



Blockchain & IOTA Foundation

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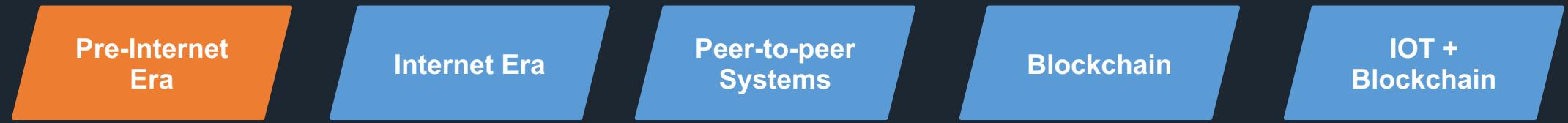
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**Tech
Mahindra**

Evolution of Communication and Decision Making



Human to human

Fixed Telephony, Telegram and Face to Face etc.



**Highly Time Consuming
Communication**

Delayed Decision Making

Evolution of Communication and Decision Making



Pre-Internet Era

Internet Era

Peer-to-peer Systems

Blockchain

IOT + Blockchain



World Wide Web

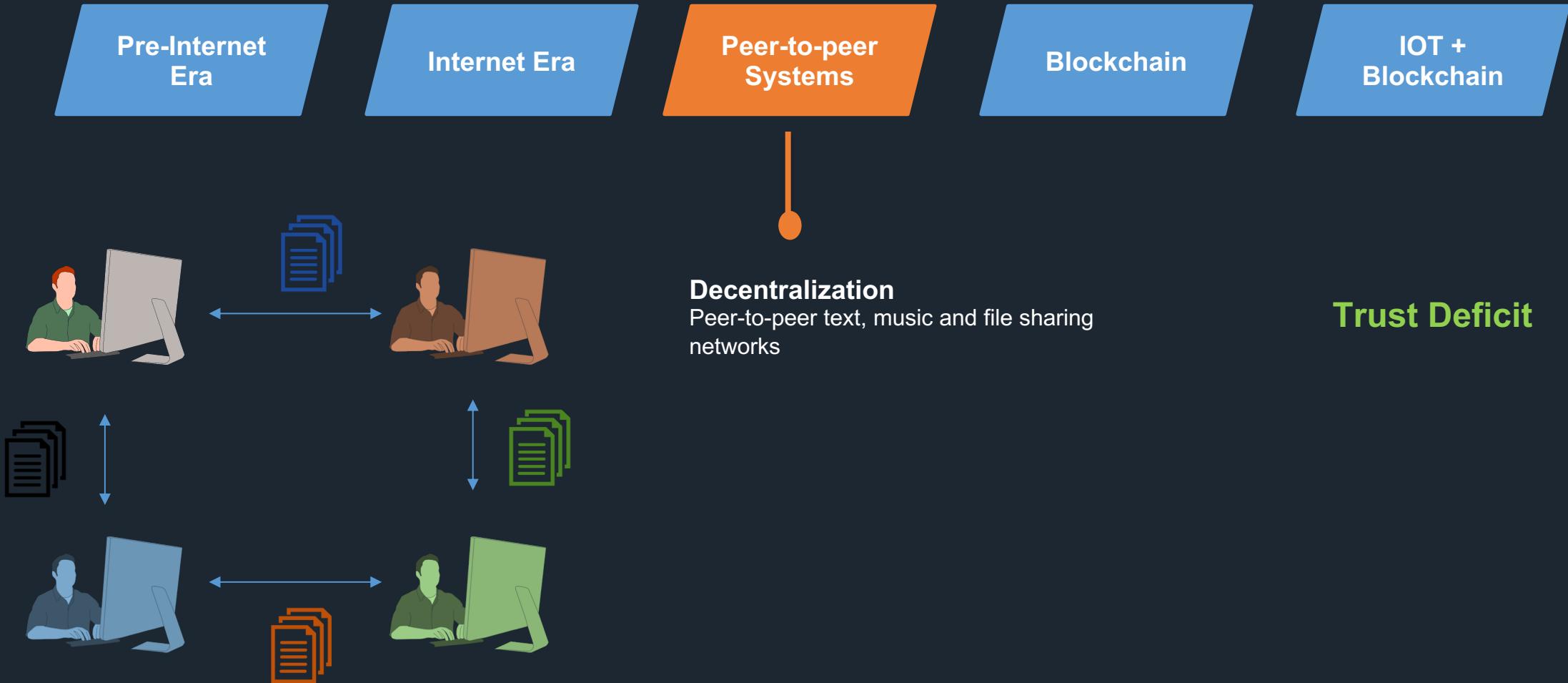
TCP/IP Protocol, Emailing, Client-server Architecture



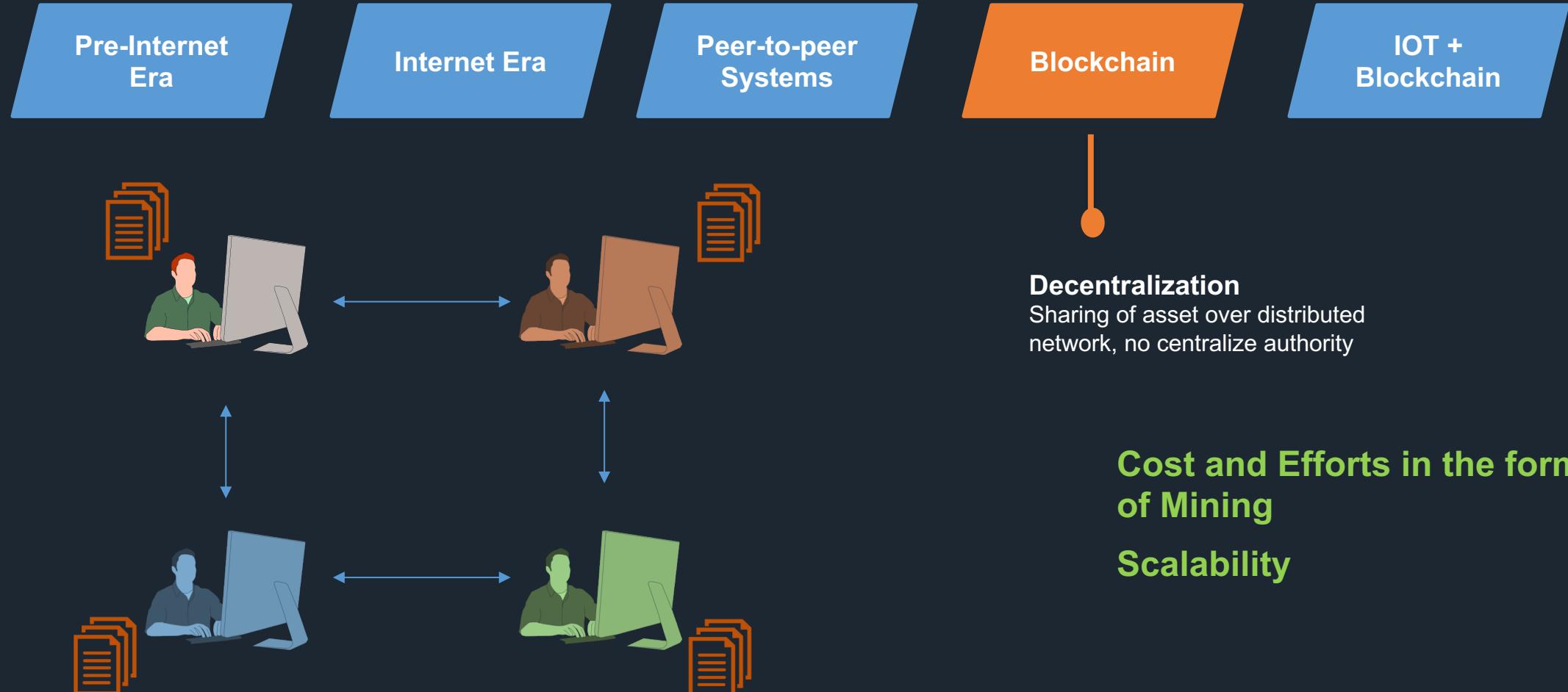
Single point of failure

Trust Deficit

Evolution of Communication and Decision Making



Evolution of Communication and Decision Making



Evolution of Communication and Decision Making



Pre-Internet Era

Internet Era

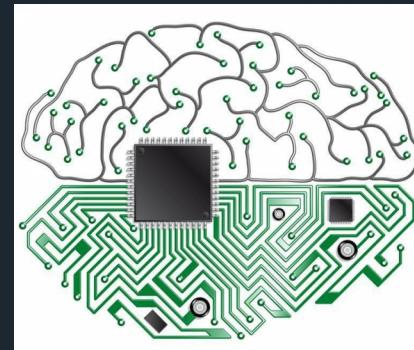
Peer-to-peer Systems

Blockchain

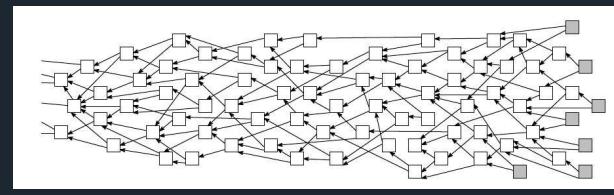
IOT + AI/ML Blockchain



Data



Insights



Storage

Decentralization + Automation
Block-less, Graph based Distributed Ledger



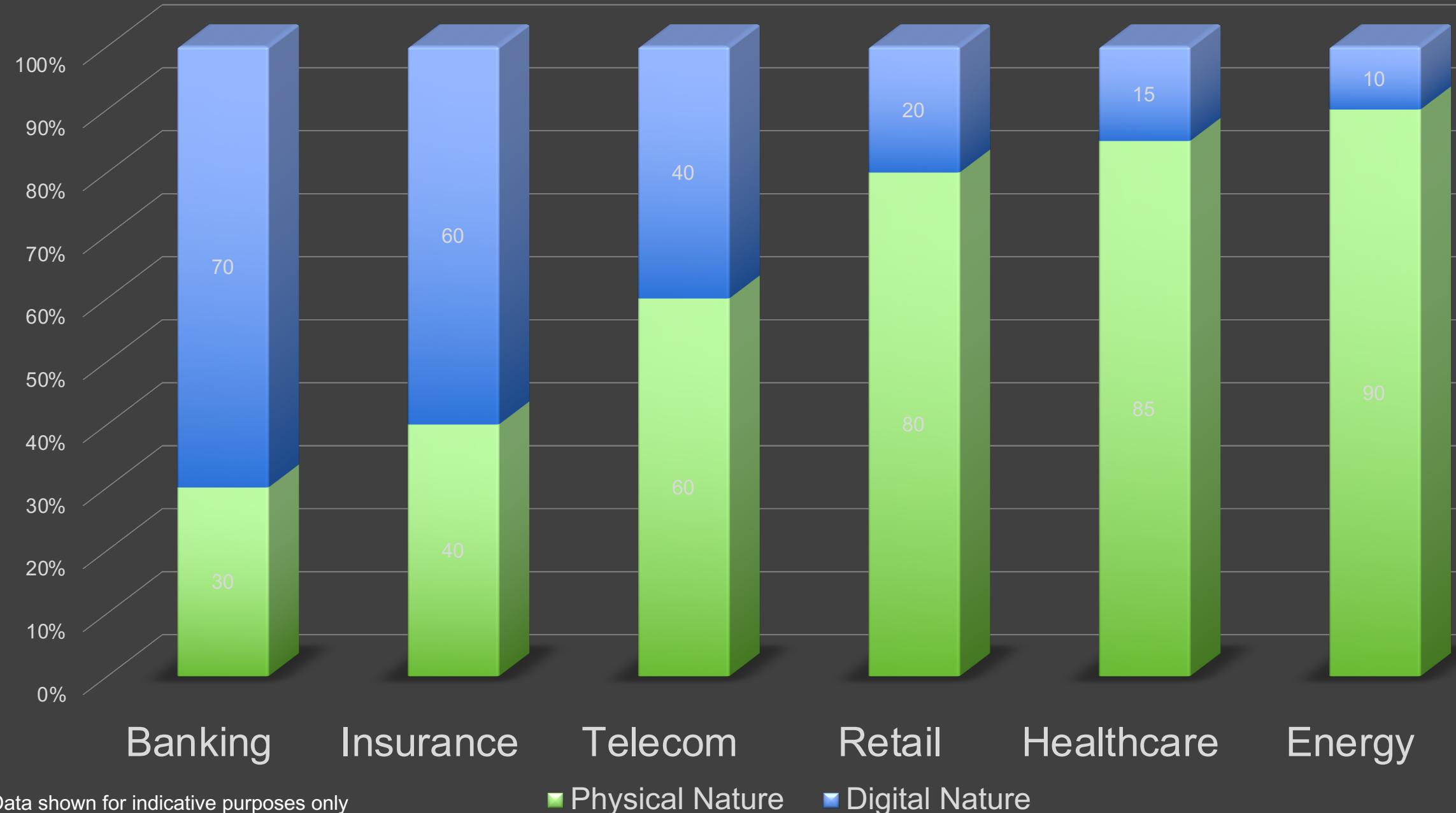
Blockchain is Blind!



- As data becomes the new oil , trust in data is depleting
- Manual data entry is prone to collusion leading to mistrust
- So we need mechanisms that can help increase this trust in data, the saviours of such situations are:
 - Distributed Ledger Technology
 - Internet of Things
 - Machine Learning & Computer Vision



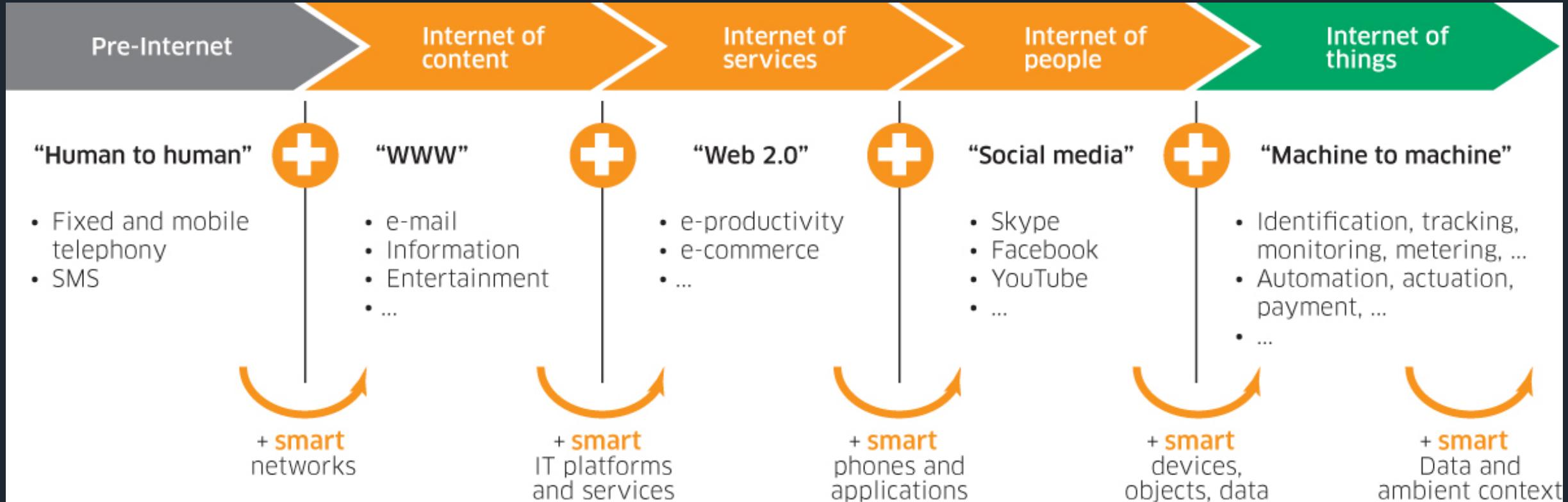
Physical vs Digital nature of transactions in various industries



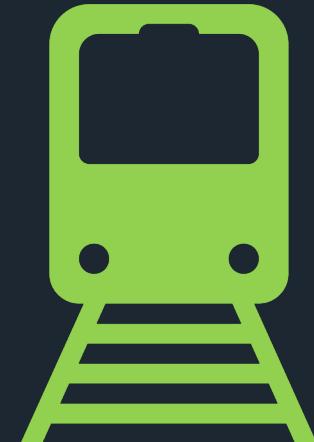
*Data shown for indicative purposes only

■ Physical Nature ■ Digital Nature

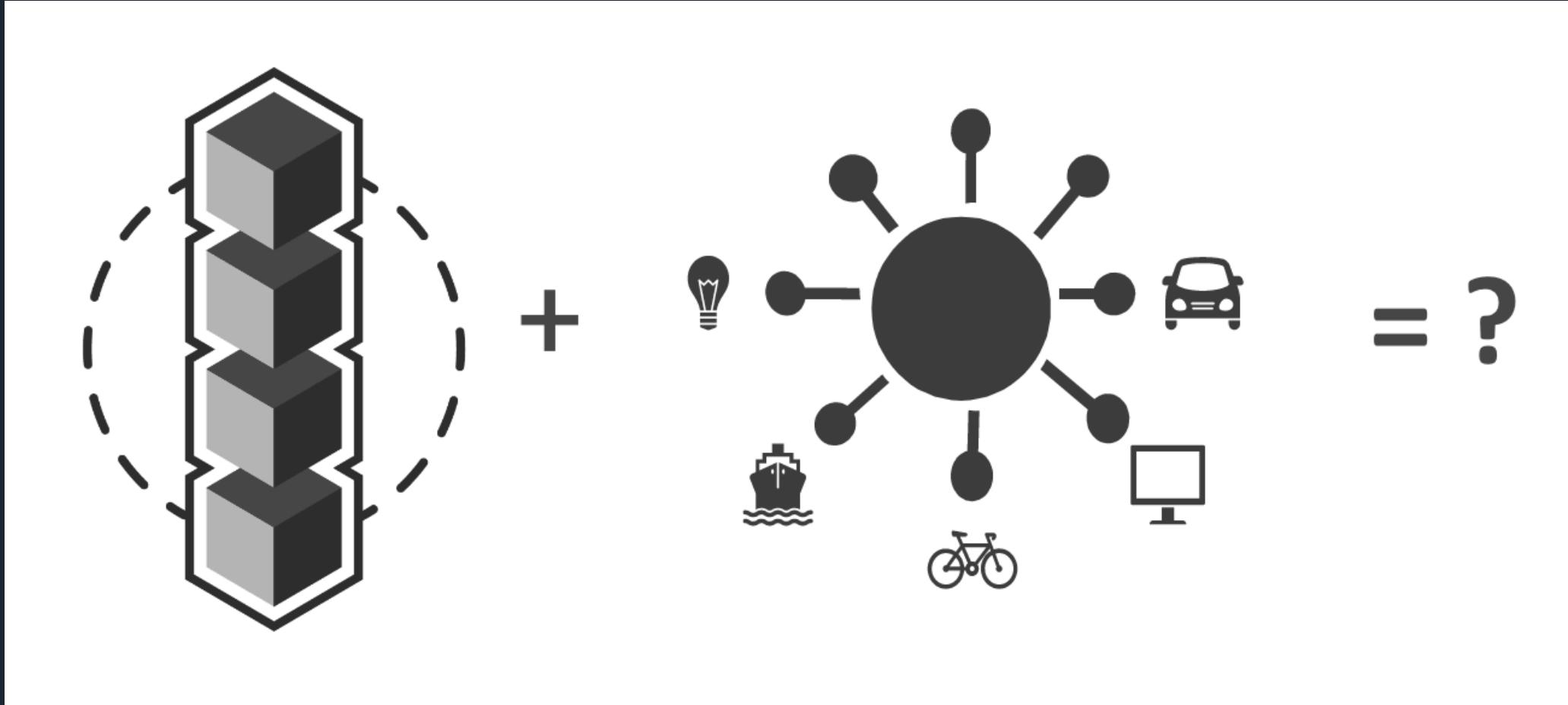
Evolution of Internet of Things



IoT Around us



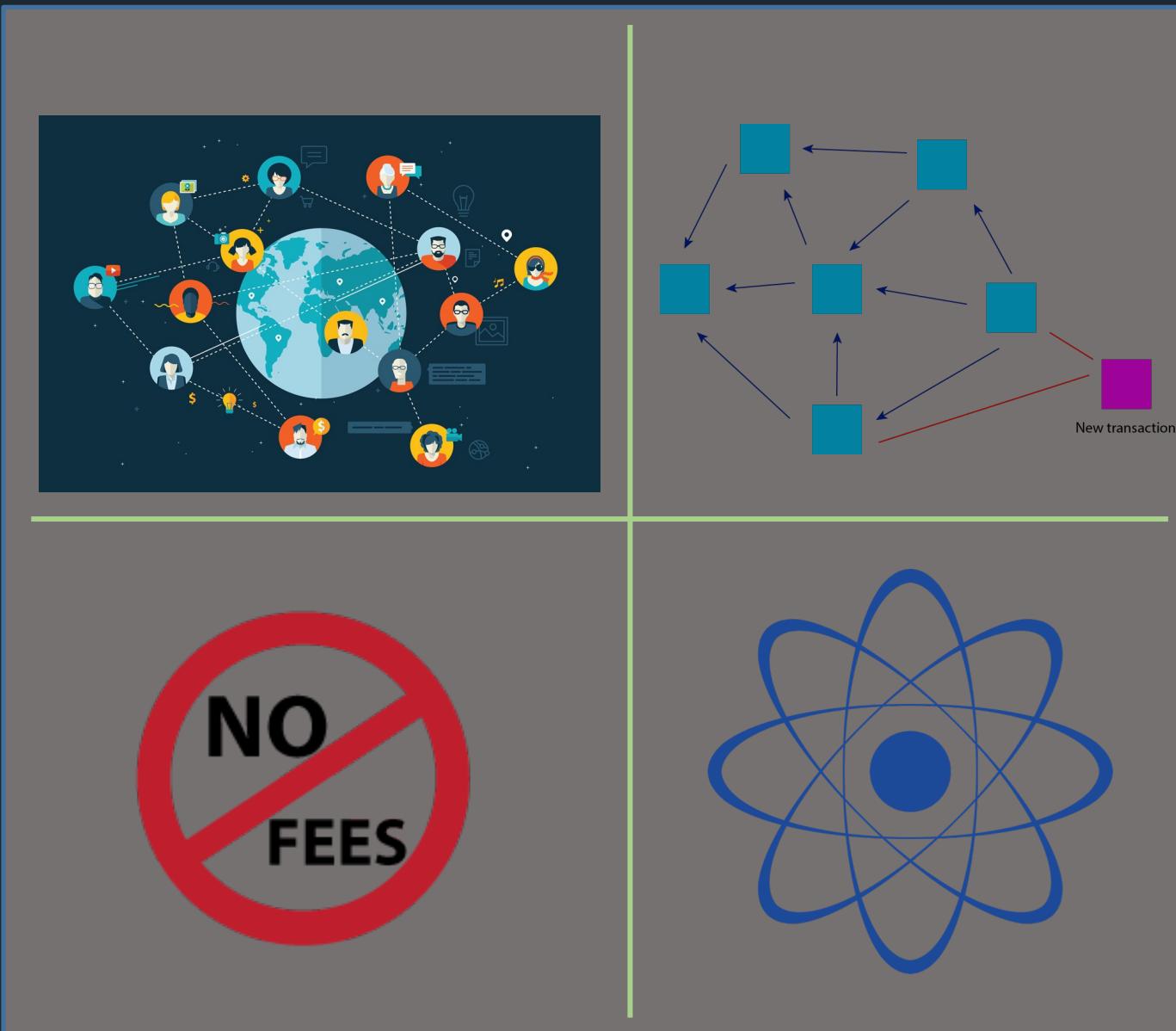
Distributed Ledger + IoT





Why IOTA

- Enabler for Shared Economy
 - Permissionless
 - Decentralized
 - P2P network
- Build to Scale : Uses a Tangle which is a Graph structure based Directed Acyclic Graphs instead of Blockchain
- No Fees: Incentivization does not require currency, to put your transaction on Tangle you need validate transactions from other's first.
- Low Resource Requirements: Works best with IOT and Machine to Machine transactions
- Secure Transactions and Quantum Resilient Cryptography

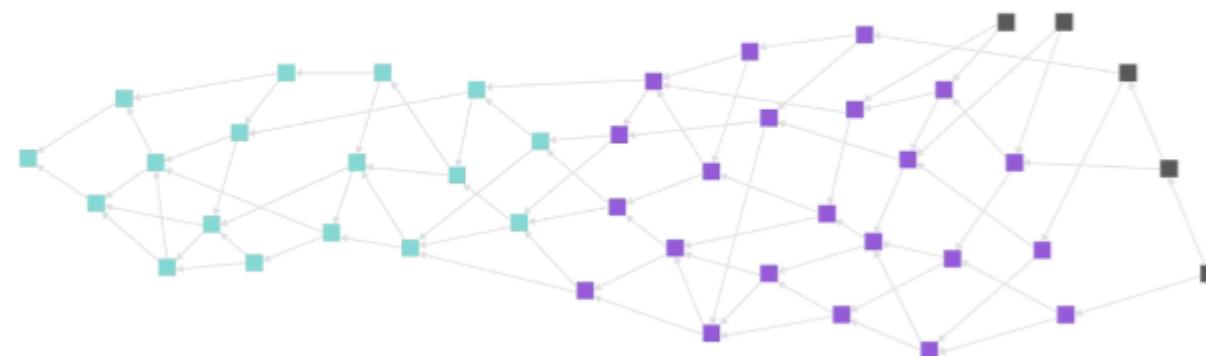




Blockchain vs IOTA – Data Structures



Blockchain



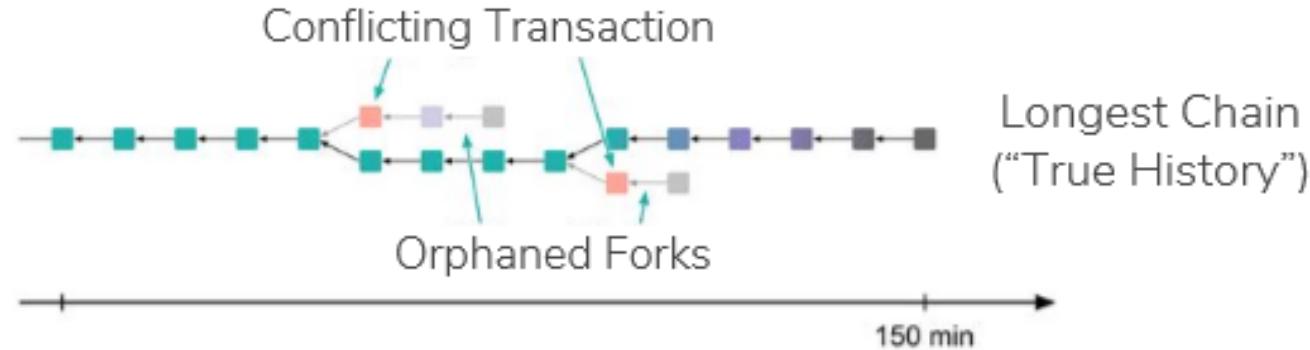
Tangle
(DAG - Directed Acyclic Graph)



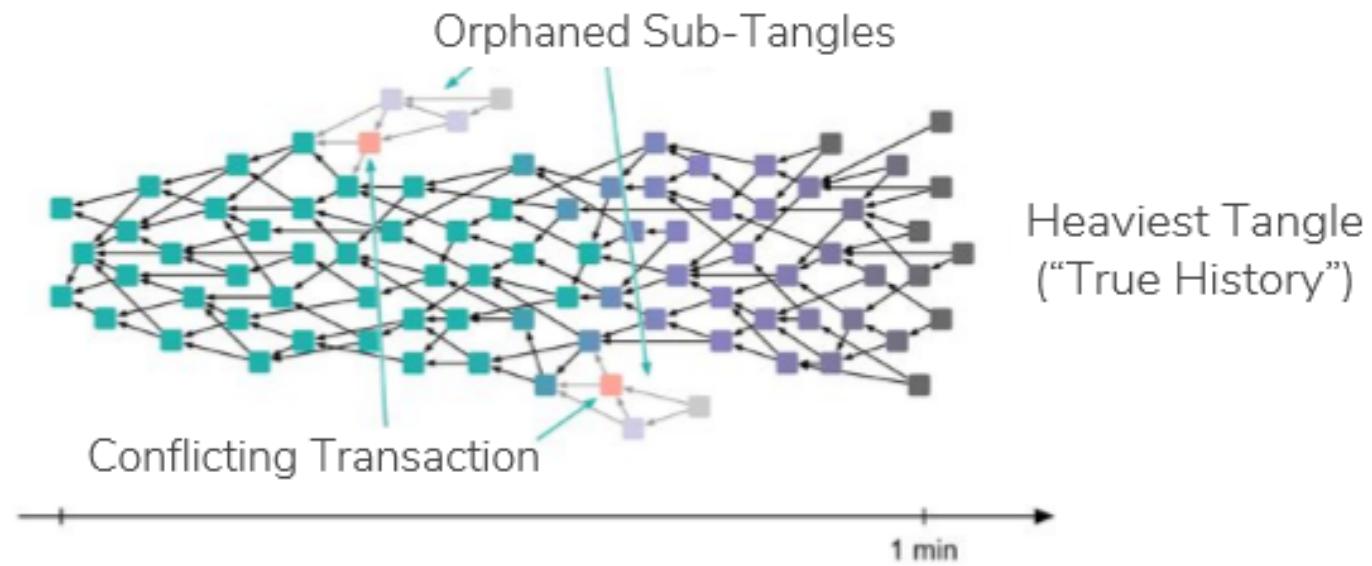
Blockchain vs IOTA - Consensus



Blockchain

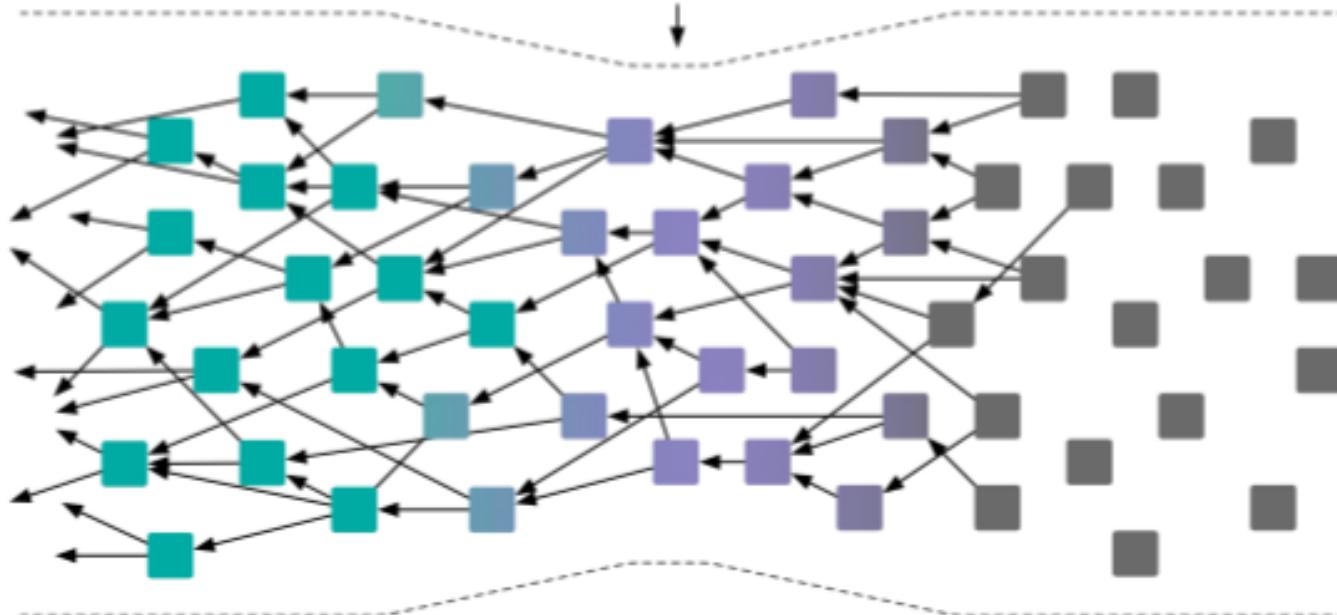


IOTA Tangle





The IOTA Tangle



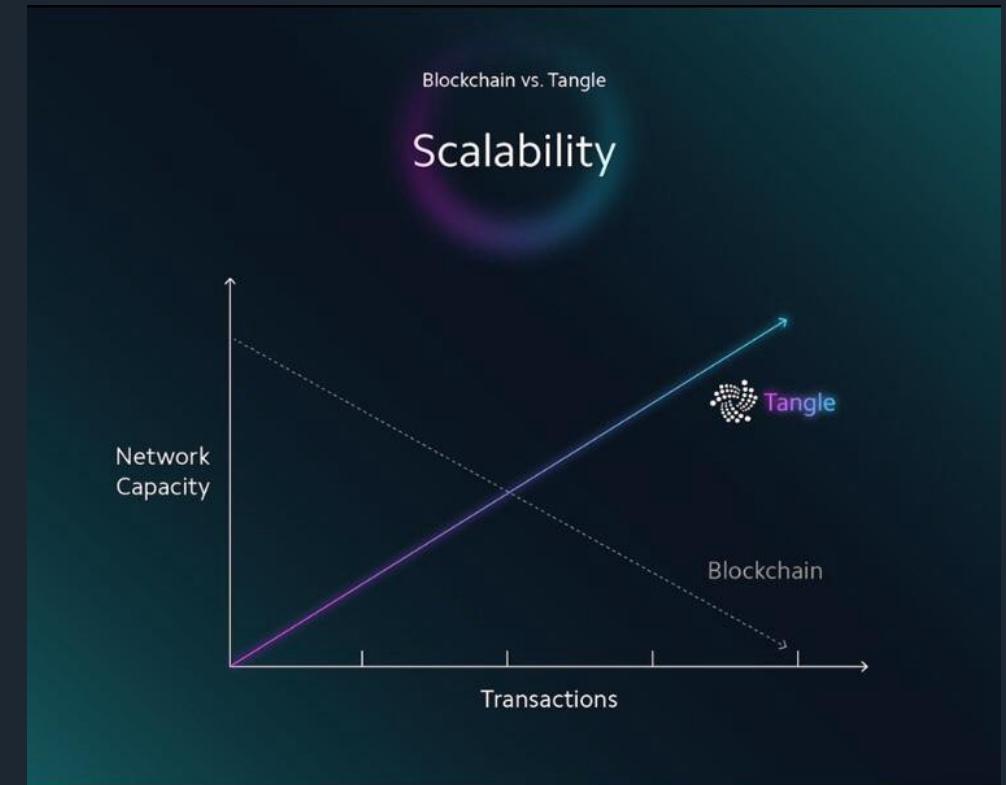
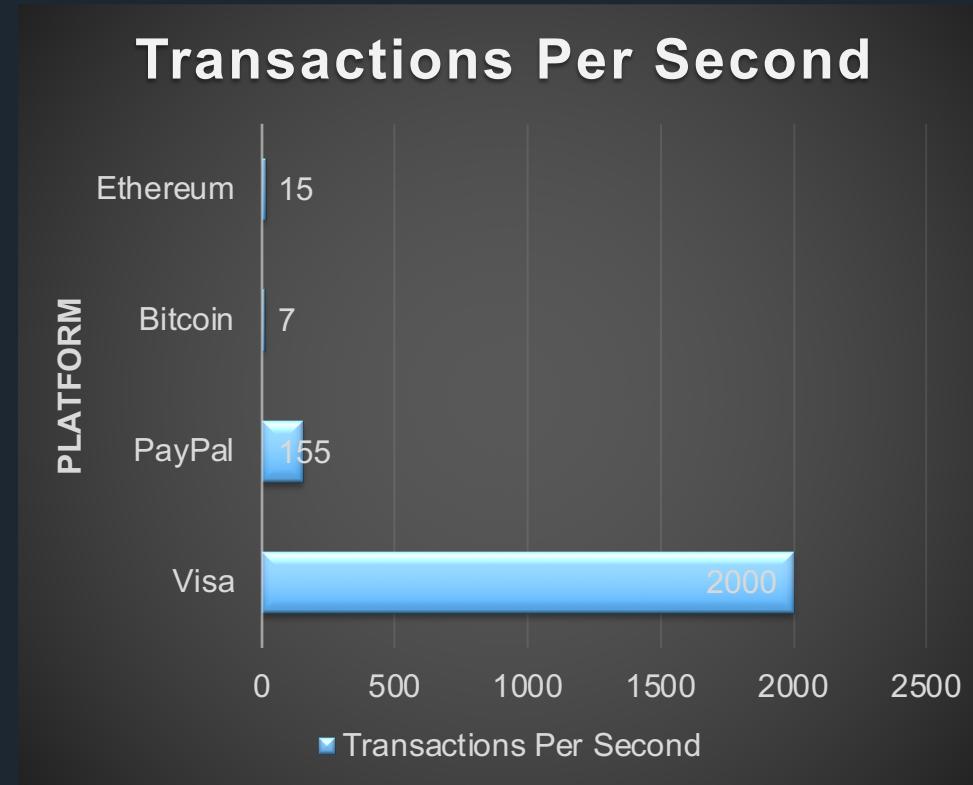
Each **Vertex** represents a transaction (Squares)

Each **Edge** represents an approval (Lines)





Blockchain vs IOTA - Scalability

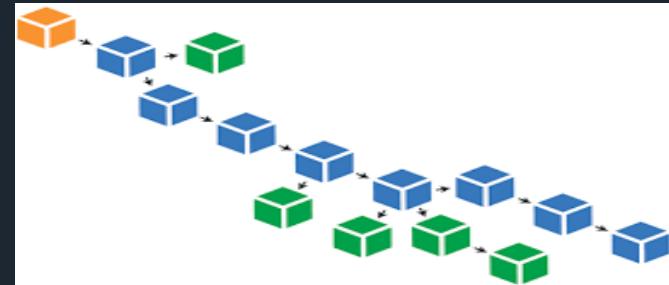




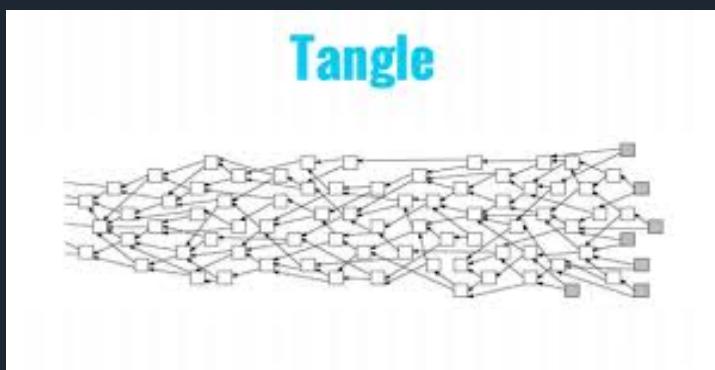
Blockchain vs IOTA - Transactions

Blockchain

- Predetermined **Block Size**, restricts number of transactions that can be added
- **Miners** generate and validate the Blocks for **incentive**, which is collected in the form of **transaction fee**



Tangle (IOTA)



- Instead of storing transactions on limited size blocks, each transaction lives on its own as a vertex in **DAG (Directed Acyclic Graph)**
- Each new transaction help is validation of other two transaction causes throughput to increase with usage surge
- **No miners.** Hence, **no transaction fee**



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THINKING BREAKTHROUGHS

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A black and white photograph of a person's hand holding a pen, poised as if about to write. The background features a worksheet with large, stylized, handwritten-style text. The main title at the top is 'WHY? WHAT?'. Below it are several other questions: 'which?', 'when?', 'WHERE?', 'WHO?', and 'How?'. Each of these words is surrounded by numerous smaller, faint, and slightly overlapping text boxes containing the same words in different sizes and orientations, creating a dense, textured appearance. The overall theme is inquiry or questioning.