ORACLE

What Is Blockchain

And How You Can Implement It, Easily?

May 2022

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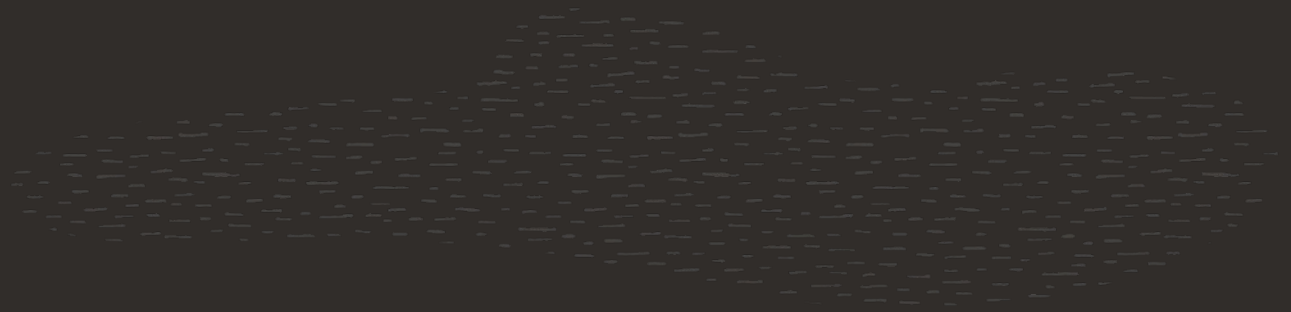

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What is blockchain?

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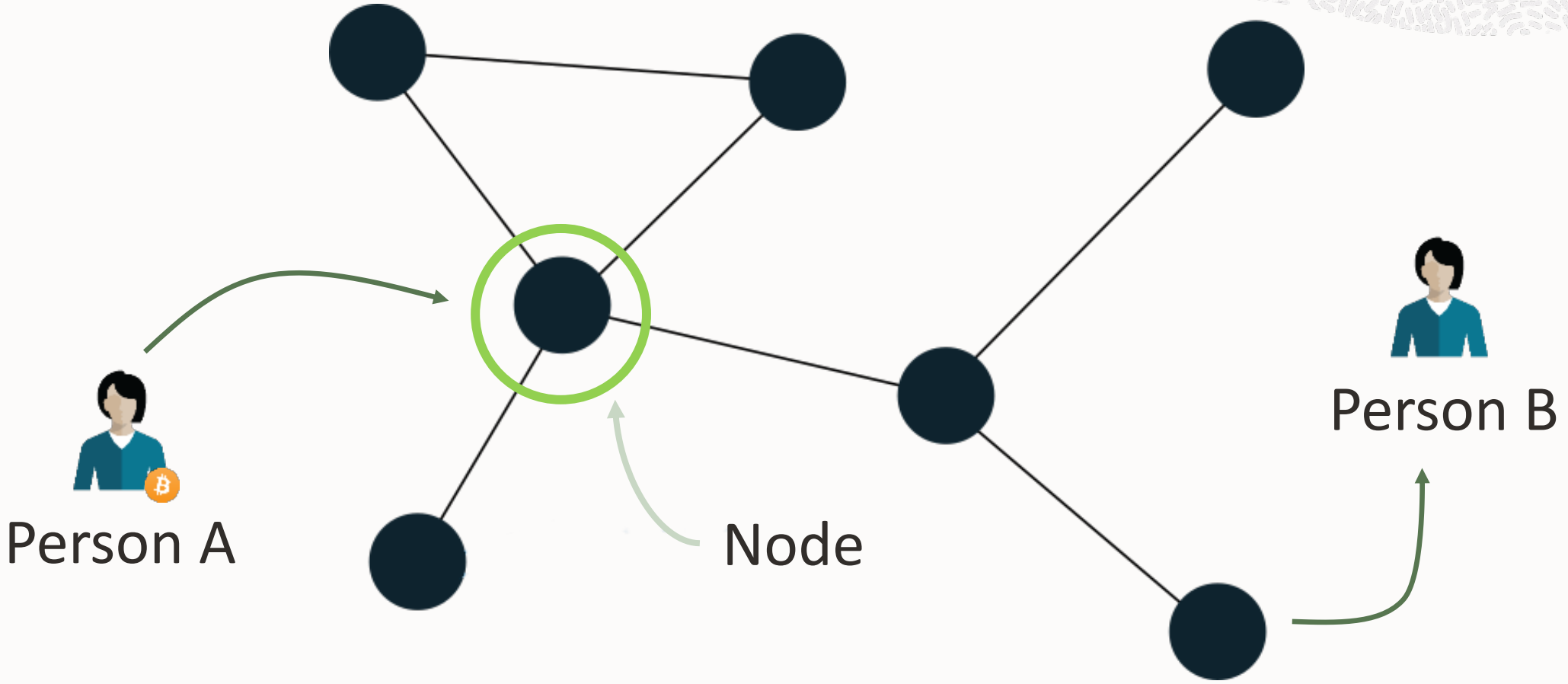
Peer-To-Peer Network



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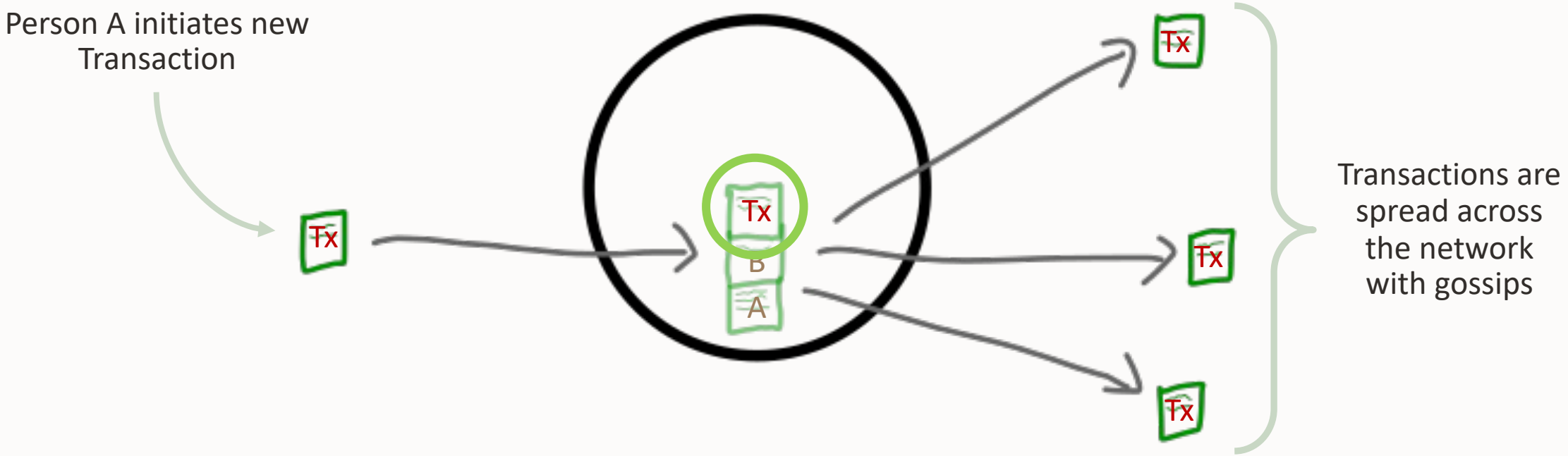
Illustrations: learnmeabitcoin.com

The Node



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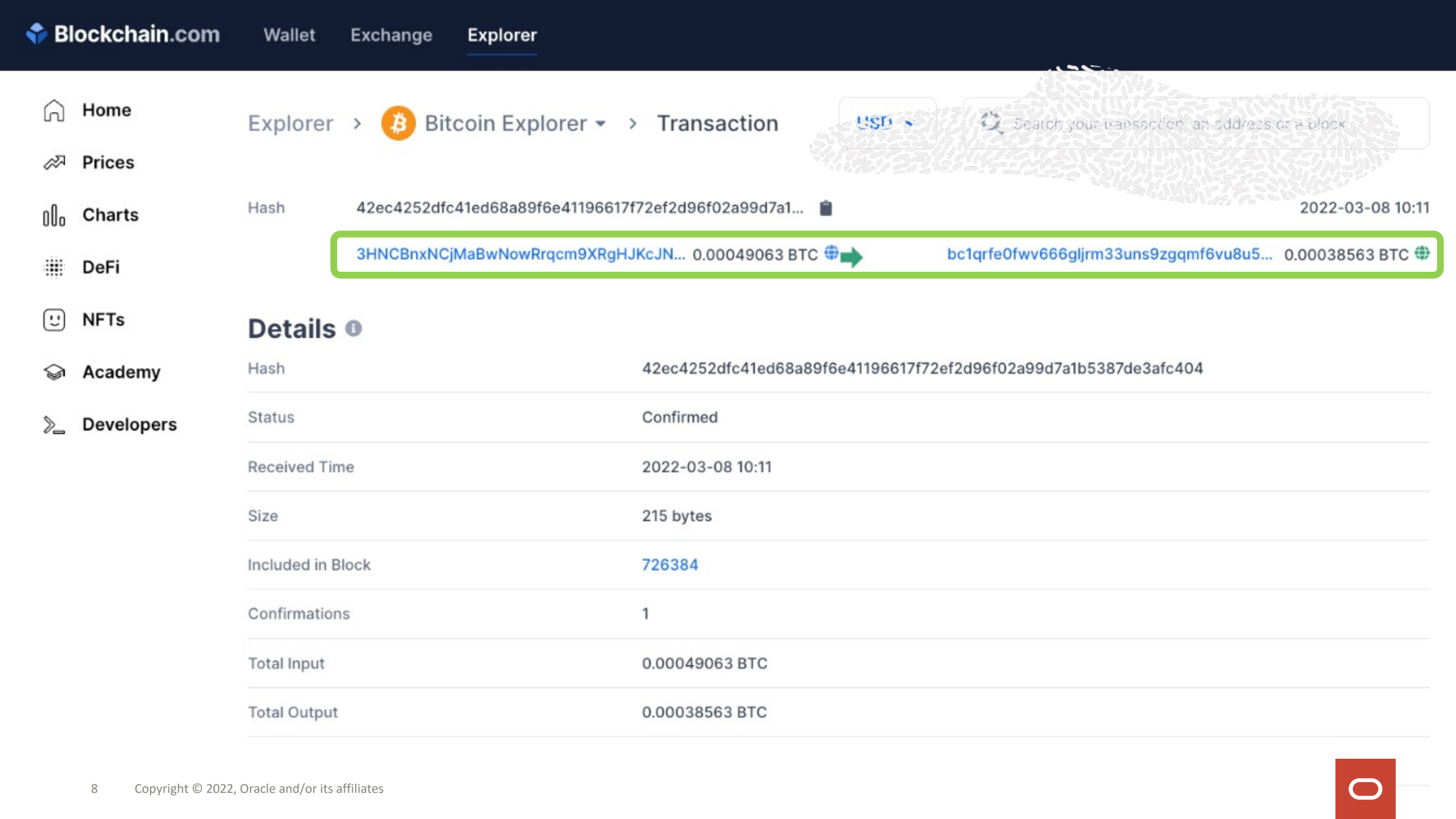

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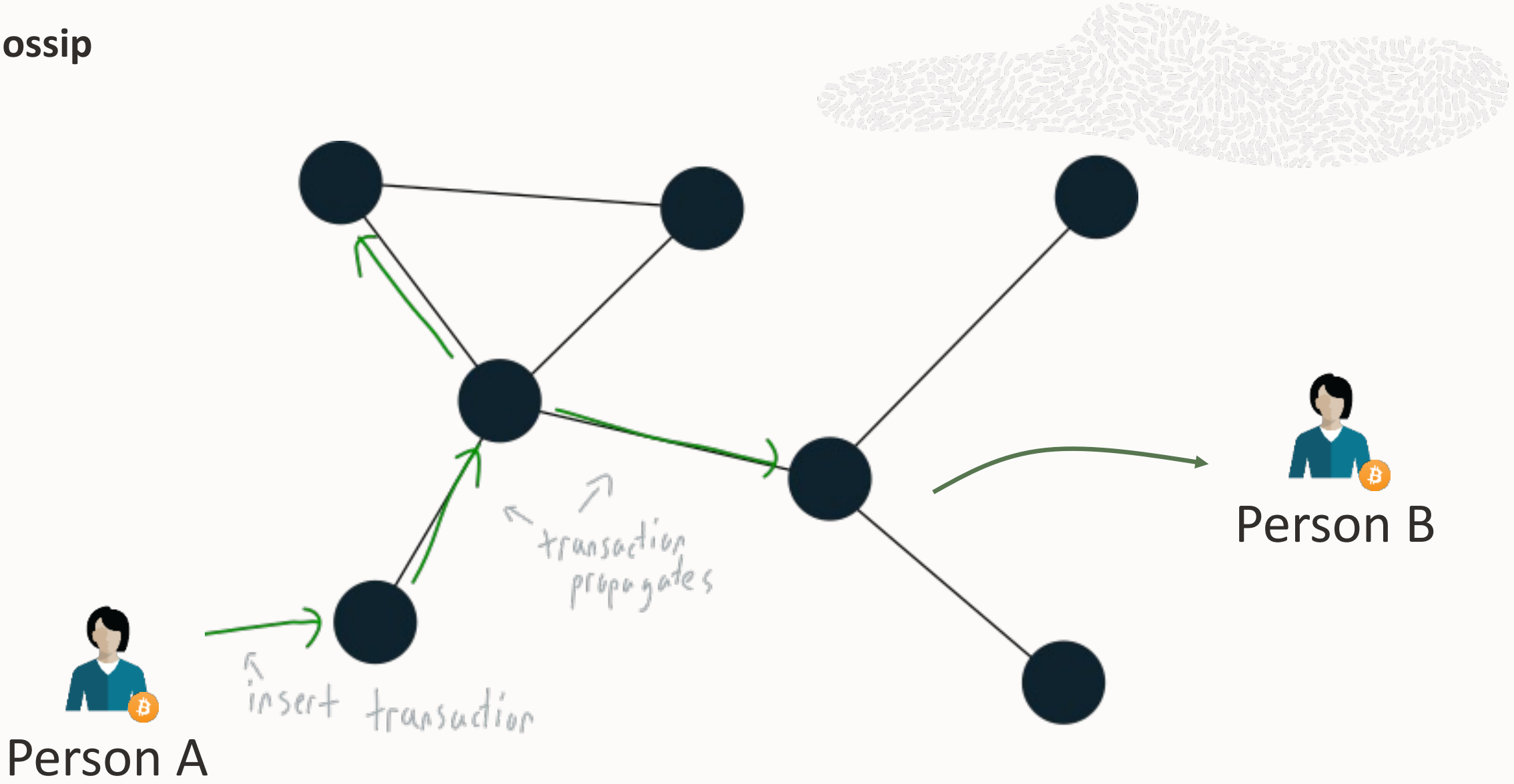
Gossip



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Consensus (1)

memory pool

blockchain

Pool of many **proposed** and **unconfirmed** transactions in between different users

Ledger of **ALL confirmed** transactions

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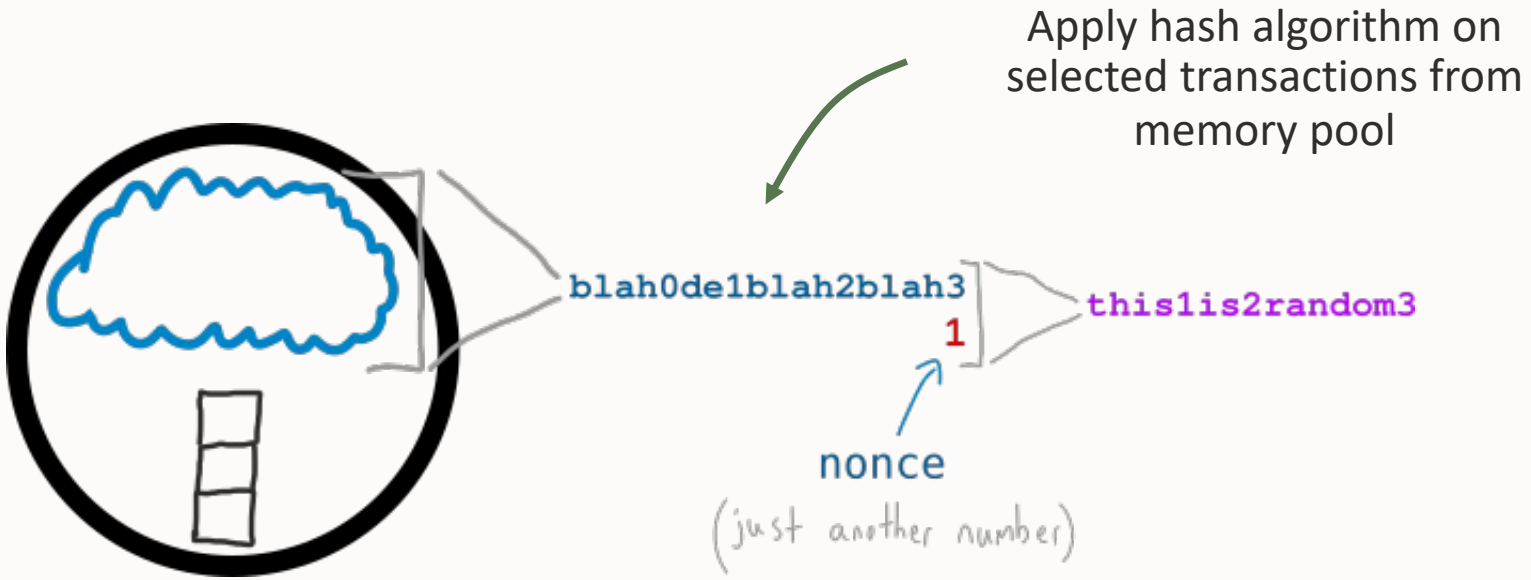
Consensus (2)



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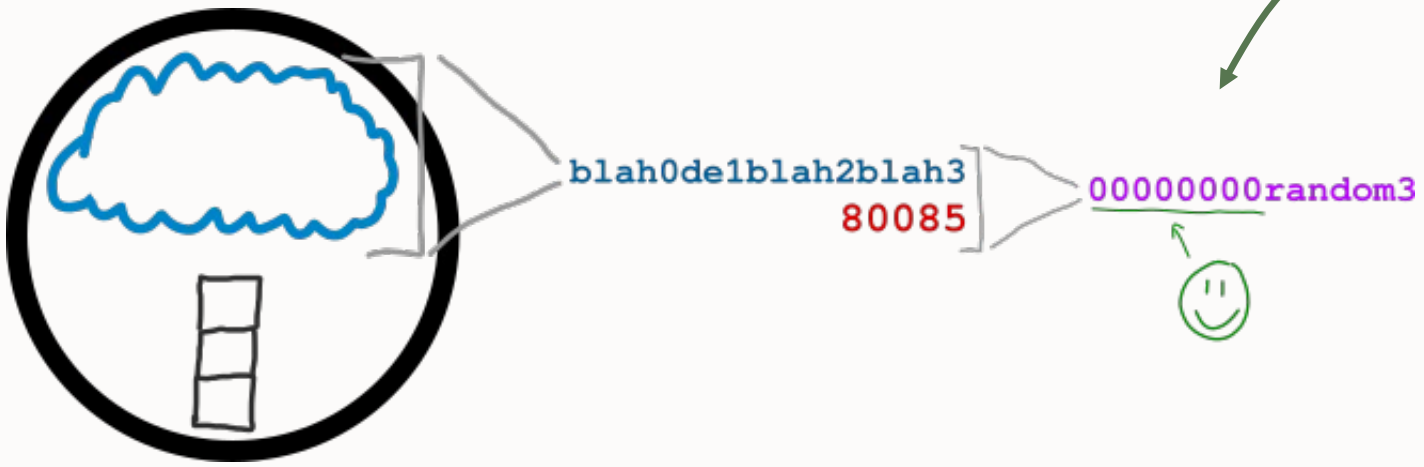
Consensus (3)



Whoever creates random signature with leading zeros **wins the prize** and **creates new block** of transactions

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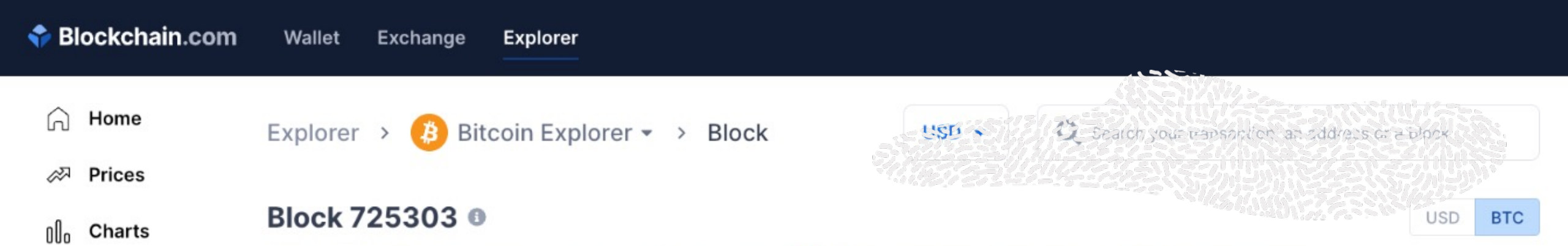

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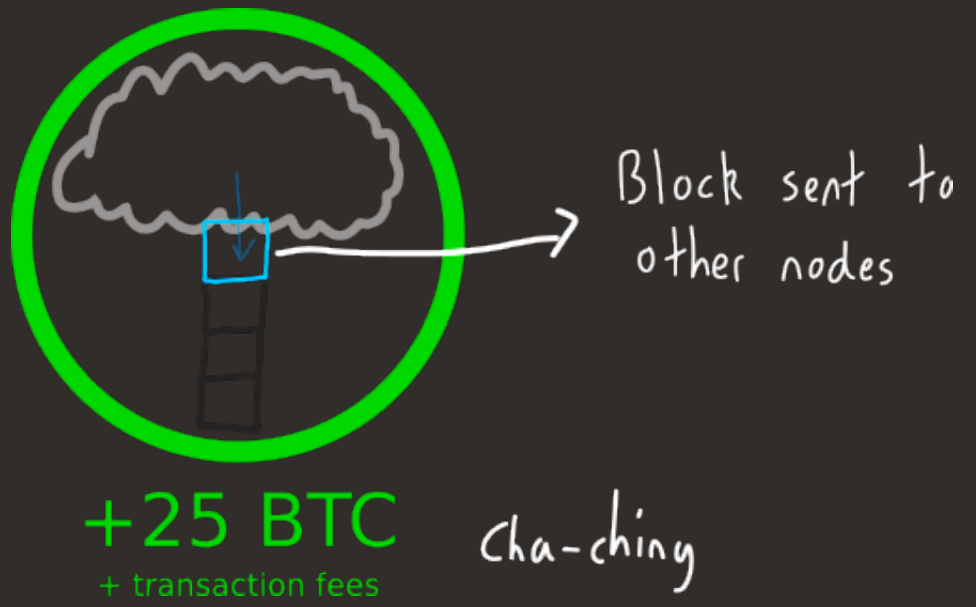
Consensus (4)



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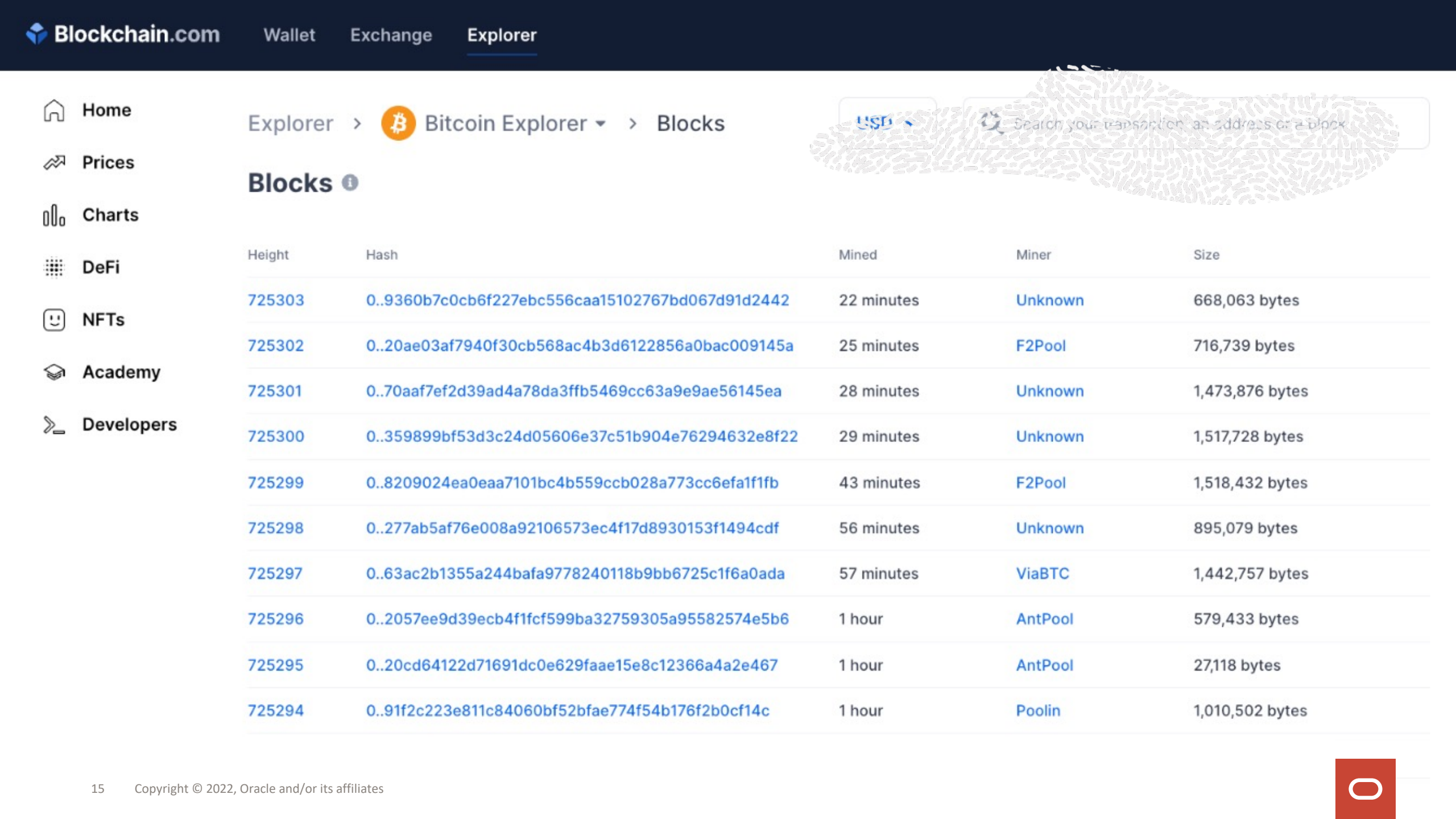

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What is the Foundation of Blockchain?

Blockchain is a distributed *ledger*, shared across a public and/or private networks

Public networks operate on *consensus* protocols (PoW, PoS, PoET…)

Each *node* in the network holds a copy of the ledger, no single point of failure

Blockchain structure is mathematically encrypted and added as a new block

Blockchain can be configured in multiple ways to meet the objectives of a use case

Decentralization; Cryptographic security; Transparency; Immutability

The ledger contains *smart contracts* for automation of events

Blockchain, in general, prevents fraud or double spending

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Why to use blockchain?

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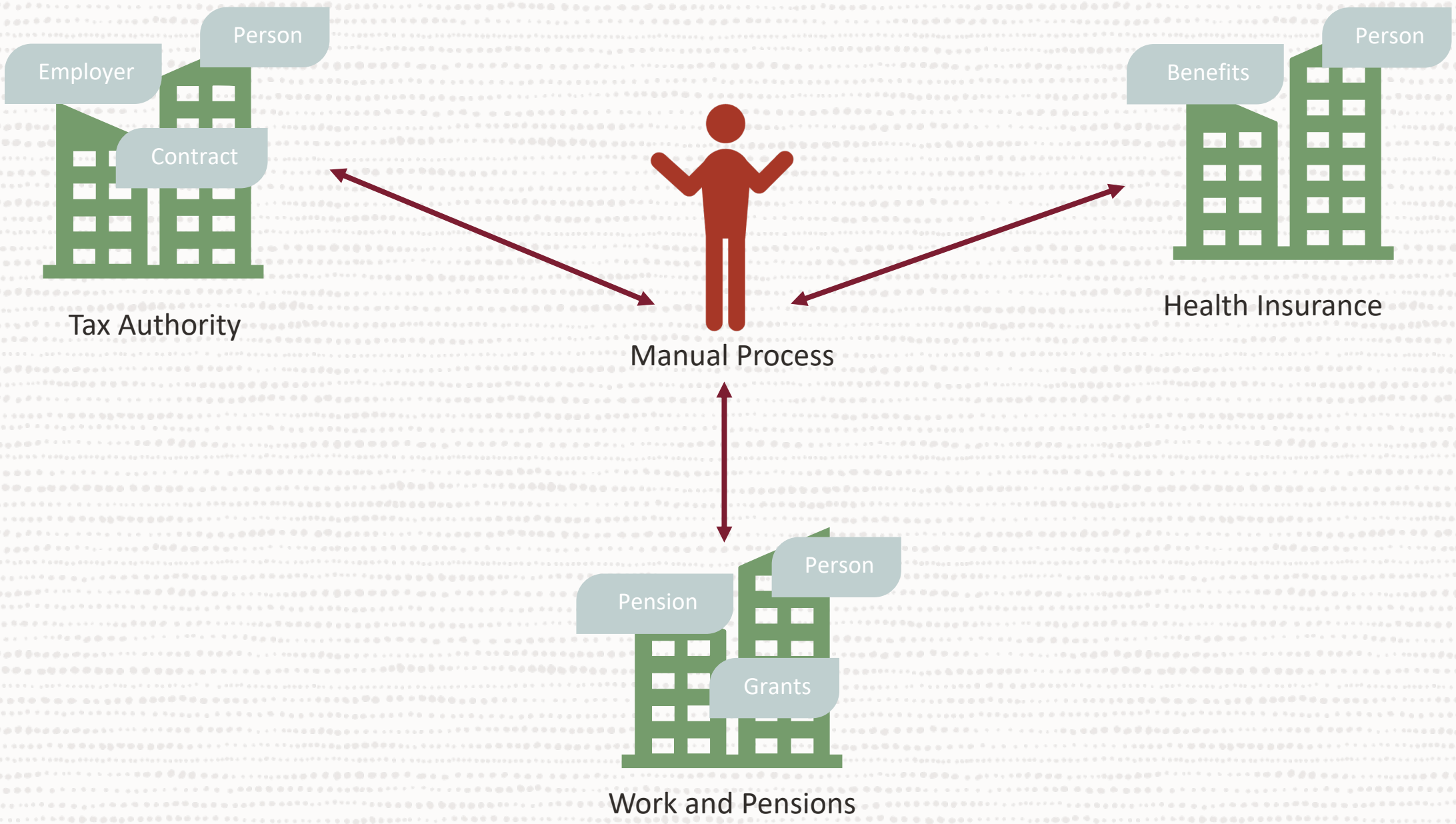

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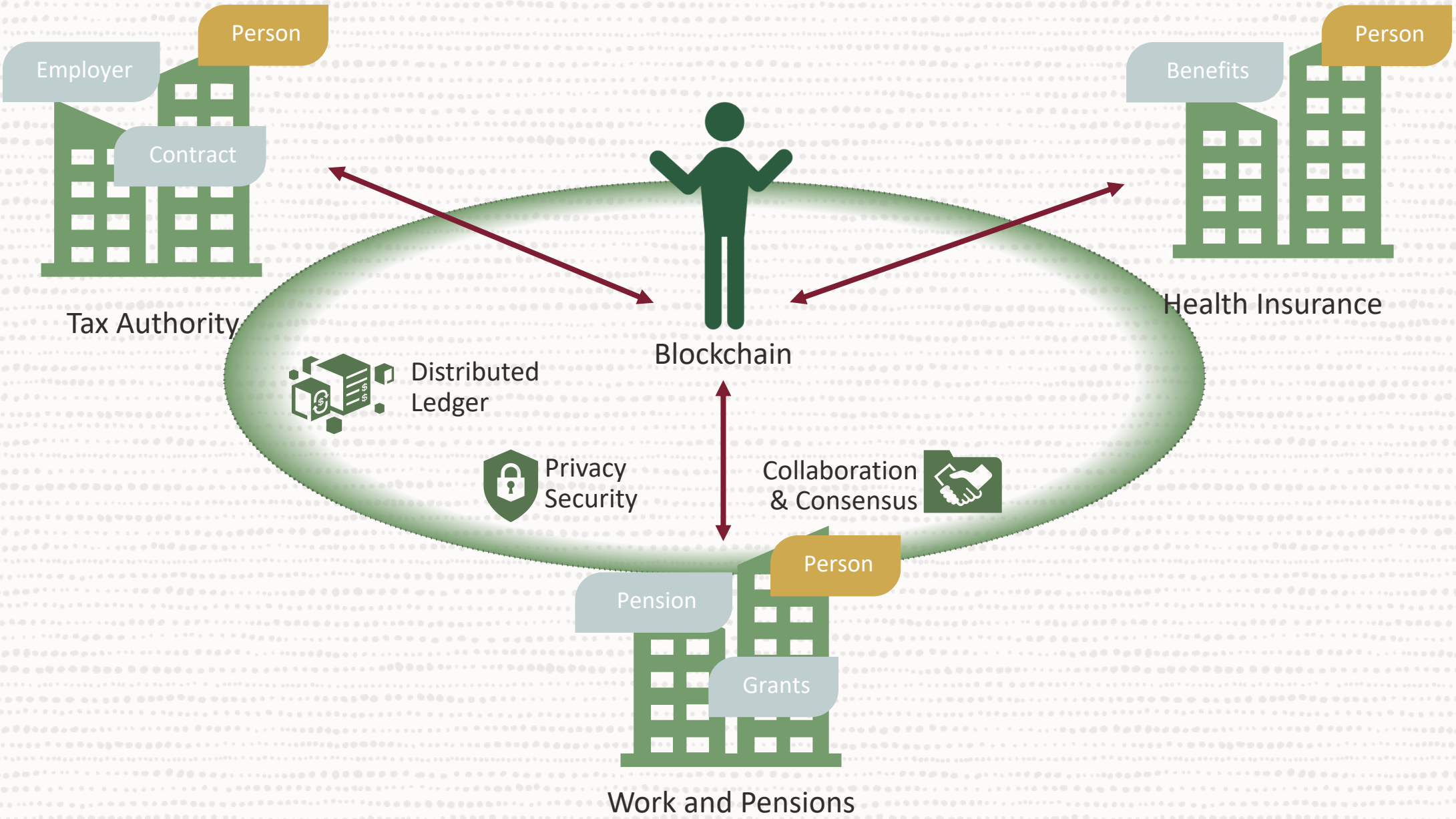

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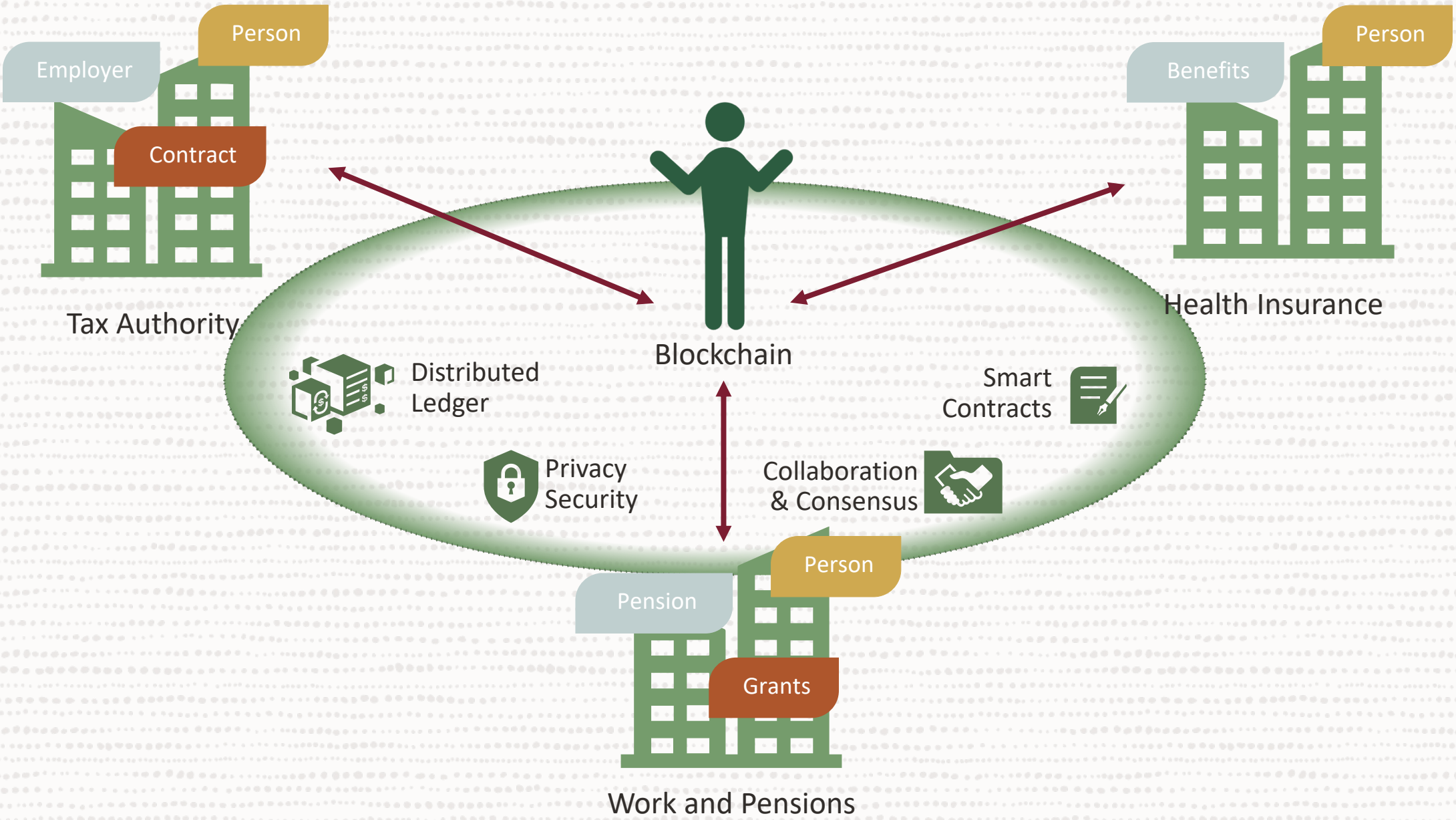

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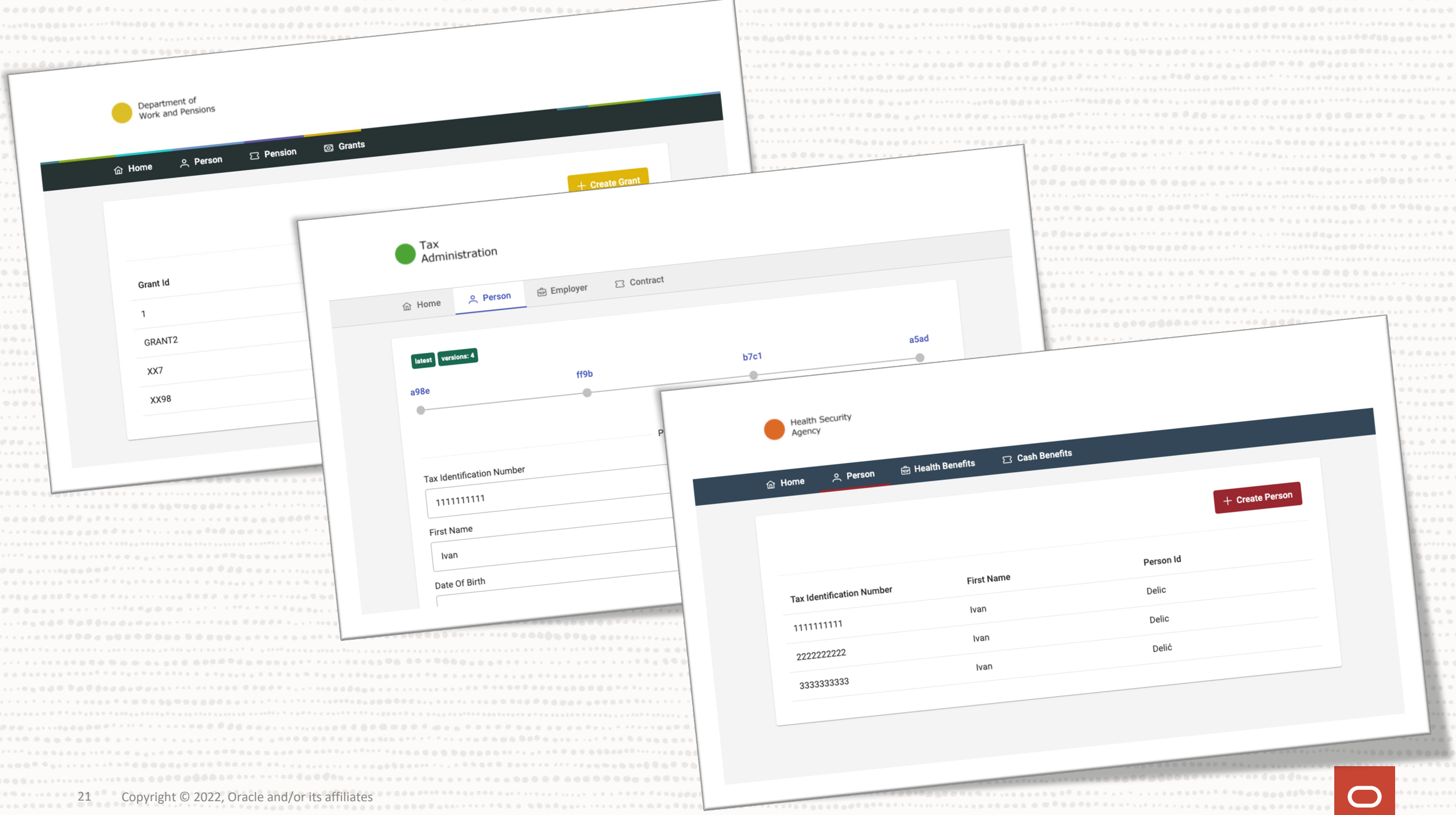

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1
Transparent Distributed Database
Share data by syncing systems in the real time, complementing blockchain to the existing systems. Tamper-evident data makes it almost impossible to change or delete.

2
Real Time Data Insight
Apply analytics across all organizations since with blockchain you have holistic view on the data. Distributed ledger enables single shared source of truth. It protects against fraud among participants

3
Smart Contracts
Automate business processes in between different Organizations to remove bureaucracy and speed up economy. It leverages trust in participants and business processes.

4
Secured by Cryptography and Consensus
Blockchain leverages advanced cryptographic concepts. Only those authorized with keys can view the data. Blockchain stores auditable historical records.

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How do we build blockchain?

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HYPERLEDGER
FABRIC

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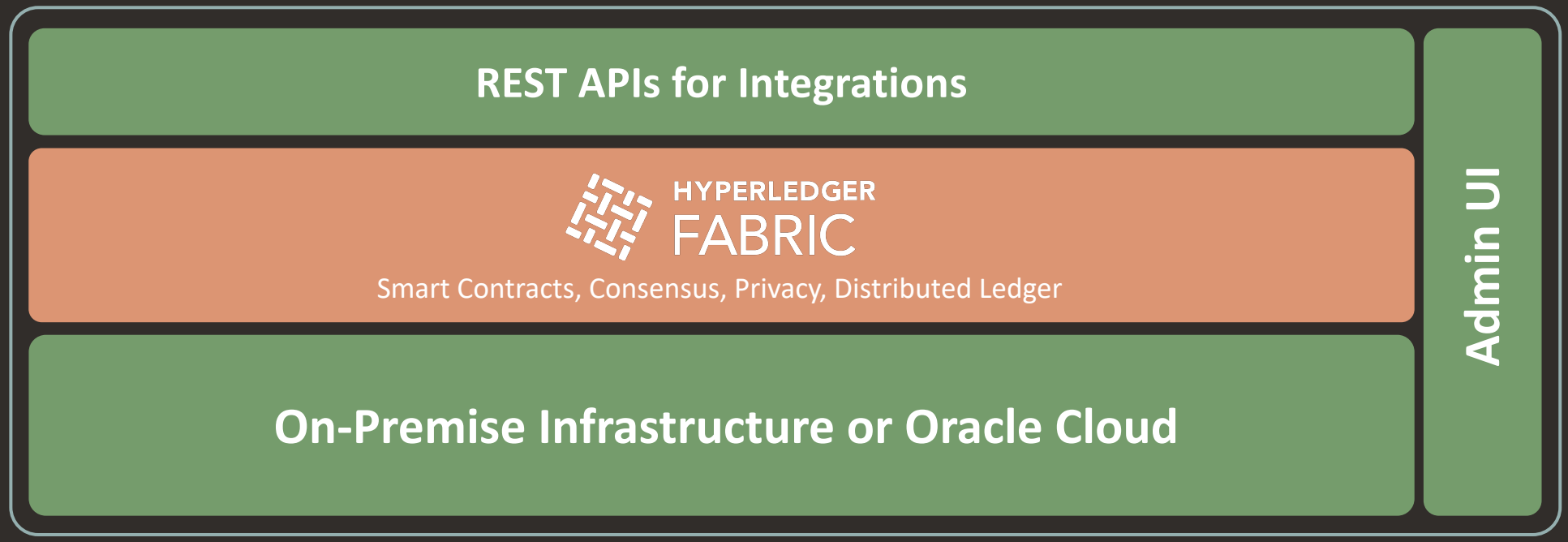
Oracle Blockchain



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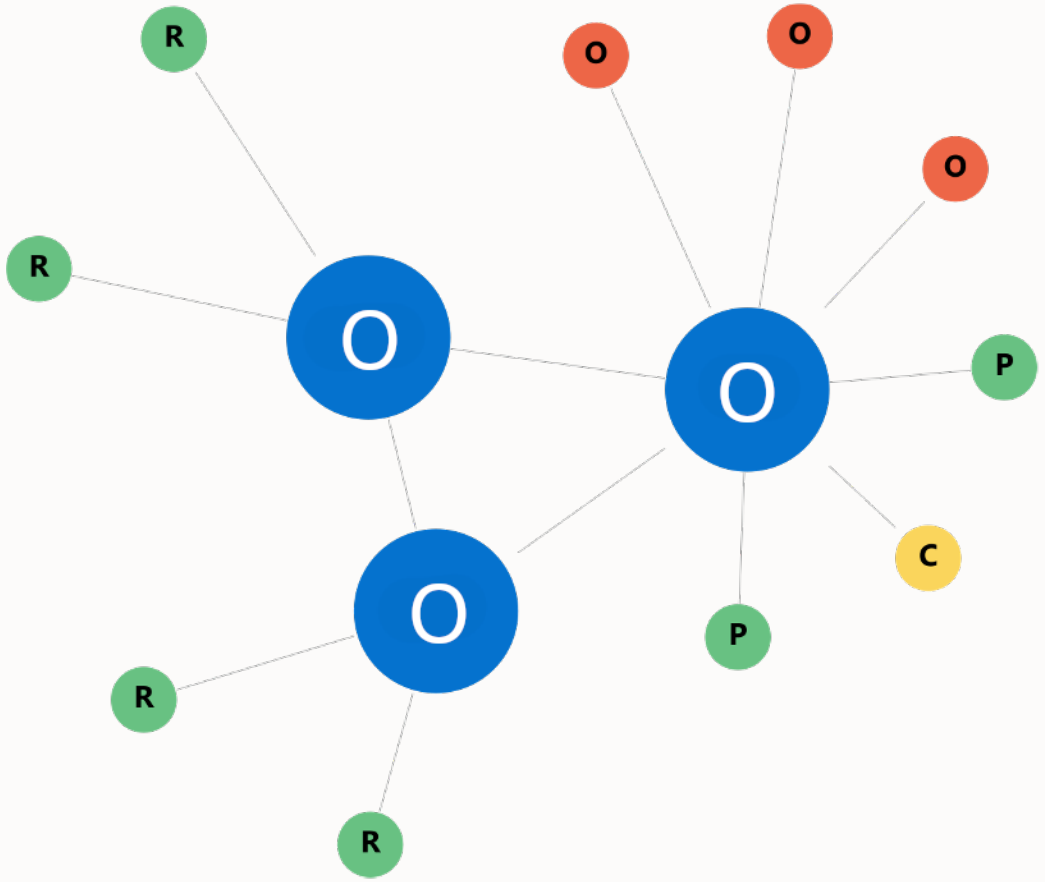

- Peer Node
- Certificate Authority
- Orderer
- Network Member

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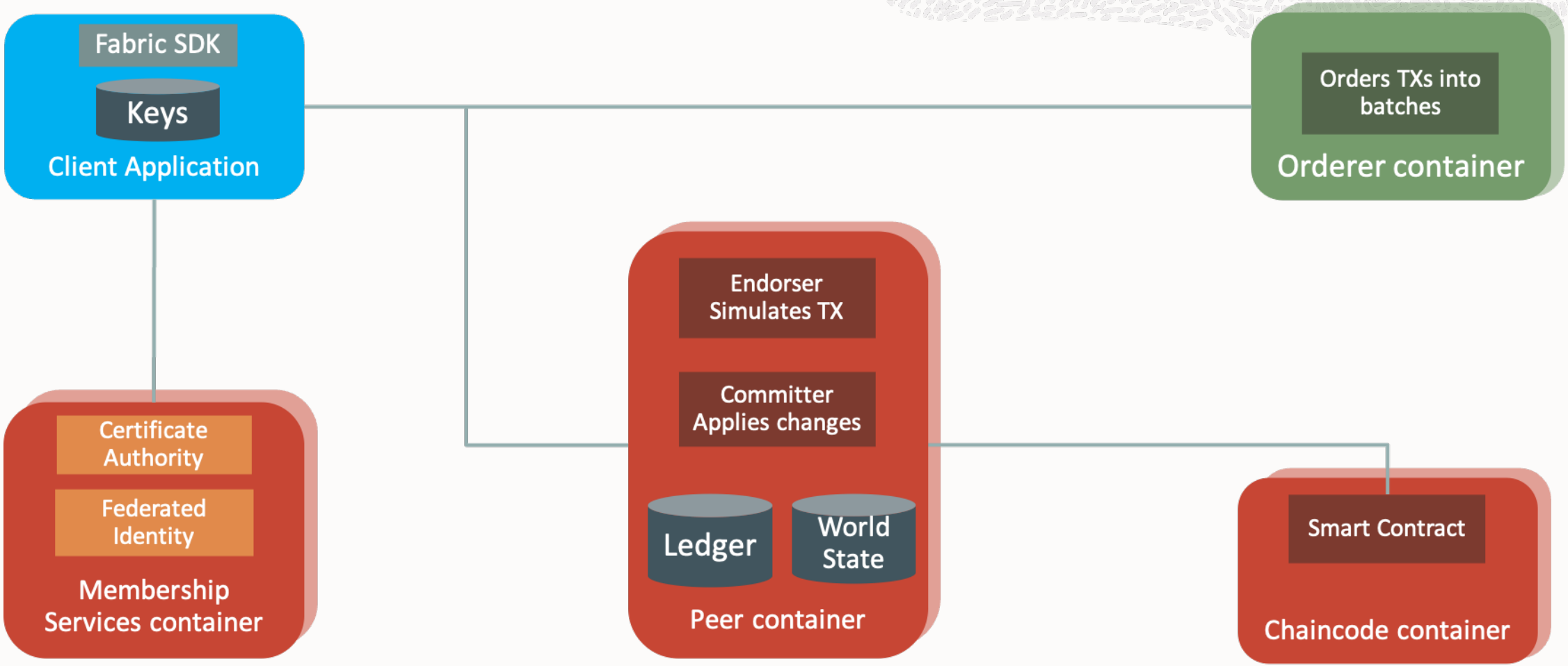
What Is Hyperledger Fabric?



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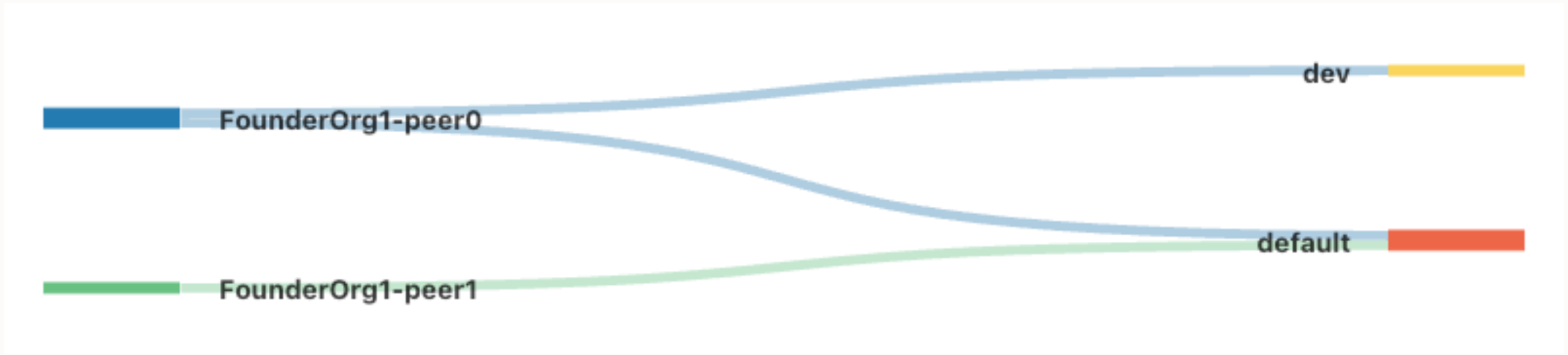
What Is the Relation of Peers and Channels?



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