

Blockchain and You

A Relationship that makes sense (?)

Introduction

- IOTA (non-profit Foundation in Germany)
- 5 Years in the Blockchain space
- 4 Blockchain Startups (Switzerland, UK, Norway, Germany)
- Not delusional (I hope)

We are Here!



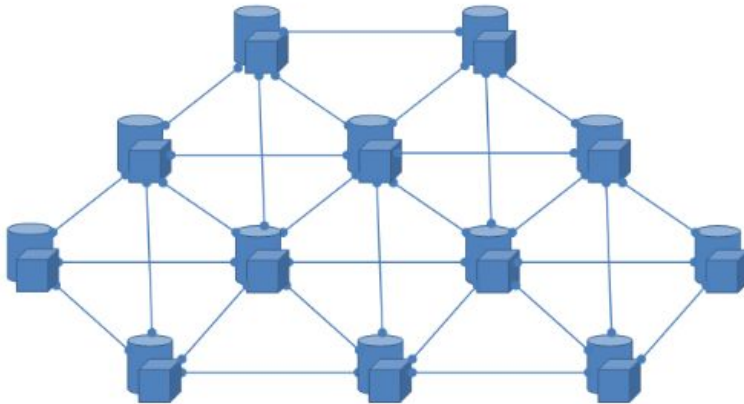
What is Blockchain?

*“Blockchain is a **decentralized, peer-to-peer network** where participants maintain an **append-only database** where global consensus is reached on the **validity of new datasets.**”*



What is Blockchain

1. Blockchain is a decentralized, Peer-to-Peer Network

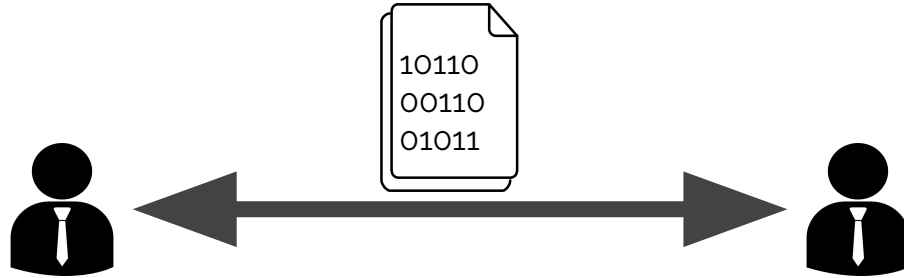


Decentralized



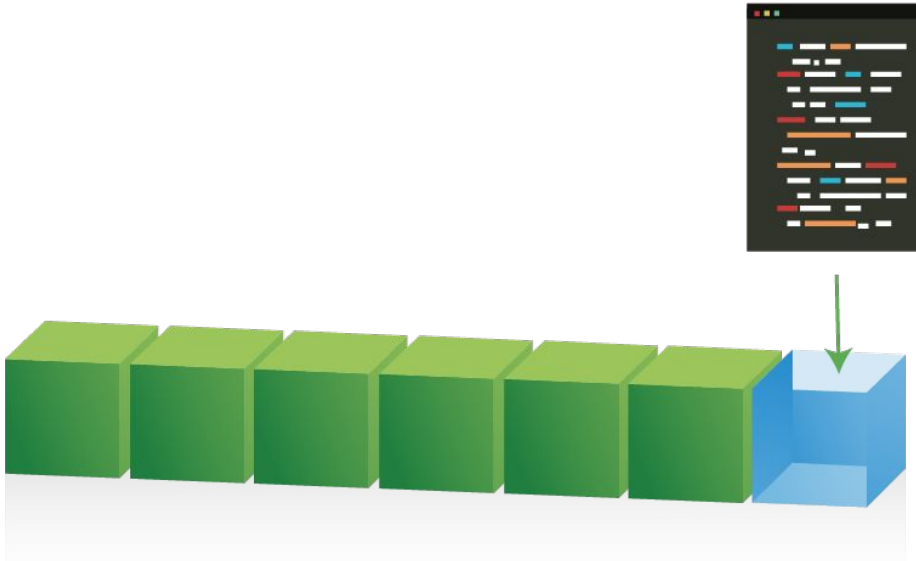
What is Blockchain

2. All data is shared among all the peers (can be encrypted)

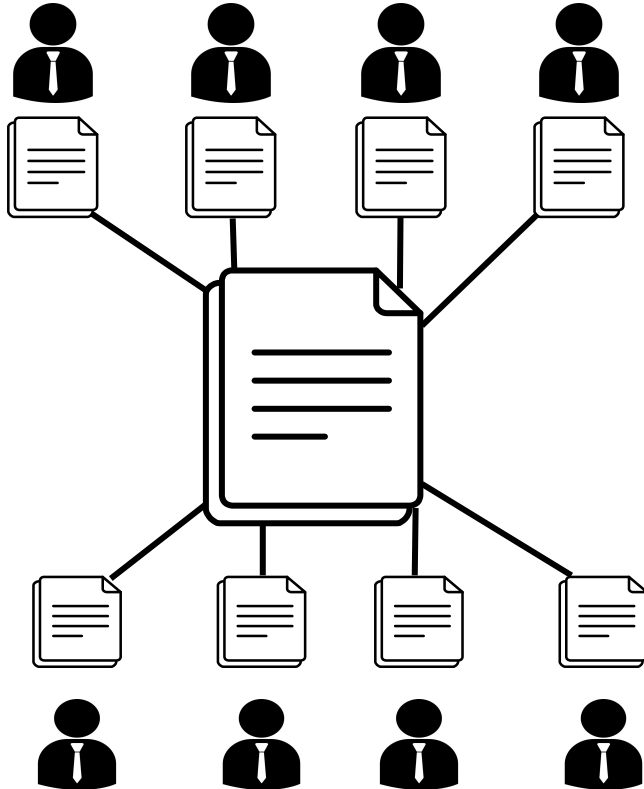


What is Blockchain

3. The data is being validated via some consensus mechanism and the proof is then input into a Block, the Block is appended to the Blockchain and secured.

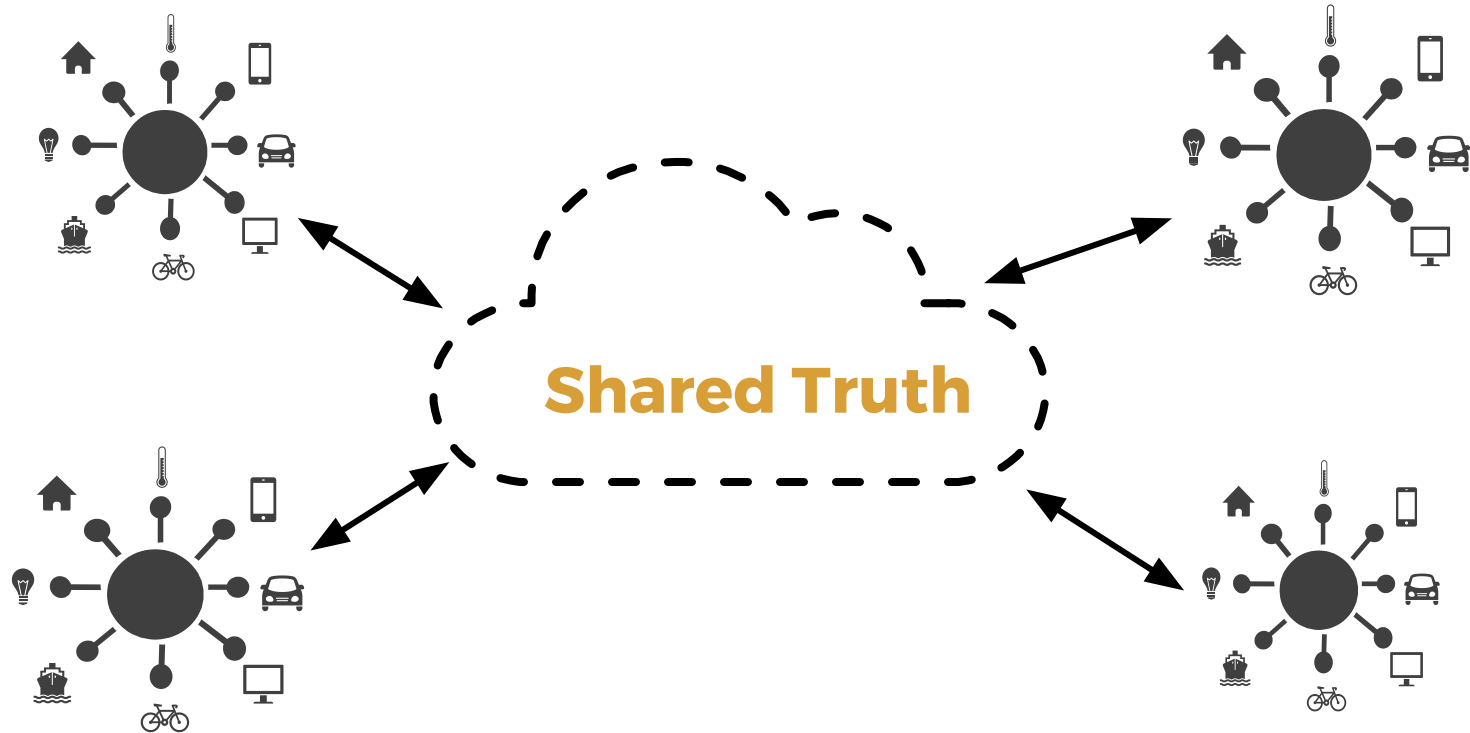


Global Consensus



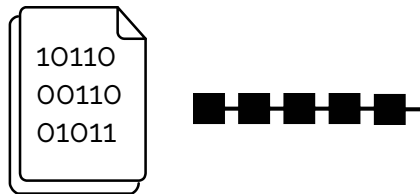
- Everyone maintains the same copy
- Data cannot be changed once confirmed
- Full Transparency
- Low Trust Requirements

Single Source of Truth



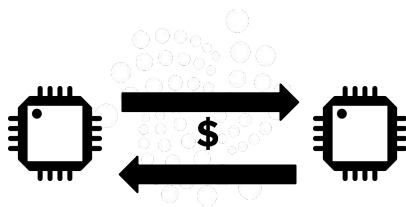
More than just Transactions

Data Security



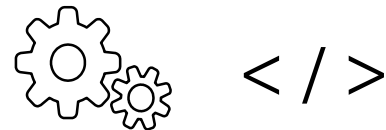
Data Security. Blockchain is a perfect solution to store data due to the high levels of security, end-to-end verifiability and guaranteed integrity.

Payments



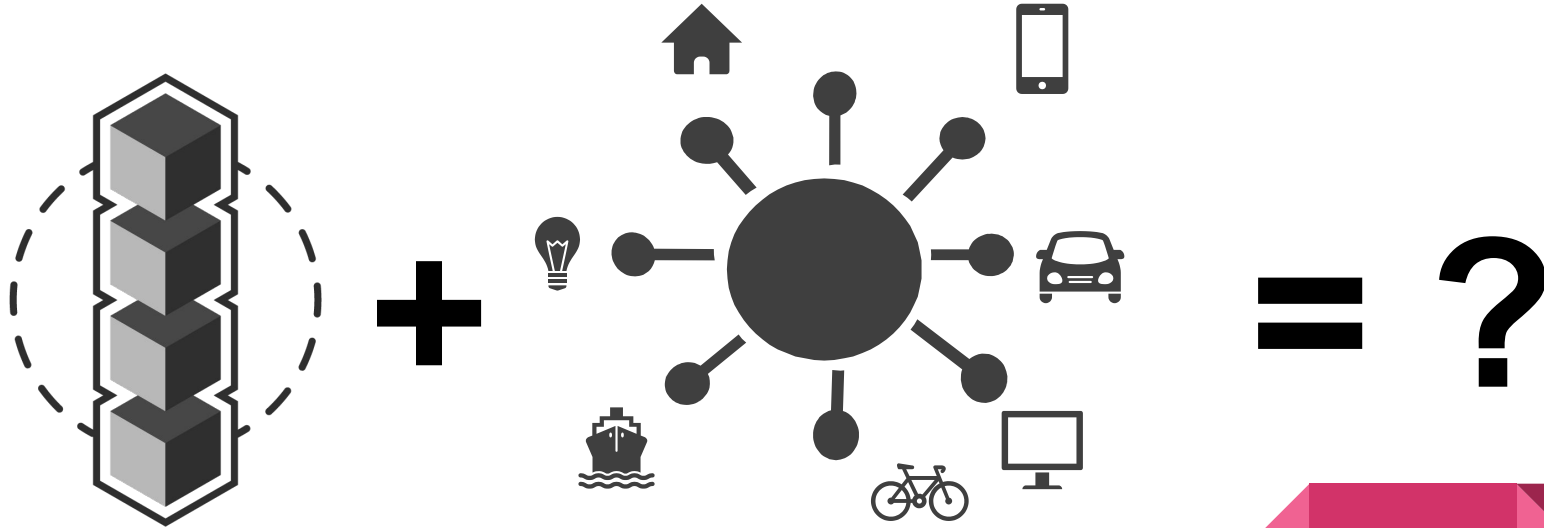
Transactional Settlement. Main purpose of a Blockchain is transactional settlement between two parties (can be humans or machines).

Automate



Smart Contracts automate business processes "trustlessly".

IoT + Blockchain

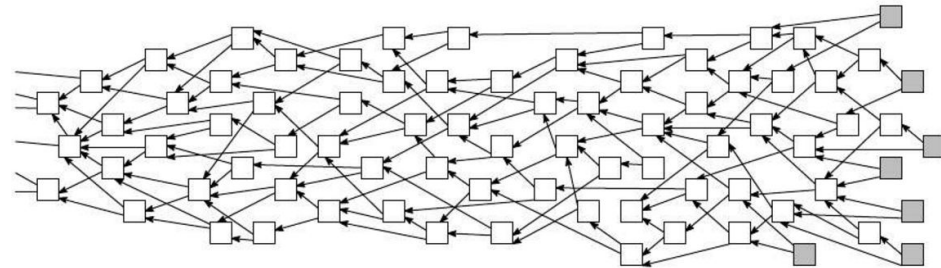



We are not quite there yet...

- No Production-running Applications today
- Blockchain has technological limitations (scalability, transaction fees, huge resource requirements)
- Oftentimes no social consensus among the nerd
- Inflated, delusional thinking that Blockchain will conquer the world tomorrow

But: We're making progress

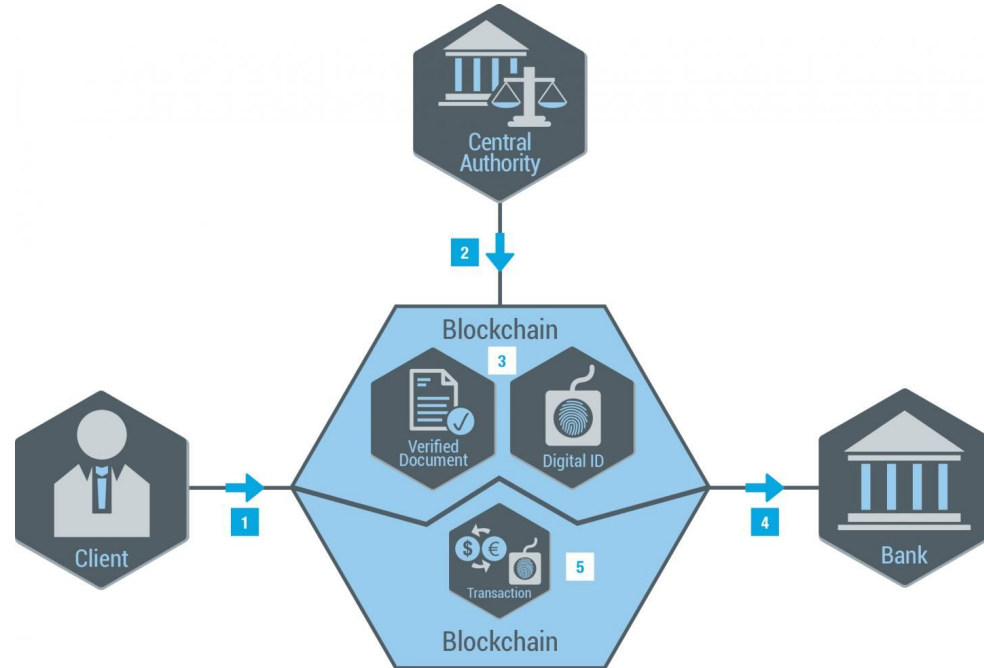
- New, scalable architectures specifically for IoT (e.g. IOTA)
- New Working Groups focused on the intersection of IoT and Blockchain (2 in the US, 1 in Europe)
- Maturity and Realization of Potential / Limitations



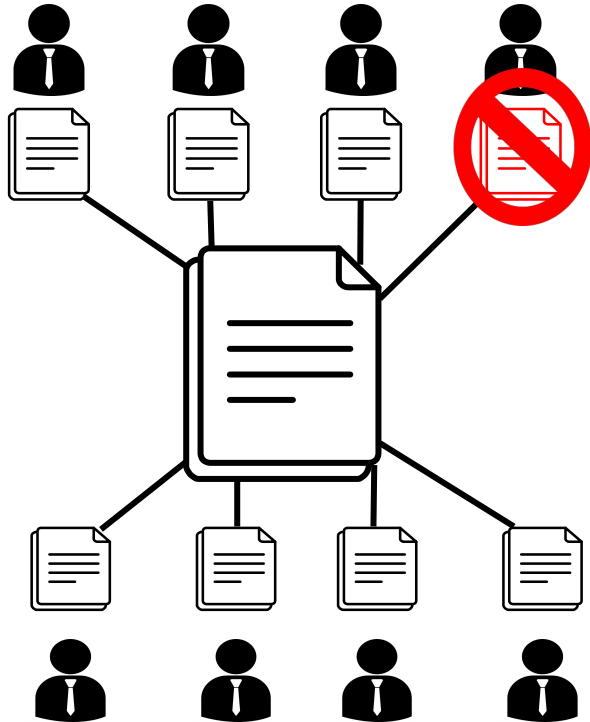


A Plethora of Use Cases

Know-Your-Machine & Identity Management

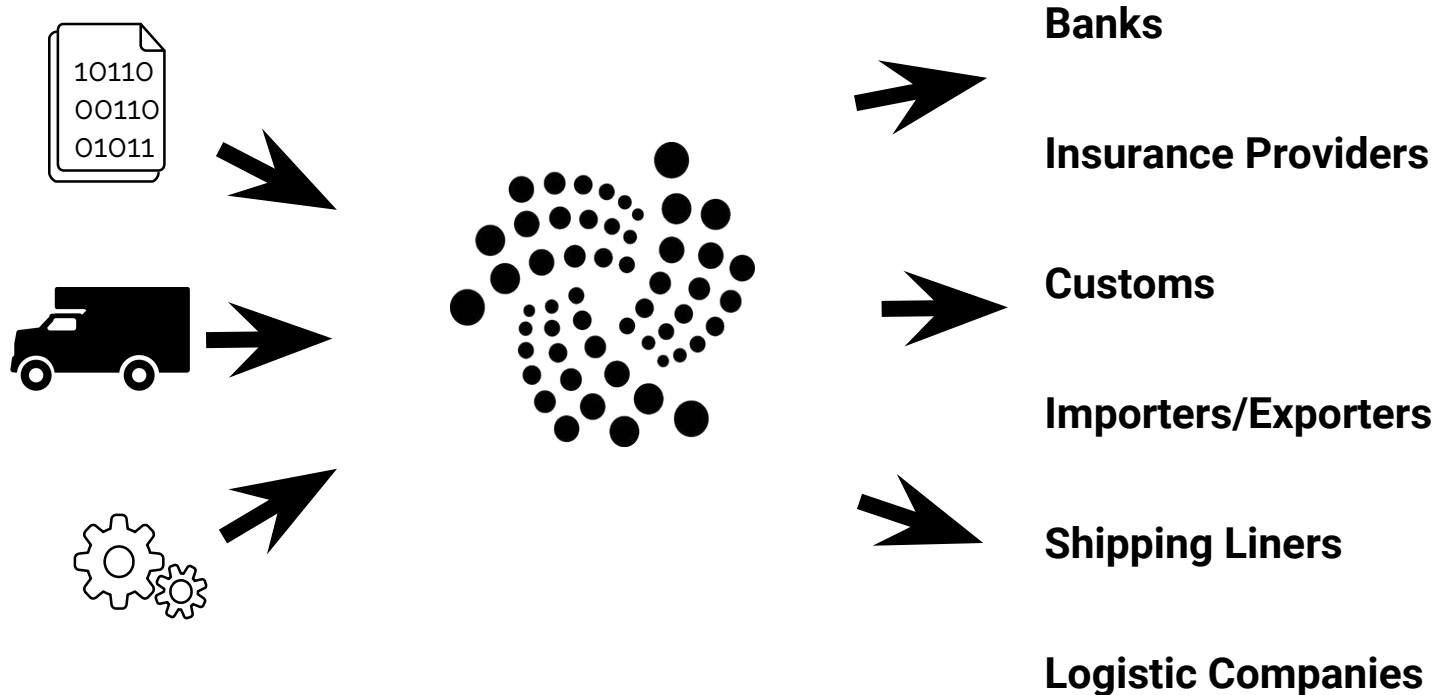


Data Integrity




- Over-the-Air Updates
- Odometer & Tachometer (e.g. CarPass)
- E-Health & Insurance
- Mission Critical Infrastructure
- Liability Management

Logistics: Chain of Custody



eMobility: Wallet in the Car





Our Vision of IoT + Blockchain



Towards Smart Decentralization



Dumb Decentralization

- “Dumb” devices
- No connectivity / sharing of data
- Human mediators



Smart Centralization

- Smart devices, dumb network
- Cloud as decision maker
- Single point of failure



Smart Decentralization

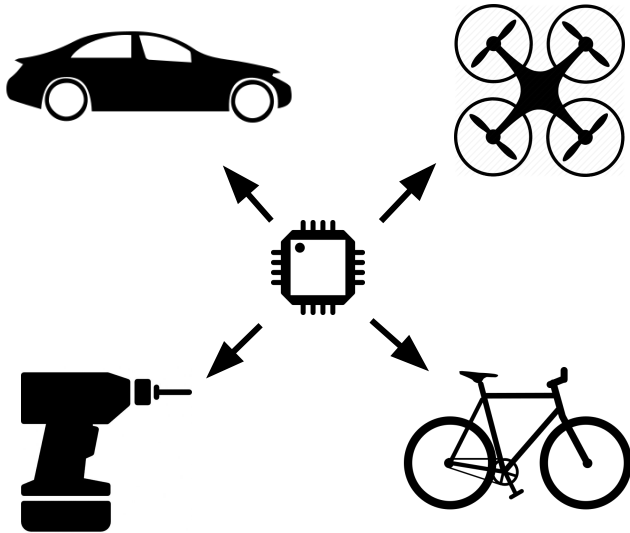
- Data and Resource Sharing
- Local Real-time Decision Making
- Smart adaptive and intelligent network

Economy of Things

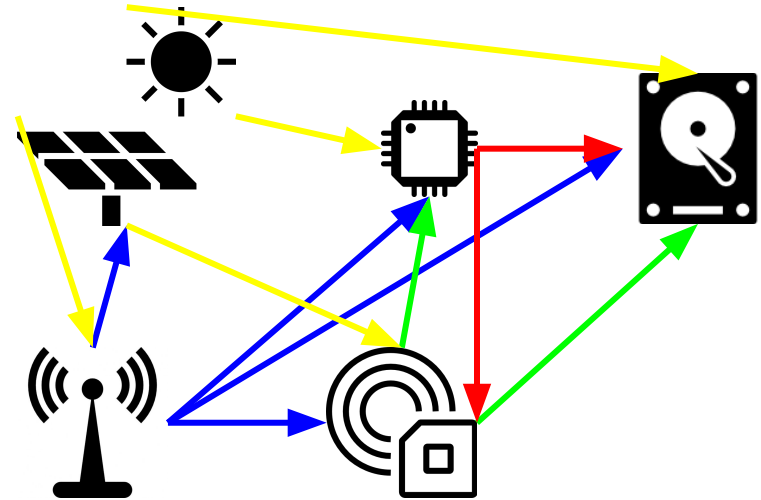


Machine Economy

Anything with a chip in it can be leased



Devices trade resources among each other



Questions?

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