

ORACLE

# What Is Blockchain

And How You Can Implement It, Easily?

**May 2022**

Ivan Delić

Application Development Specialist



## Safe harbor statement

The following is intended to outline our general product direction. It is intended for information purposes only, and may not be incorporated into any contract. It is not a commitment to deliver any material, code, or functionality, and should not be relied upon in making purchasing decisions.

The development, release, timing, and pricing of any features or functionality described for Oracle's products may change and remains at the sole discretion of Oracle Corporation.



**Ivan Delic**  
Application Development Specialist



1

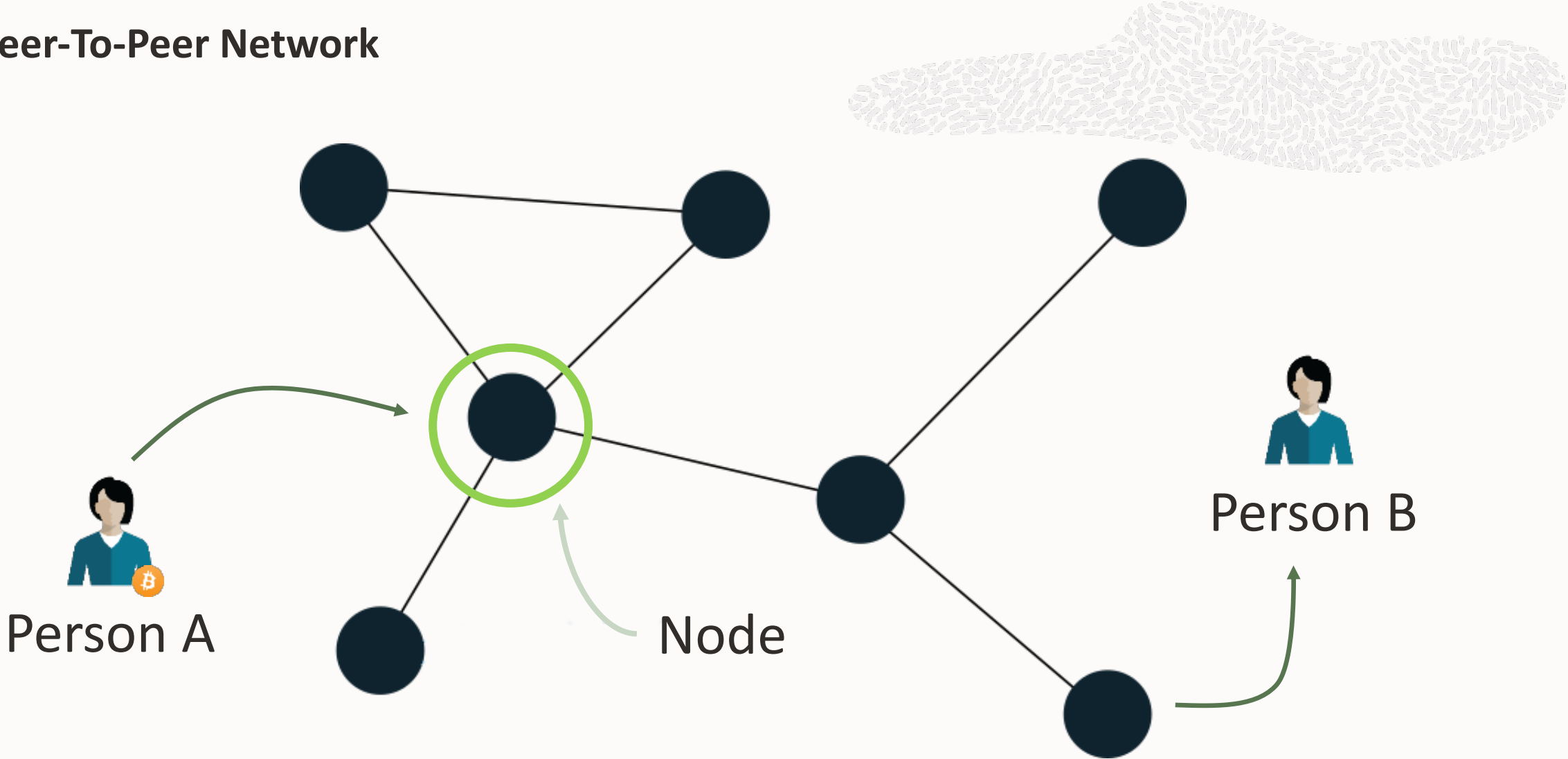
# What is blockchain?



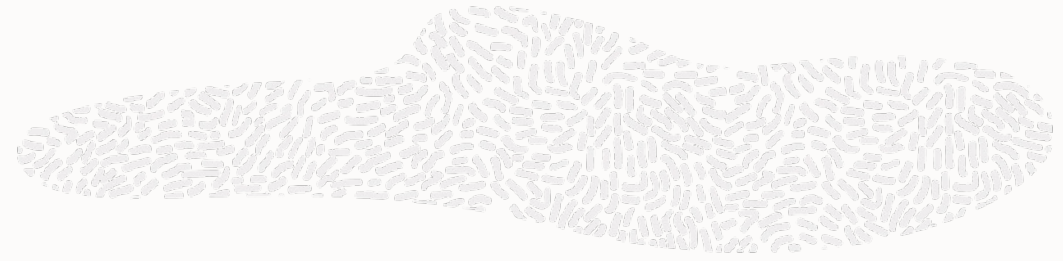




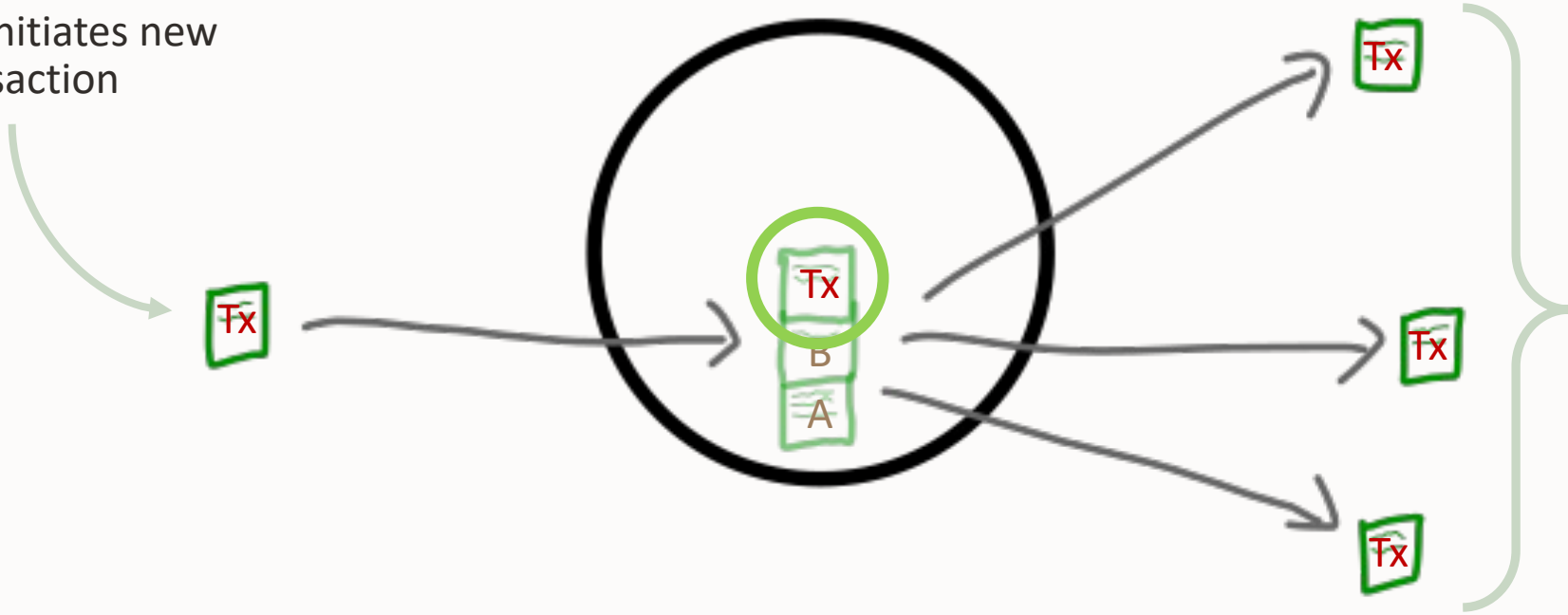
# Peer-To-Peer Network



# The Node



Person A initiates new Transaction



Transactions are spread across the network with gossips





Home



Prices



Charts



DeFi



NFTs



Academy



Developers

Explorer > Bitcoin Explorer > Transaction

USD

Search your transaction, an address or a block

Hash 42ec4252dfc41ed68a89f6e41196617f72ef2d96f02a99d7a1...

2022-03-08 10:11

3HNcBnxNCjMaBwNowRrQcm9XRgHJKcJN... 0.00049063 BTC



bc1qrfe0fwv666gljrm33uns9zqqmf6vu8u5... 0.00038563 BTC

### Details

Hash 42ec4252dfc41ed68a89f6e41196617f72ef2d96f02a99d7a1b5387de3afc404

Status Confirmed

Received Time 2022-03-08 10:11

Size 215 bytes

Included in Block 726384

Confirmations 1

Total Input 0.00049063 BTC

Total Output 0.00038563 BTC

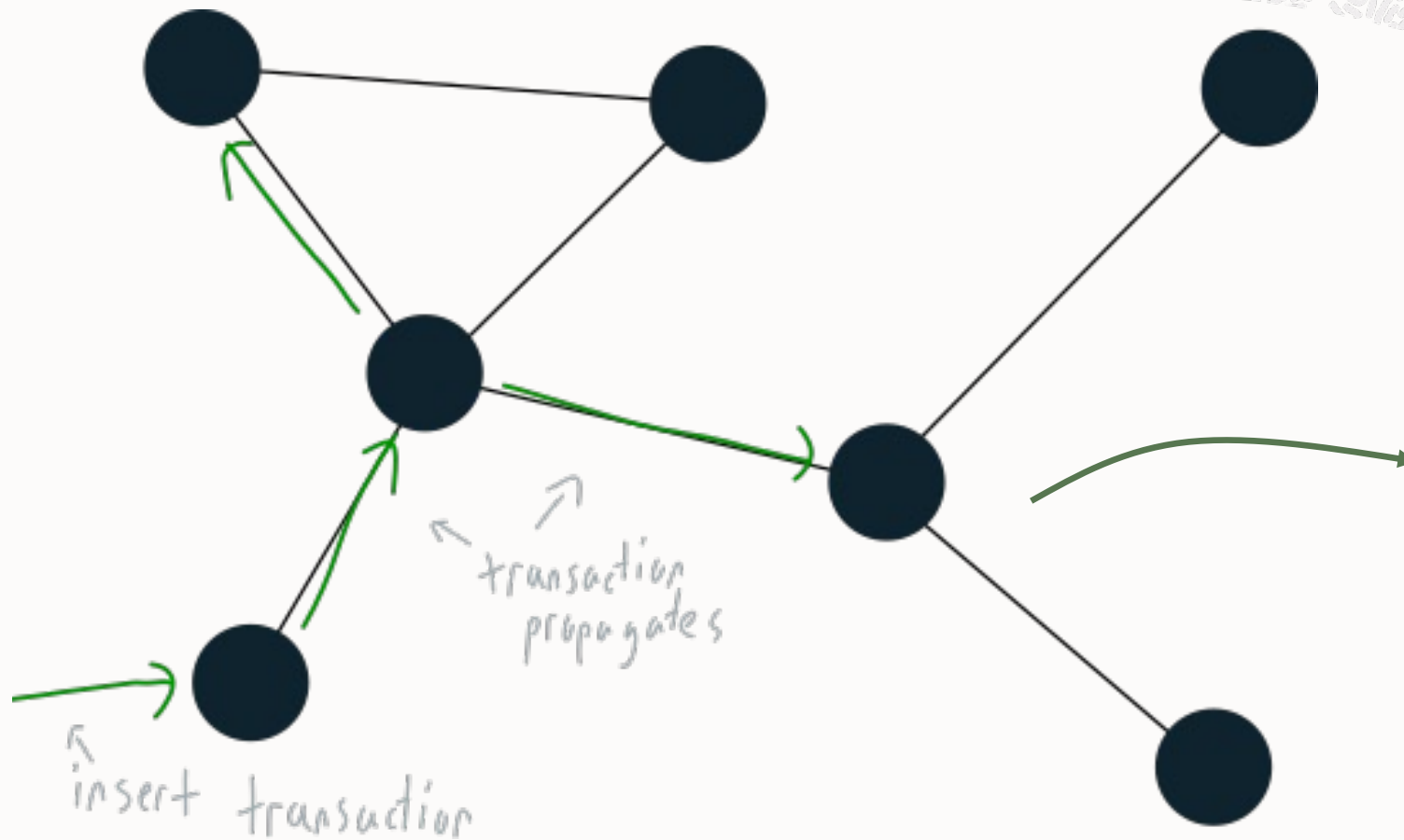




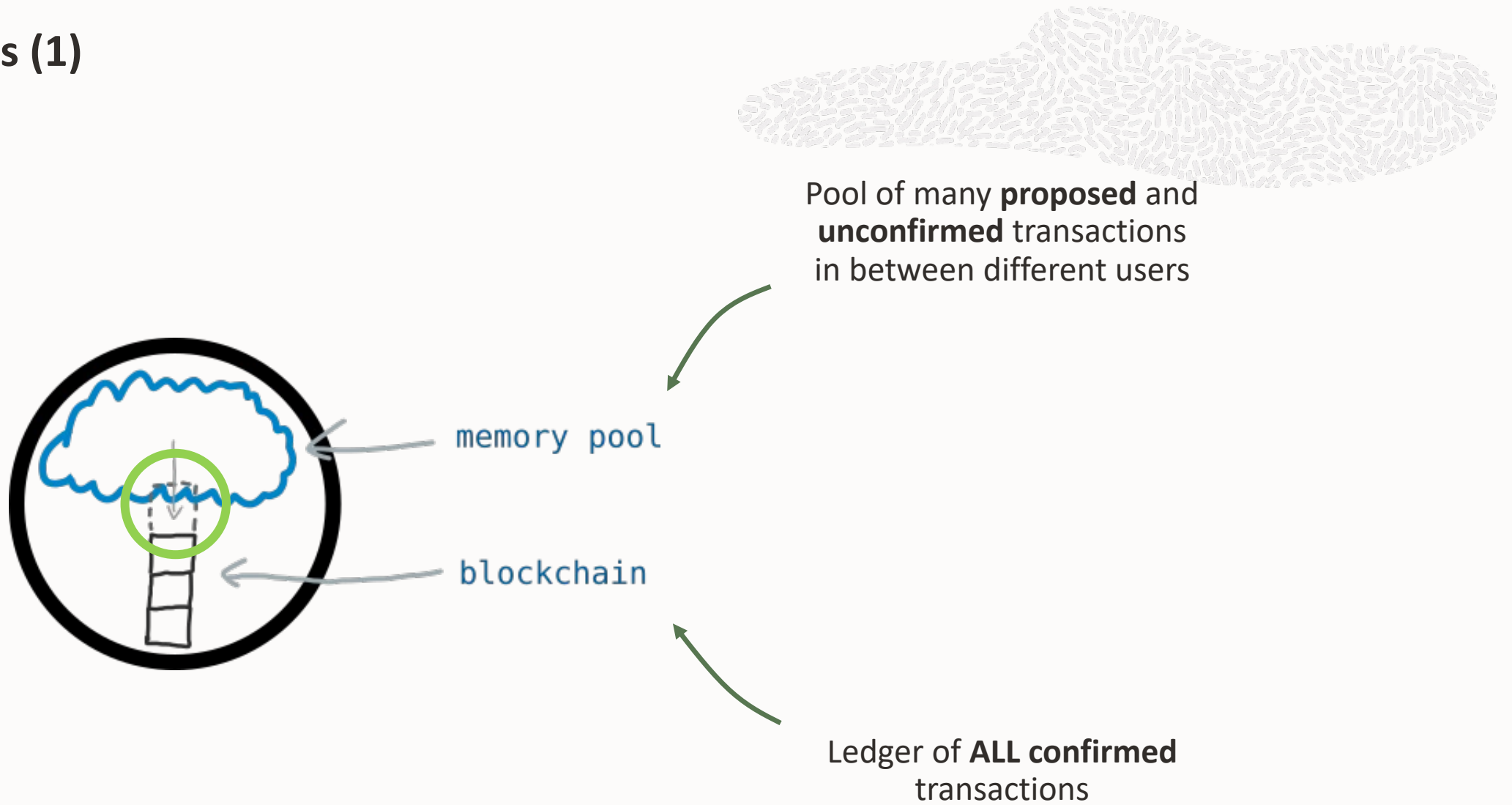
# Gossip



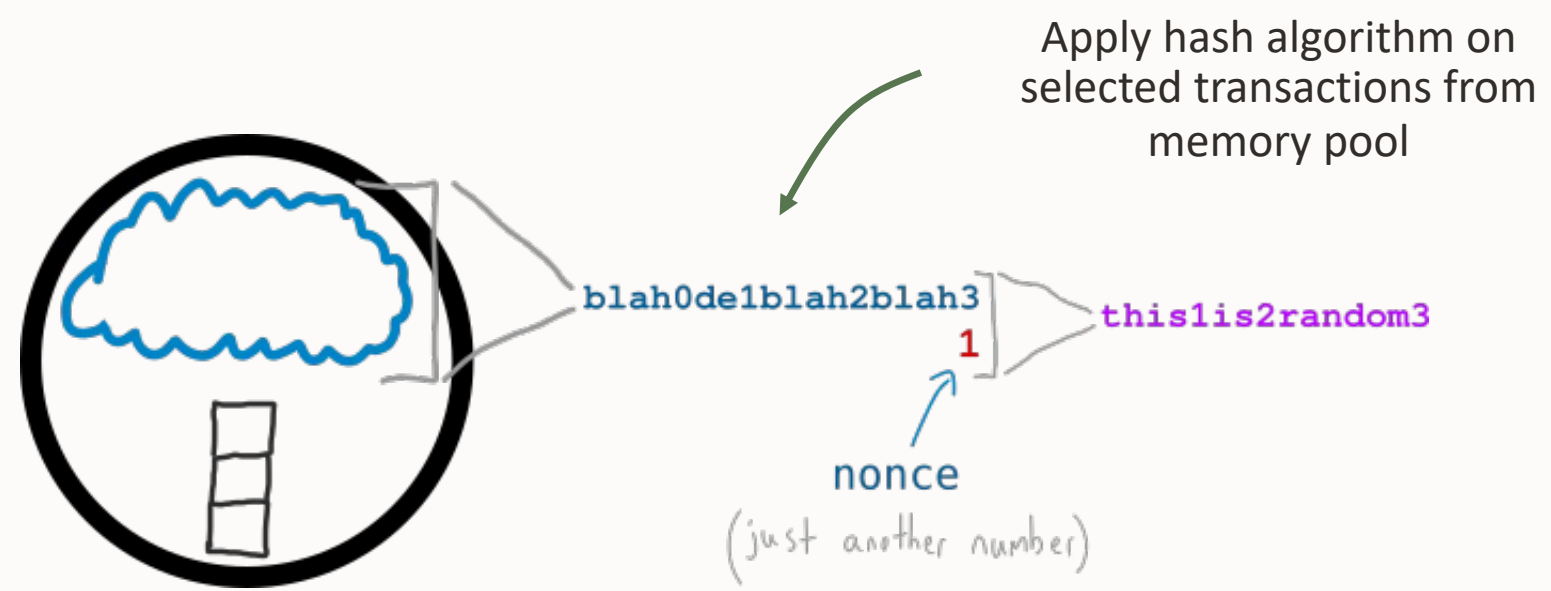
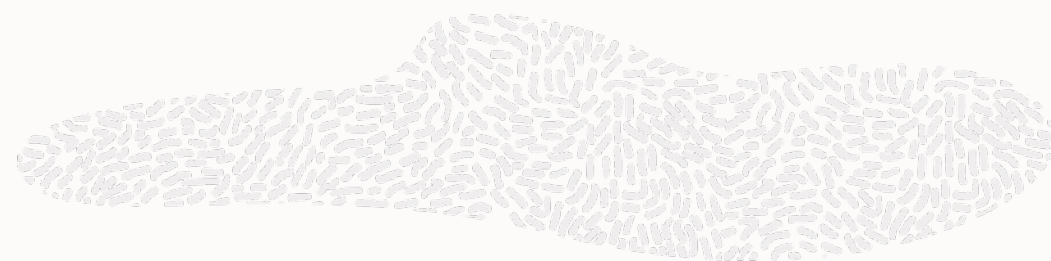
Person A



# Consensus (1)

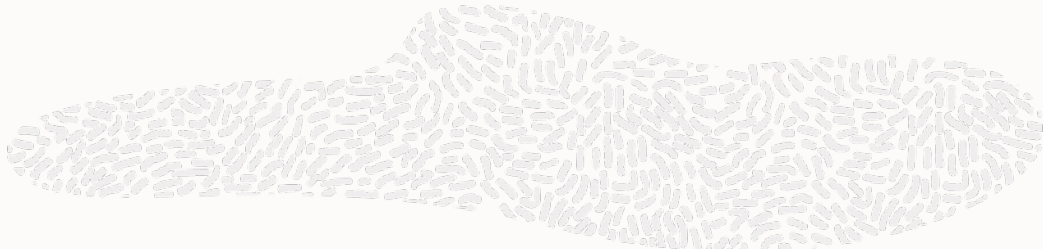


# Consensus (2)

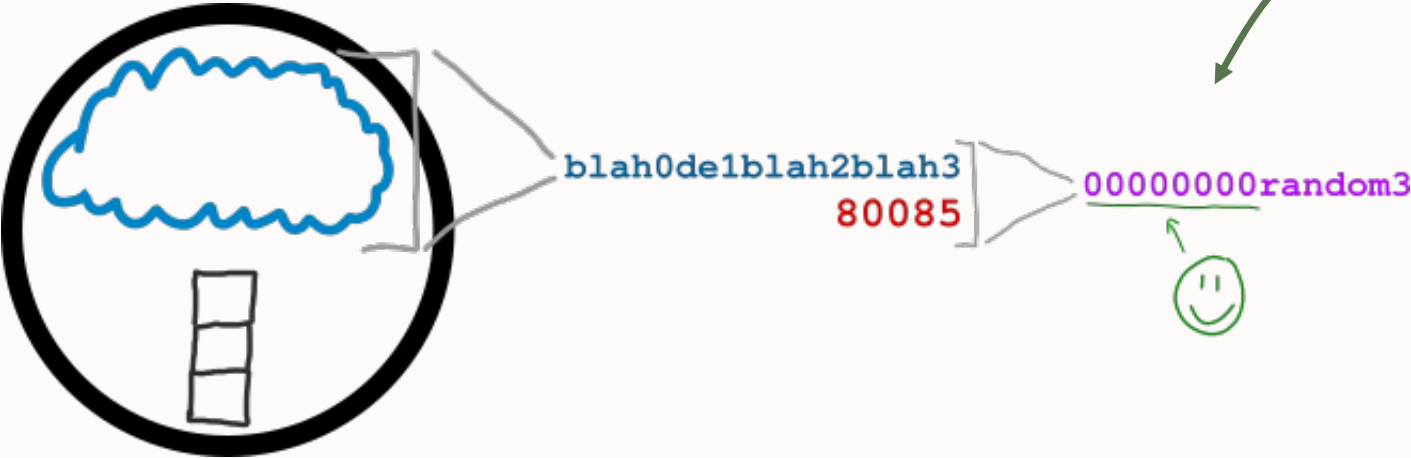




# Consensus (3)

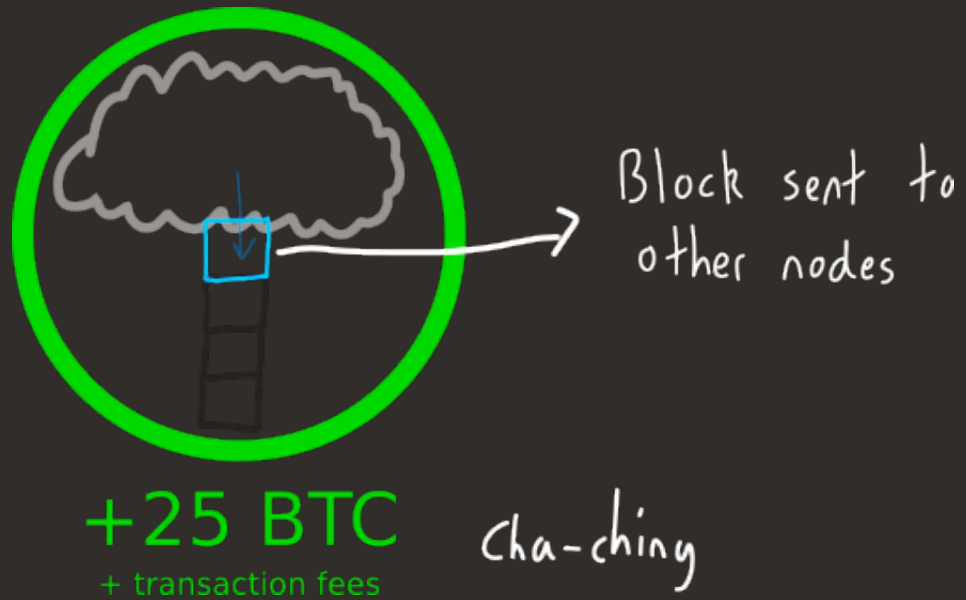
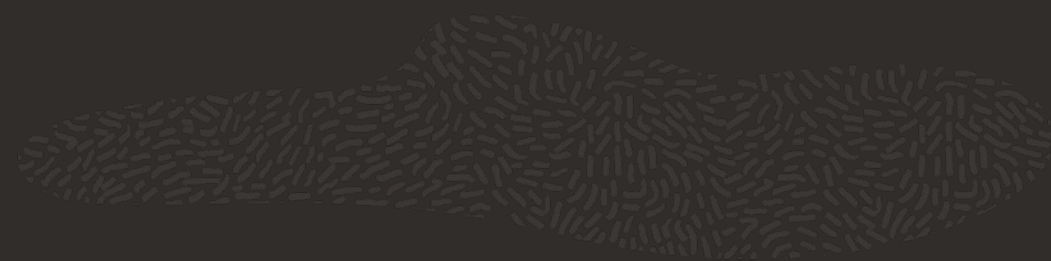


Whoever creates random signature with leading zeros **wins the prize** and **creates new block** of transactions





# Consensus (4)







Home



Prices



Charts



DeFi



NFTs



Academy



Developers

Explorer >  Bitcoin Explorer > Blocks

USD



Search your transaction, an address or a block

Blocks 

Height	Hash	Mined	Miner	Size
<a href="#">725303</a>	<a href="#">0..9360b7c0cb6f227ebc556caa15102767bd067d91d2442</a>	22 minutes	Unknown	668,063 bytes
<a href="#">725302</a>	<a href="#">0..20ae03af7940f30cb568ac4b3d6122856a0bac009145a</a>	25 minutes	F2Pool	716,739 bytes
<a href="#">725301</a>	<a href="#">0..70aaf7ef2d39ad4a78da3ffb5469cc63a9e9ae56145ea</a>	28 minutes	Unknown	1,473,876 bytes
<a href="#">725300</a>	<a href="#">0..359899bf53d3c24d05606e37c51b904e76294632e8f22</a>	29 minutes	Unknown	1,517,728 bytes
<a href="#">725299</a>	<a href="#">0..8209024ea0eaa7101bc4b559ccb028a773cc6efa1f1fb</a>	43 minutes	F2Pool	1,518,432 bytes
<a href="#">725298</a>	<a href="#">0..277ab5af76e008a92106573ec4f17d8930153f1494cdf</a>	56 minutes	Unknown	895,079 bytes
<a href="#">725297</a>	<a href="#">0..63ac2b1355a244bafa9778240118b9bb6725c1f6a0ada</a>	57 minutes	ViaBTC	1,442,757 bytes
<a href="#">725296</a>	<a href="#">0..2057ee9d39ecb4f1fcf599ba32759305a95582574e5b6</a>	1 hour	AntPool	579,433 bytes
<a href="#">725295</a>	<a href="#">0..20cd64122d71691dc0e629faae15e8c12366a4a2e467</a>	1 hour	AntPool	27,118 bytes
<a href="#">725294</a>	<a href="#">0..91f2c223e811c84060bf52bfae774f54b176f2b0cf14c</a>	1 hour	Poolin	1,010,502 bytes

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

## What is the Foundation of Blockchain?

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

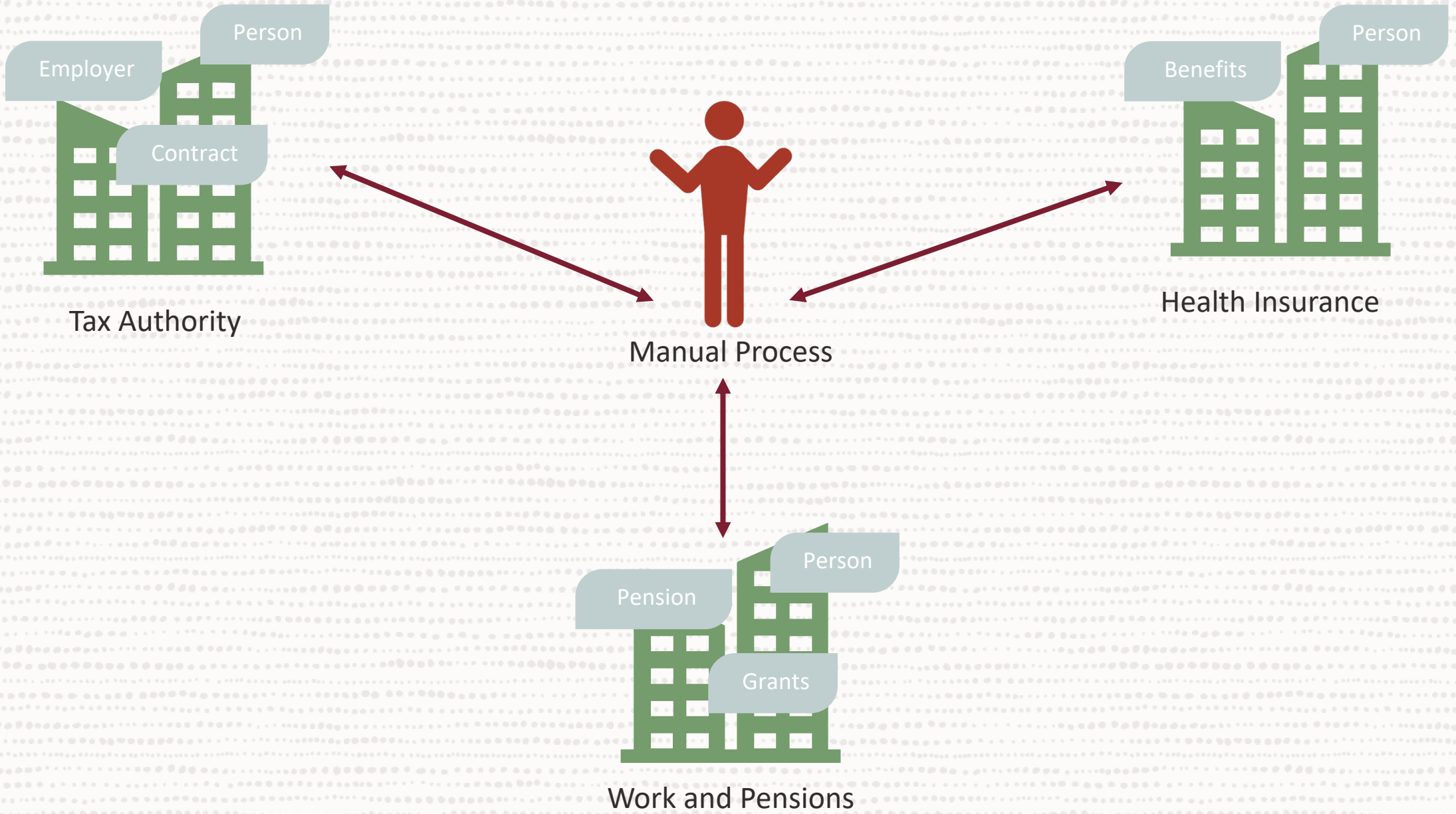


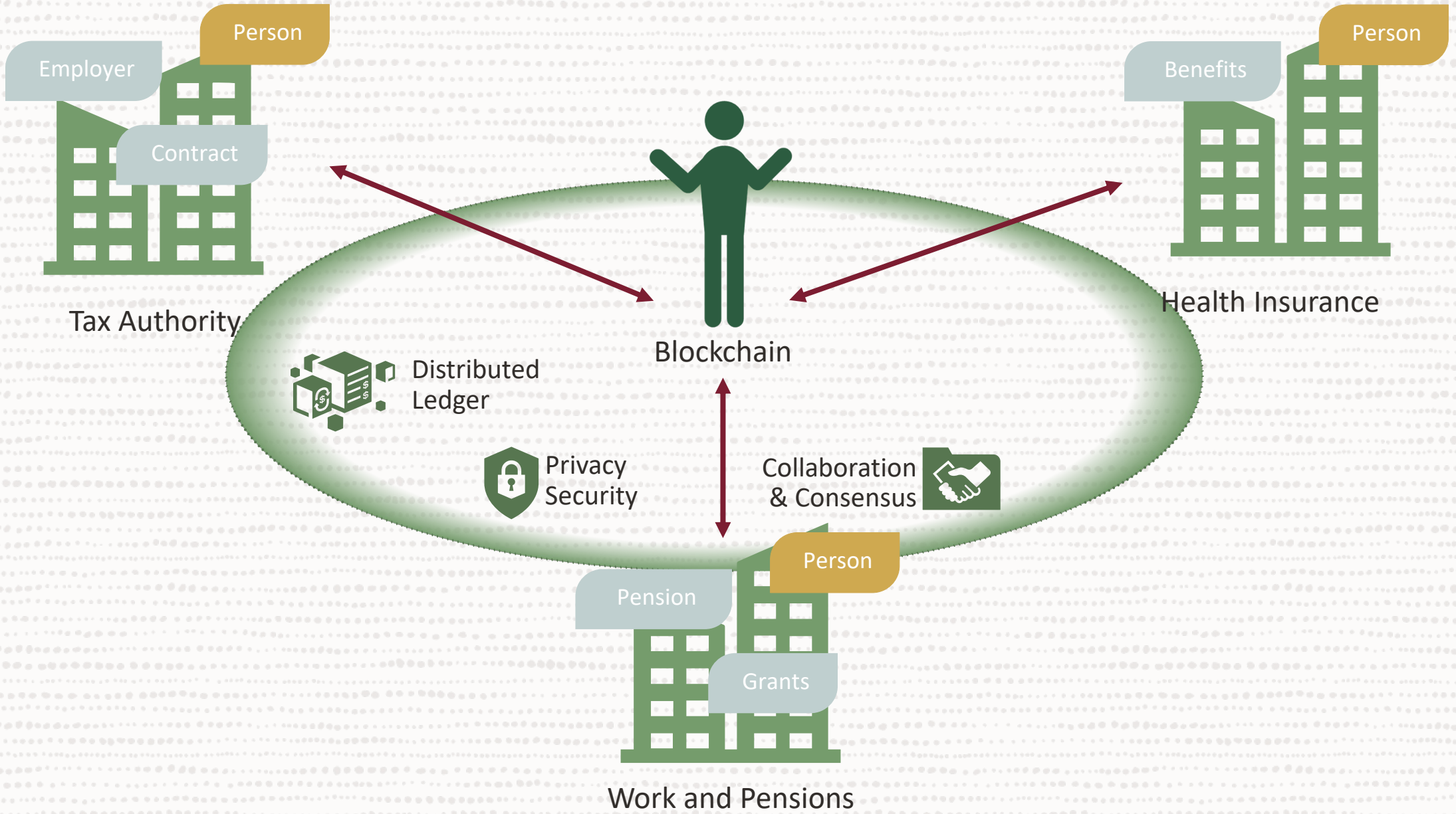
2

# Why to use blockchain?

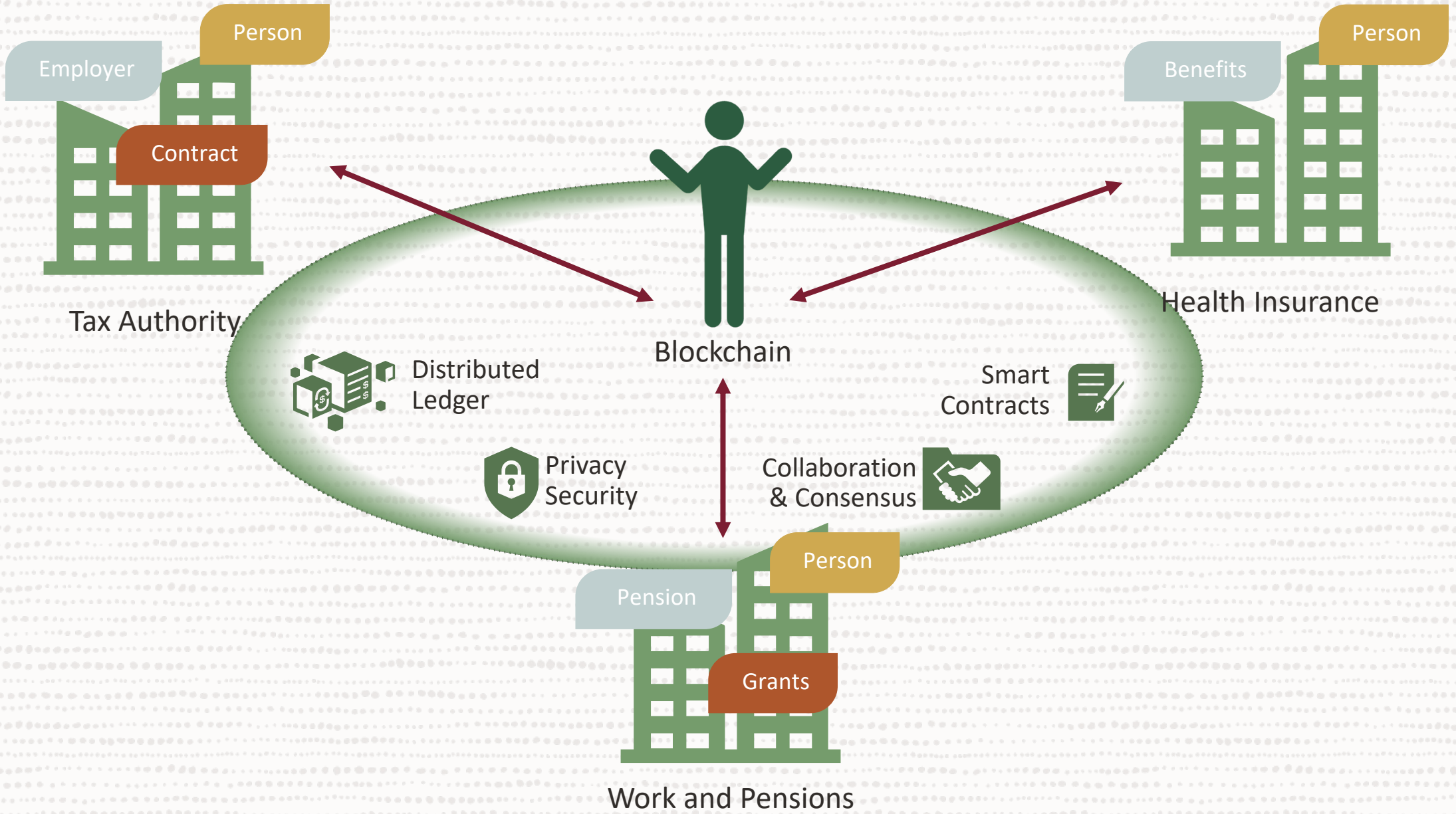
---











Department of Work and Pensions

Home Person Pension Grants

+ Create Grant

Grant Id
1
GRANT2
XX7
XX98

Tax Administration

Home Person Employer Contract

latest versions: 4

a98e ff9b b7c1 a5ad

Tax Identification Number

1111111111

First Name

Ivan

Date Of Birth

Health Security Agency

Home Person Health Benefits Cash Benefits

+ Create Person

Tax Identification Number	First Name	Person Id
1111111111	Ivan	Delic
2222222222	Ivan	Delic
3333333333	Ivan	Delic





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.



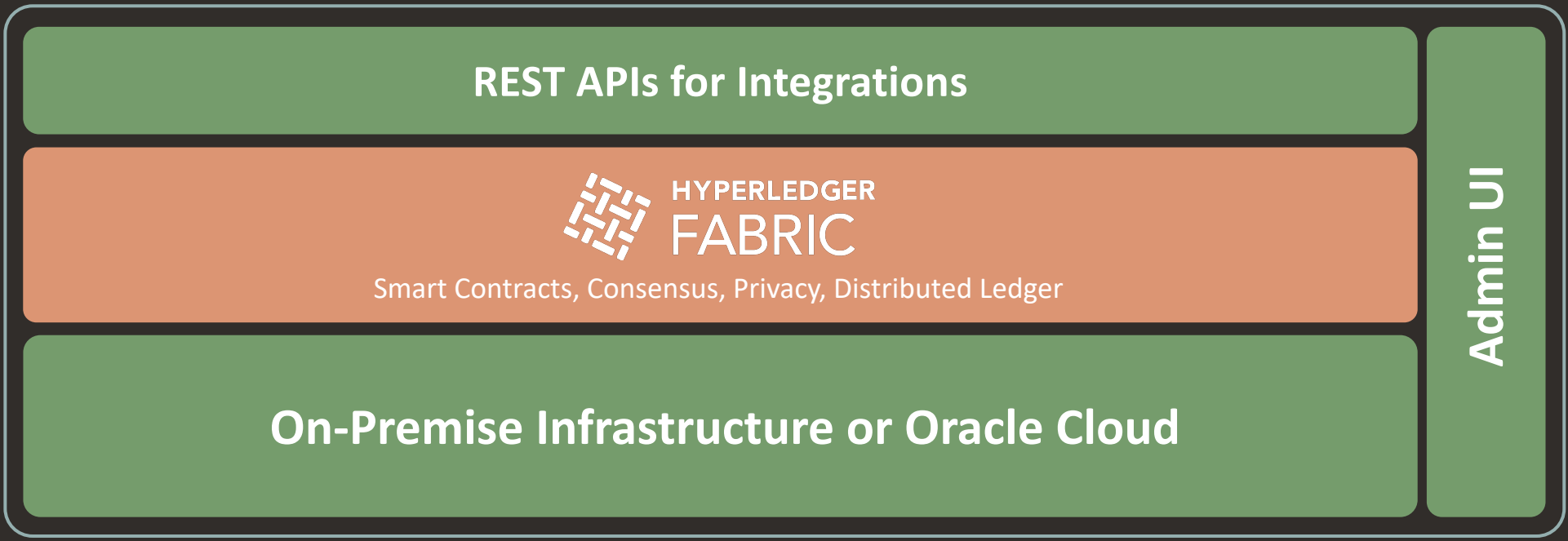
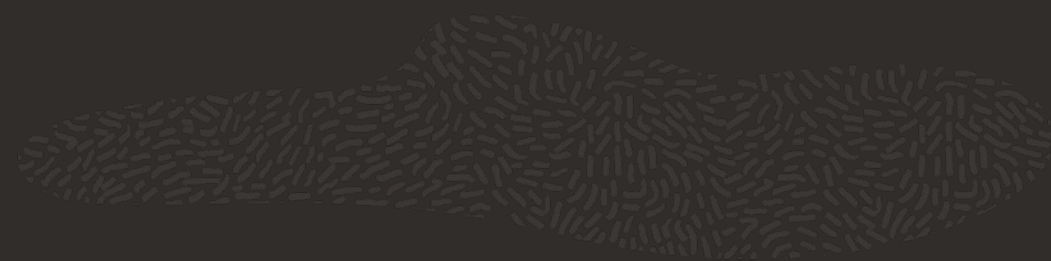
# 3

## How do we build blockchain?

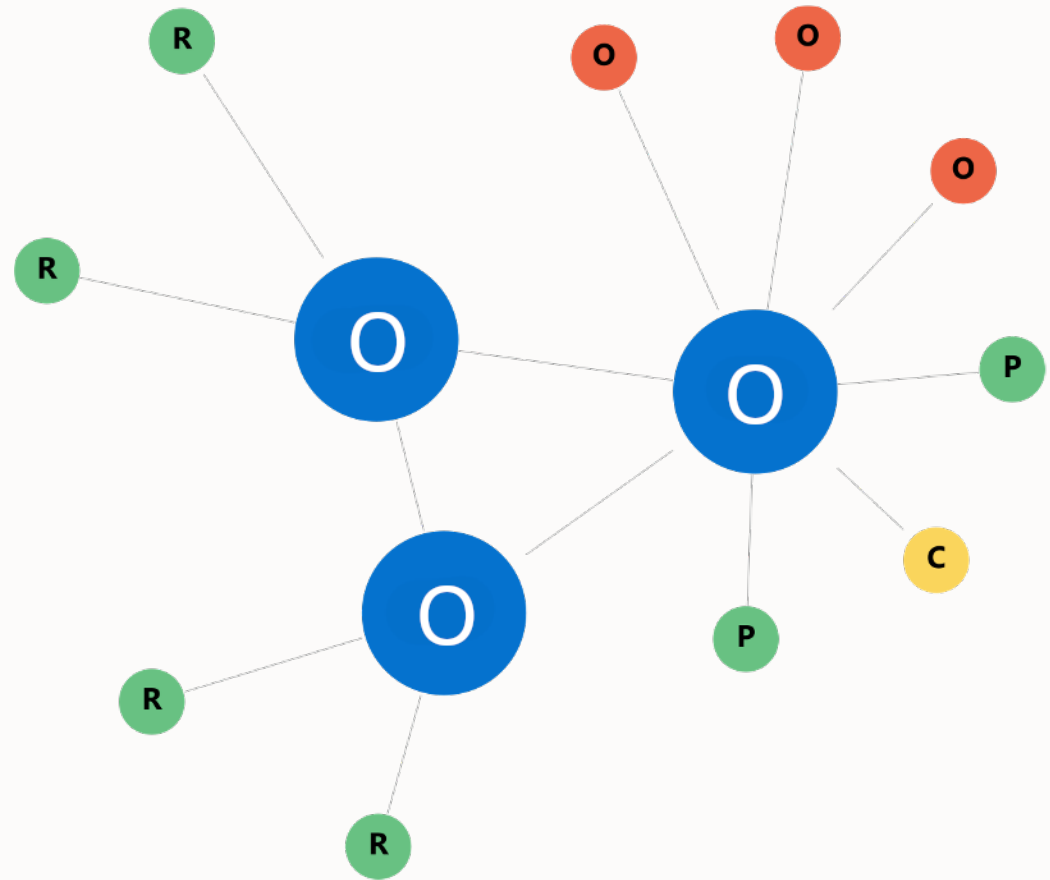
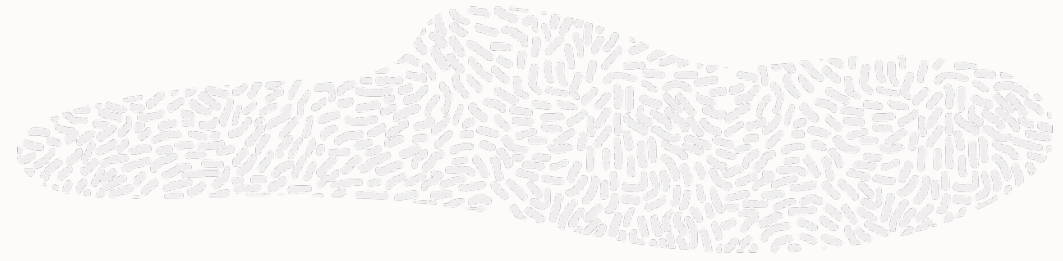
---







# Oracle Blockchain



# What Is a Blockchain?

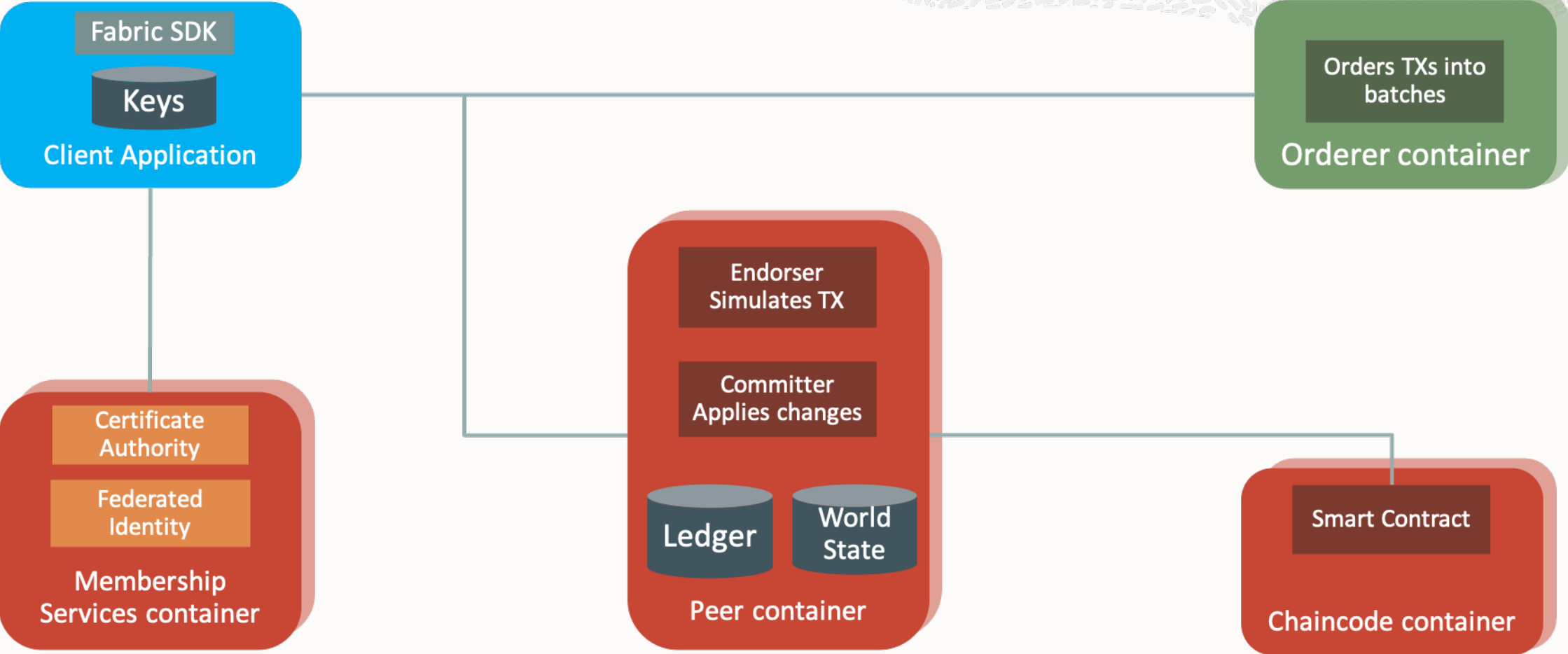


-  Peer Node
-  Certificate Authority
-  Orderer
-  Network Member



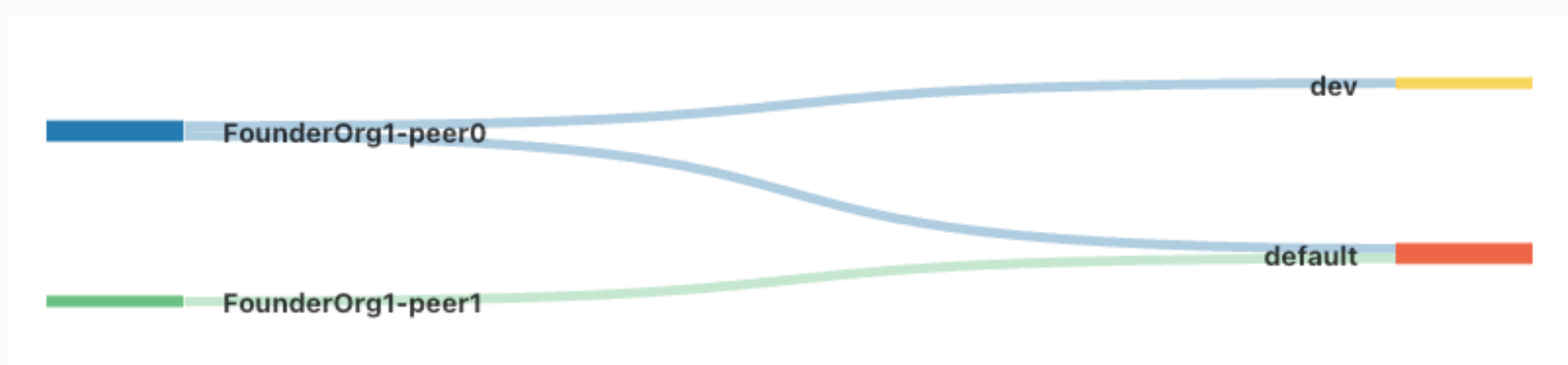
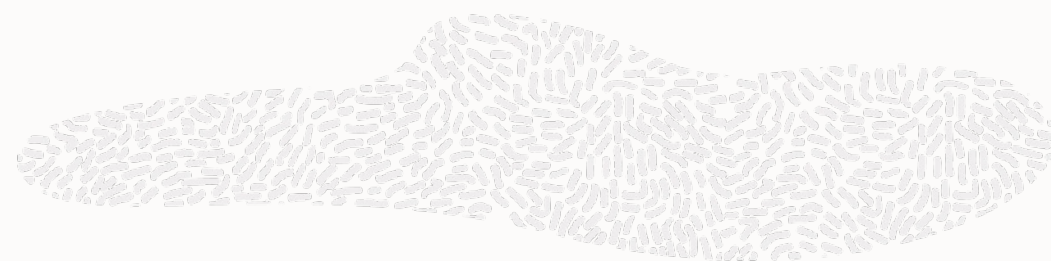


# What Is Hyperledger Fabric?





# What Is the Relation of Peers and Channels?



# What Is App Builder?



# Thank you

---