapore



### Fraud Prevention

- Singapore Government is seeking to prevent traders from defrauding banks
- The Singapore government has developed a system with the local banks focused on preventing invoice fraud by using the blockchain to create a unique cryptographic hash (a unique fingerprint) of every invoice

## UK Government



### Government grants and welfare

- Protecting critical infrastructure against cyberattacks
- Tracking eligibility, registration & payments for Govt grants and benefits
- Strengthening International Aid Systems
- Reducing Market Friction and Enabling Innovation for SMEs
- Reducing tax fraud and reducing EU's VAT shortfall
- Mayor of London considering to place the entire mayoral budget on blockchain - transforming public sector budgets
- Further, Credits, UK's blockchain-as-a-service\* start-up has started to provide the blockchain services to the UK's public sector through the G-Cloud framework

## Estonia/ Denmark



### e-Residency

- Estonia has established an e-residency program residents receive a digital ID card with a cryptographic key to securely sign digital documents
- a blockchain-based e-voting service that enables people to become shareholders of Nasdaq's Tallinn Stock Exchange
- The system is an identity platform that gives Estonian citizens and businesses digital authentication. This gives members of the e-Residency program access to certain government programs.

## Georgia/ Ghana/ Sweden



### Land Registrations

- Another emerging area of focus is in government land registries
- The Republic of Georgia: blockchain project focused on land registries
- Ghana, West Africa: Land registry application is taking shape to enable tamper-resistant property ownerships
- Sweden is planning to place real estate transactions on the blockchain





# Four Types of Blockchain Initiatives and How They Differ



Blockchain  
Disruptor



Digital Asset  
Market



Efficiency  
Play



Record  
Keeper

New Business Models

Current Business Models

New Revenue Channels  
Growth in Existing Business Models

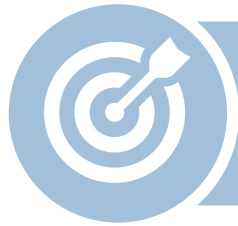
Cost Savings

# Key Questions

3



Why is blockchain the best option?



What blockchain style will enable value?



How do I get started?

# Your 30, 60 and 90 Days Plan



## 30

- Perform scenario planning to identify specific areas where blockchain and decentralization will affect your industry.

## 60

- Initiate proofs-of-concept to learn about decentralization and the major platforms.
- Look and learn from examples across your peers and disruptors across the four types of blockchain projects.

## 90

- Use lessons to reimagine business processes, business models, markets and products.



# Sample Cross Industry Use Cases

## Financial

Trading  
Deal origination  
POs for new securities  
Equities  
Fixed income  
Derivatives trading  
Total Return Swaps (TRS)  
2<sup>nd</sup> generation derivatives  
The race to a zero middle office  
Collateral management  
Settlements  
Payments  
Transferring of value  
Know your client (KYC)  
Anti money laundering  
Client and product reference data.  
Crowd Funding  
Peer-to-peer lending  
Compliance reporting  
Trade reporting & risk visualizations  
Betting & prediction markets  
Micropayments  
B2B international remittance  
Tax filing & collection

## Media

Digital rights mgmt  
Game monetization  
Art authentication  
Purchase & usage monitoring  
Ticket purchases  
Fan tracking  
Ad click fraud reduction  
Resell of authentic assets  
Real time auction & ad placements

## Computer Science

Micronization of work  
Disbursement of work  
Direct to developer payments  
API platform plays  
Notarization & certification  
P2P storage & compute sharing

## Medical

Records sharing  
Prescription sharing  
Compliance  
Personalized medicine  
DNA sequencing

## Asset Titles

Diamonds  
Designer brands  
Car leasing & sales  
Home Mortgages & payments  
Land title ownership  
Digital asset records

## Government

Voting  
Vehicle registration  
WIC, Vet, SS, benefits, distribution  
Licensing & identification  
Copyrights

## Identity

Personal  
Objects  
Families of objects  
Digital assets  
Multifactor Auth  
Refugee tracking  
Education & badging  
Purchase & review tracking  
Employer & Employee reviews

## Insurance

Claim filings  
MBS/Property payments  
Claims processing & admin  
Fraud prediction  
Telematics & ratings

## IoT

Device to Device payments  
Device directories  
Operations (e.g. water flow)  
Grid monitoring  
Smart home & office management

## Supply Chain

Dynamic ag commodities pricing  
Real time auction for supply delivery  
Pharmaceutical tracking & purity  
Agricultural food authentication  
Shipping & logistics management

# Recommended Gartner Research

- ▶ [Practical Blockchain: A Gartner Trend Insight Report](#)  
David Furlonger and Ray Valdes (G00325933)
- ▶ [Hype Cycle for Blockchain Technologies, 2017](#)  
David Furlonger, Ray Valdes and Rajesh Kandaswamy (G00332627)
- ▶ [Hype Cycle for Blockchain Business, 2017](#)  
David Furlonger, Ray Valdes and Rajesh Kandaswamy (G00332628)
- ▶ [Cool Vendors in Blockchain Applications, 2017](#)  
Rajesh Kandaswamy, Fabio Chesini and Ray Valdes (G00328047)
- ▶ [How to Develop a Business Case for Blockchain Projects](#)  
Rajesh Kandaswamy and David Furlonger (G00323011)
- ▶ [How to Determine If You Need a Blockchain Project, and If So, What Kind?](#)  
Rajesh Kandaswamy and Fabio Chesini (G00320247)