

BLOCKCHAIN

BLOCKCHAIN

Bitcoin the first Blockchain

What are blockchains?

Implications in the world at large

How Blockchains work (simplified technical explanation)

Designers in the Conversation

ABOUT THE PRESENTER



**EDWARD
BUCHI**

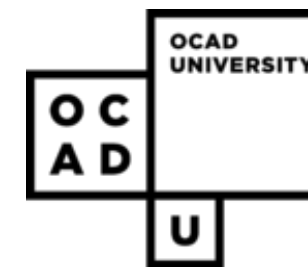
With a background in Advertising and User Experience Design, I work directly with clients business problems. Raising the values of their brands and companies and making products user-centric and usable.

Recently my clients and work has revolved around Blockchain Networks, its applications, and its potential to reshape society.

DESIGN/MARKETING LEAD



ADVERTISING GRADUATE 2012



DESIGN ADVISOR



PRESENTATION GOALS

Introduce the concept of Blockchains

Get Designers at the table

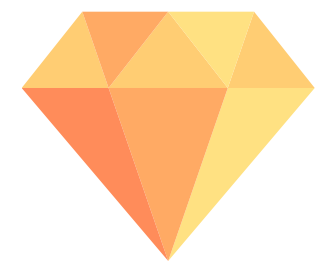
Not to defend or critique the monetary value of cryptocurrencies



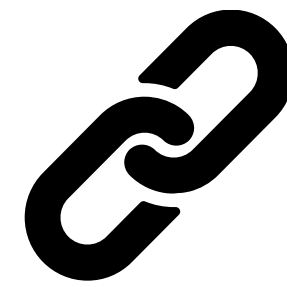
bitcoin

03/Jan/2009

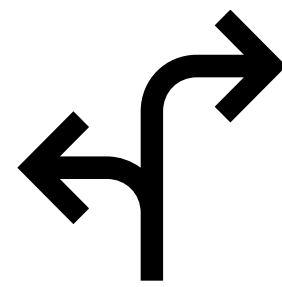
Typical Attributes of Currency



Scarce



Durable



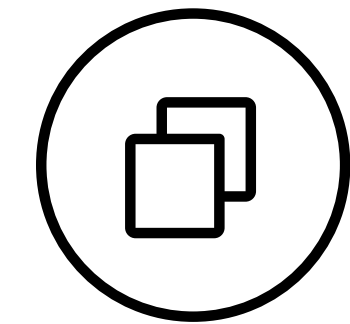
Divisible



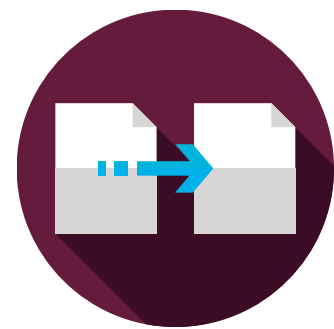
Divisible



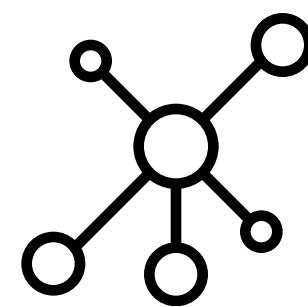
Verifiable



Fungible



Inimitable



Decentralised



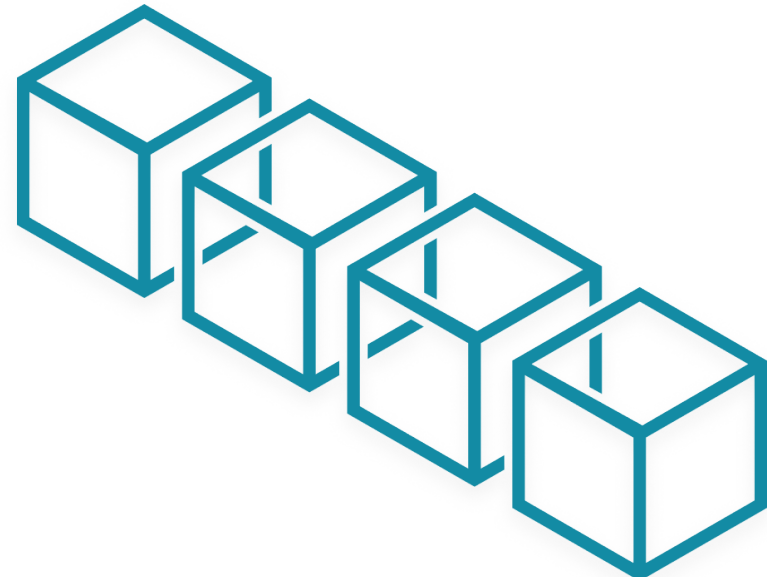
Digital

Added Attributes of **Crypto**Currency

CryptoCurrency

=

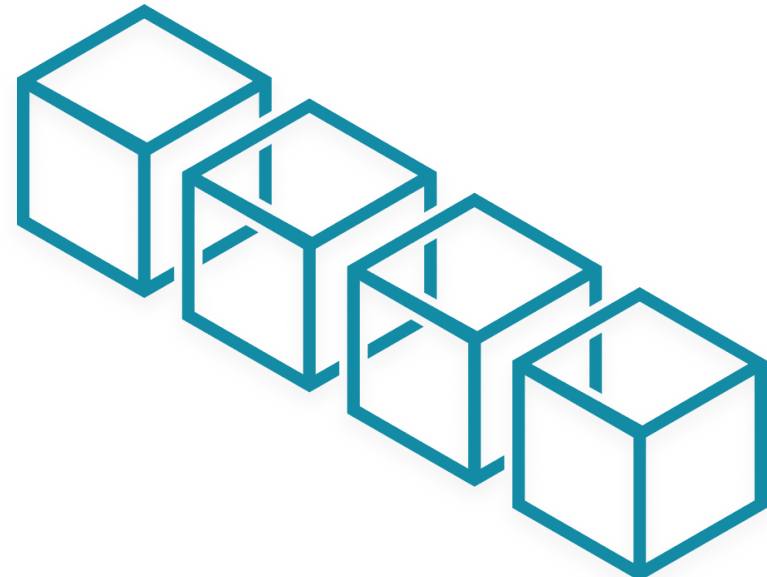
**Token/Unit
Managed by
a Blockchain**



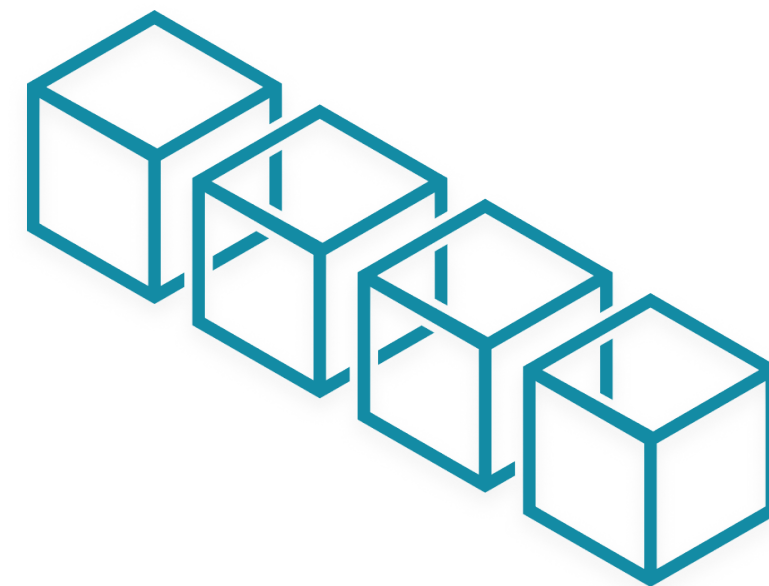
CryptoCurrency
Value

=

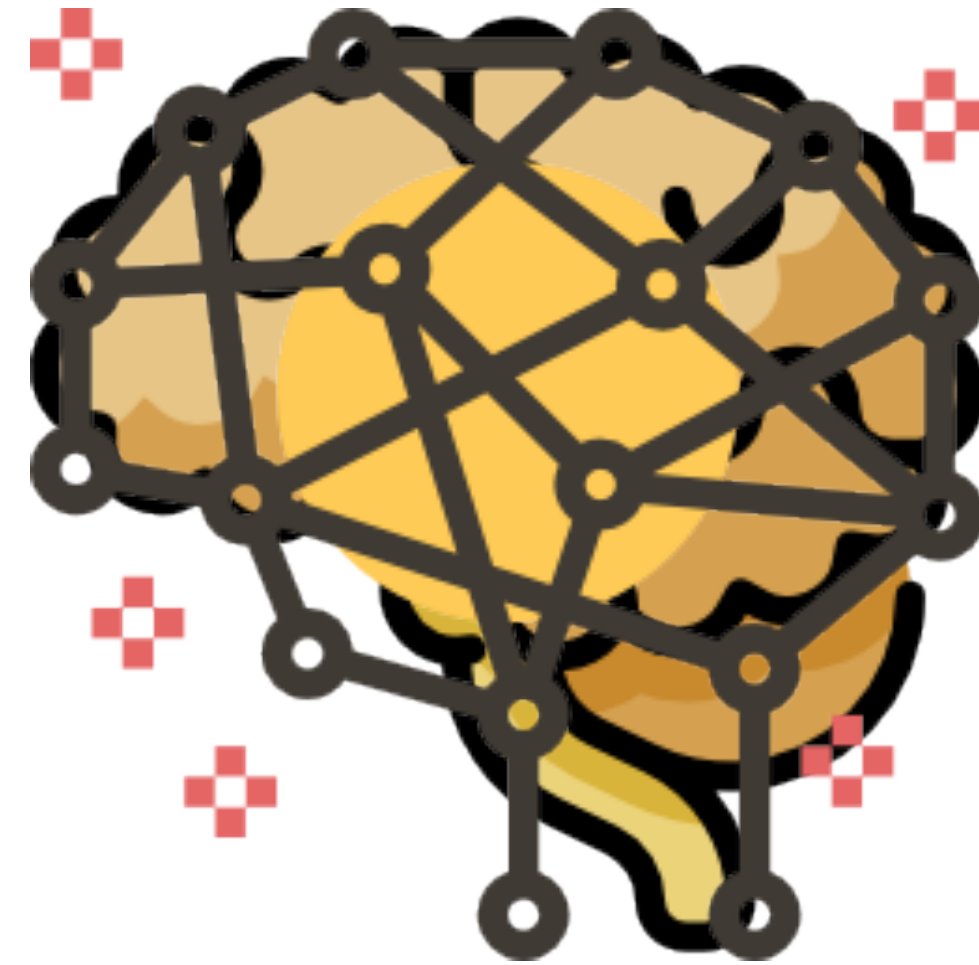
**Belief in the
utility of the
Blockchain network**



What is a **Blockchain**?



Blockchains are the
memory of the internet.



It gives the internet access to data in order to execute critical functions



Data Example

ACCOUNT BALANCES

MEDICAL RECORDS

CITIZENSHIP DATA



Data Example

TRANSACTIONS

TREATMENT APPROVALS

APPROVAL TO VOTE

It gives the internet access to data
in order **to execute critical functions**

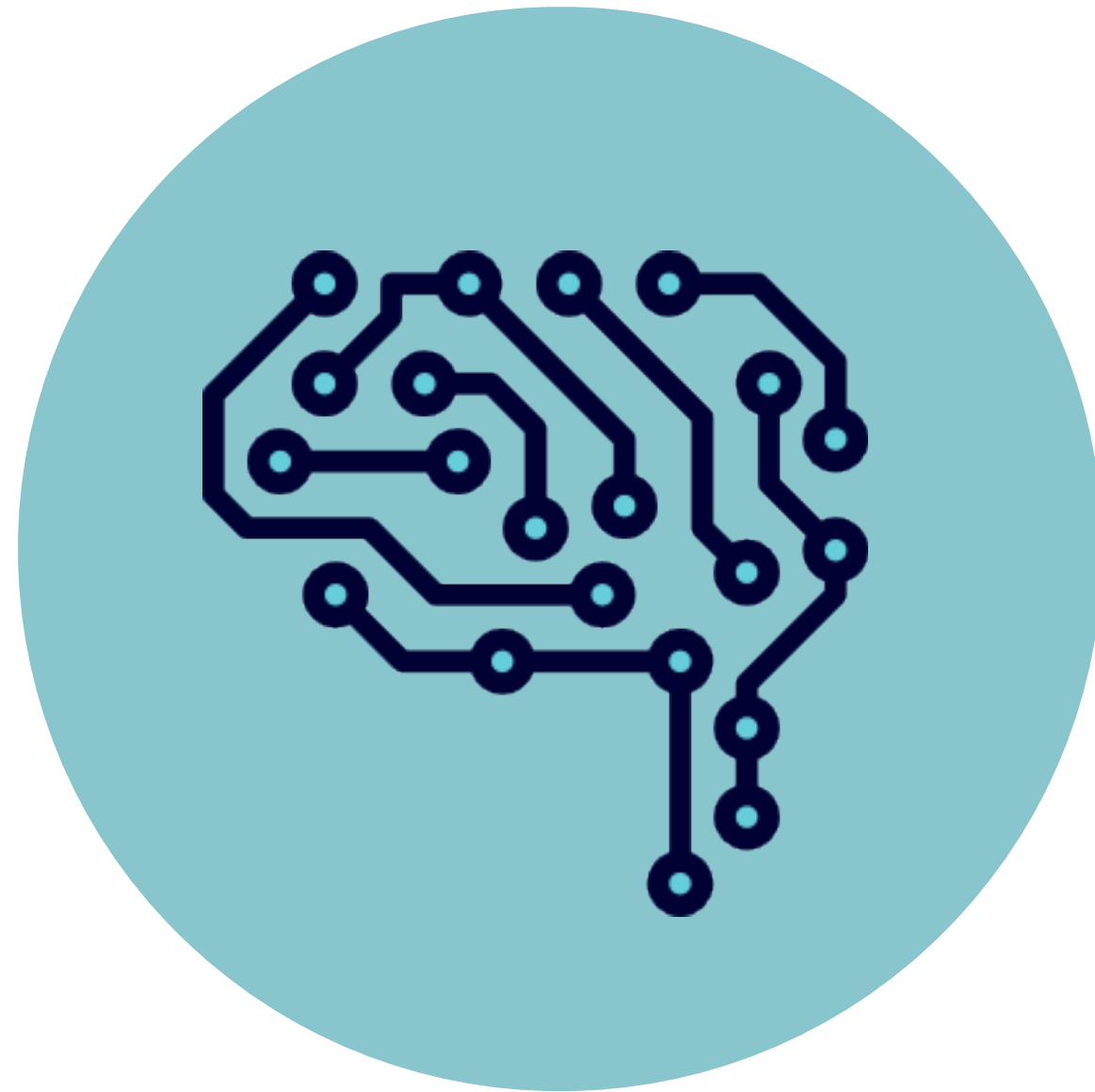


And not **need to rely**
on central servers for information



in the case of **bitcoin** it was
databases owned by banks

SEMANTICS



A **Blockchain** Network is a type of distributed network.



It also refers to the **structure** data is stored in.

HOW TO PARTICIPATE

A USER NEEDS TWO BASIC THINGS



Private
Key

A **Private Key** is a string
of numbers that permits functions,
like a password

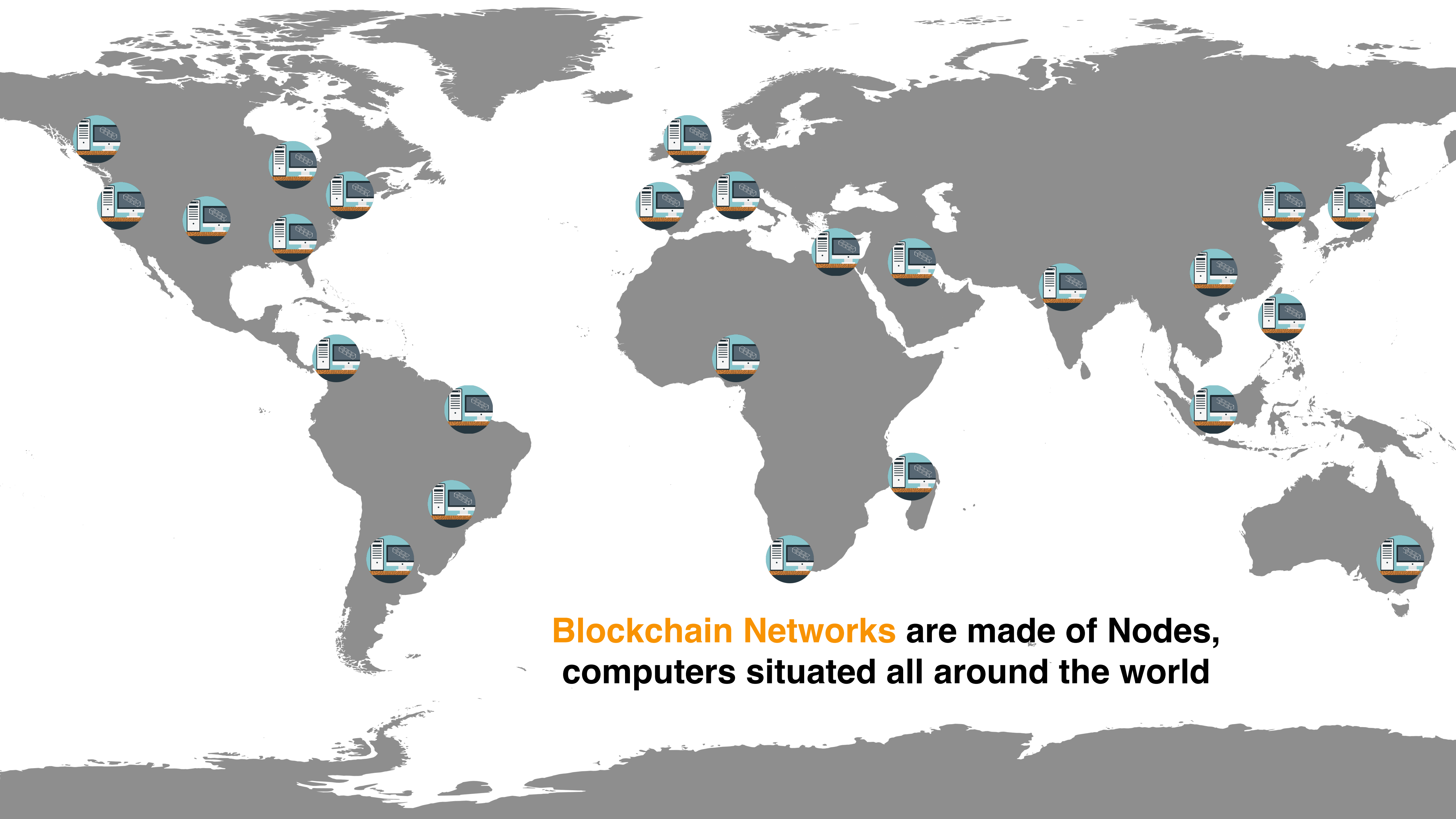
```
E9873D79C6D87DC0FB6A5778633389F4  
453213303DA61F20BD67FC233AA33262
```



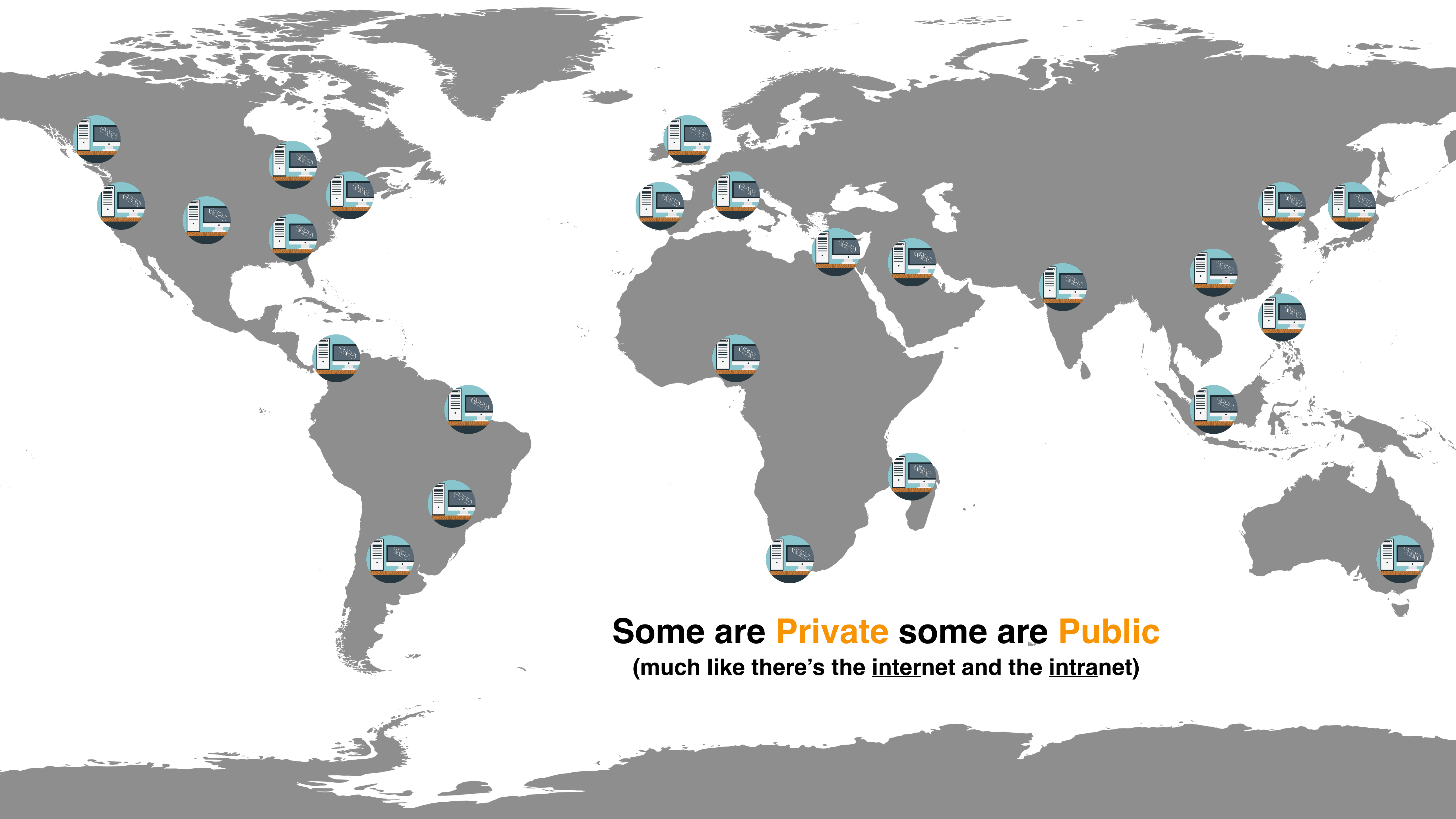
Public
Key

A **Public Key** (aka Address)
lets other users know who they are
interacting with - like a phone number

```
1CC3X2gu58d6wXUWMffpuzN9JAfTUWu4Kj
```

Blockchain Networks are made of Nodes,
computers situated all around the world



Some are **Private** some are **Public**
(much like there's the internet and the intranet)

CROSSROADS



Technical

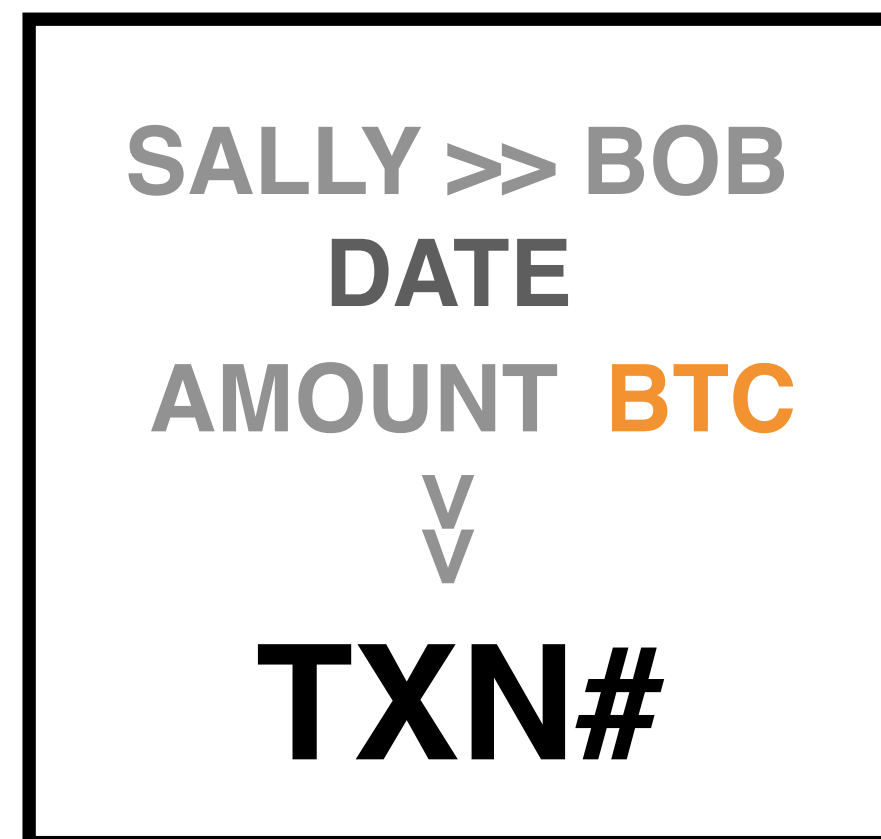


Implications



BASICS COMPONENTS OF A BLOCK

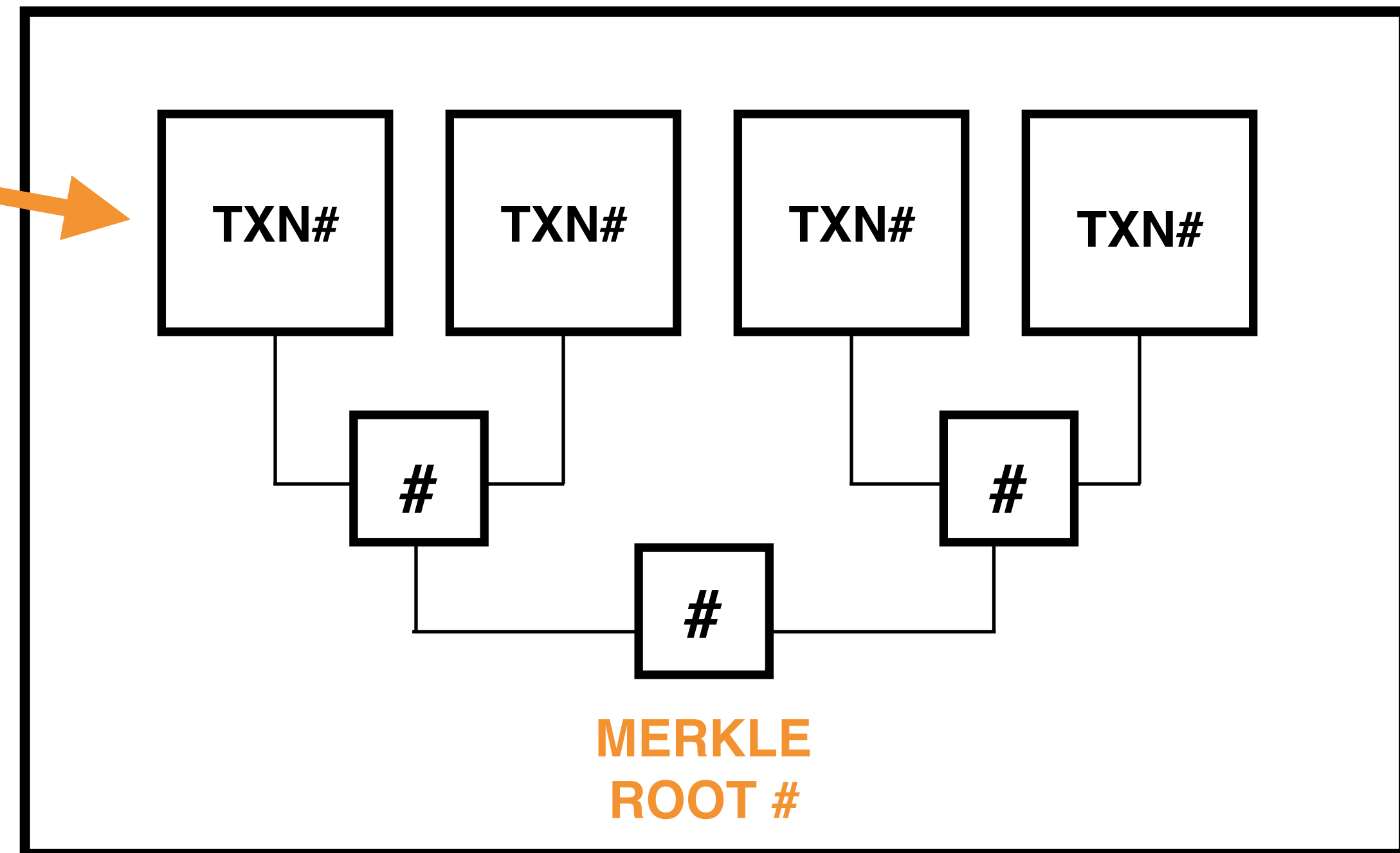
EXAMPLE: BITCOIN BLOCKCHAIN



ON
HASHING

CMPT 1

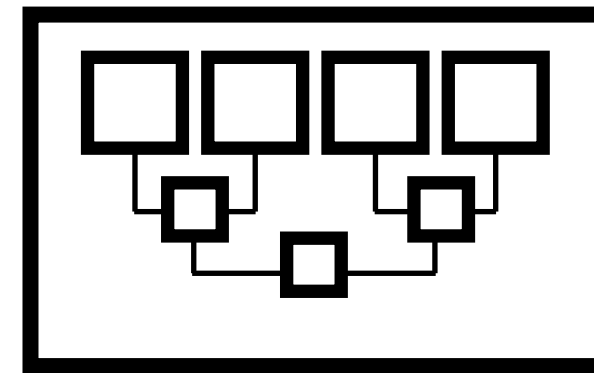
TRANSACTION HASH





BASICS COMPONENTS OF A BLOCK

EXAMPLE: BITCOIN BLOCKCHAIN



CMPT 1
TRANSACTION HASH

+



CMPT 2
PREVIOUS BLOCK HASH

+

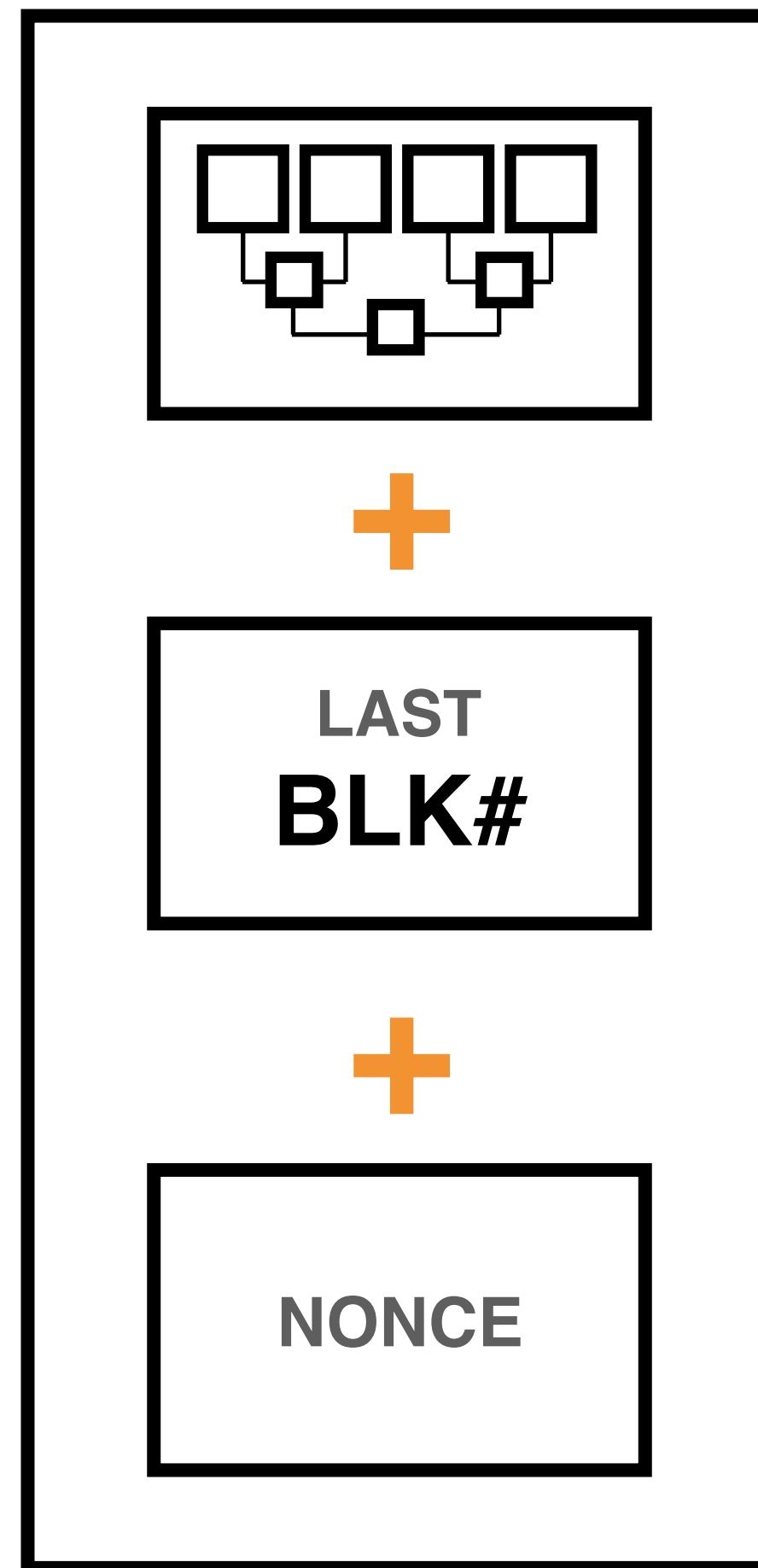


CMPT 3
RANDOMN NUMBER

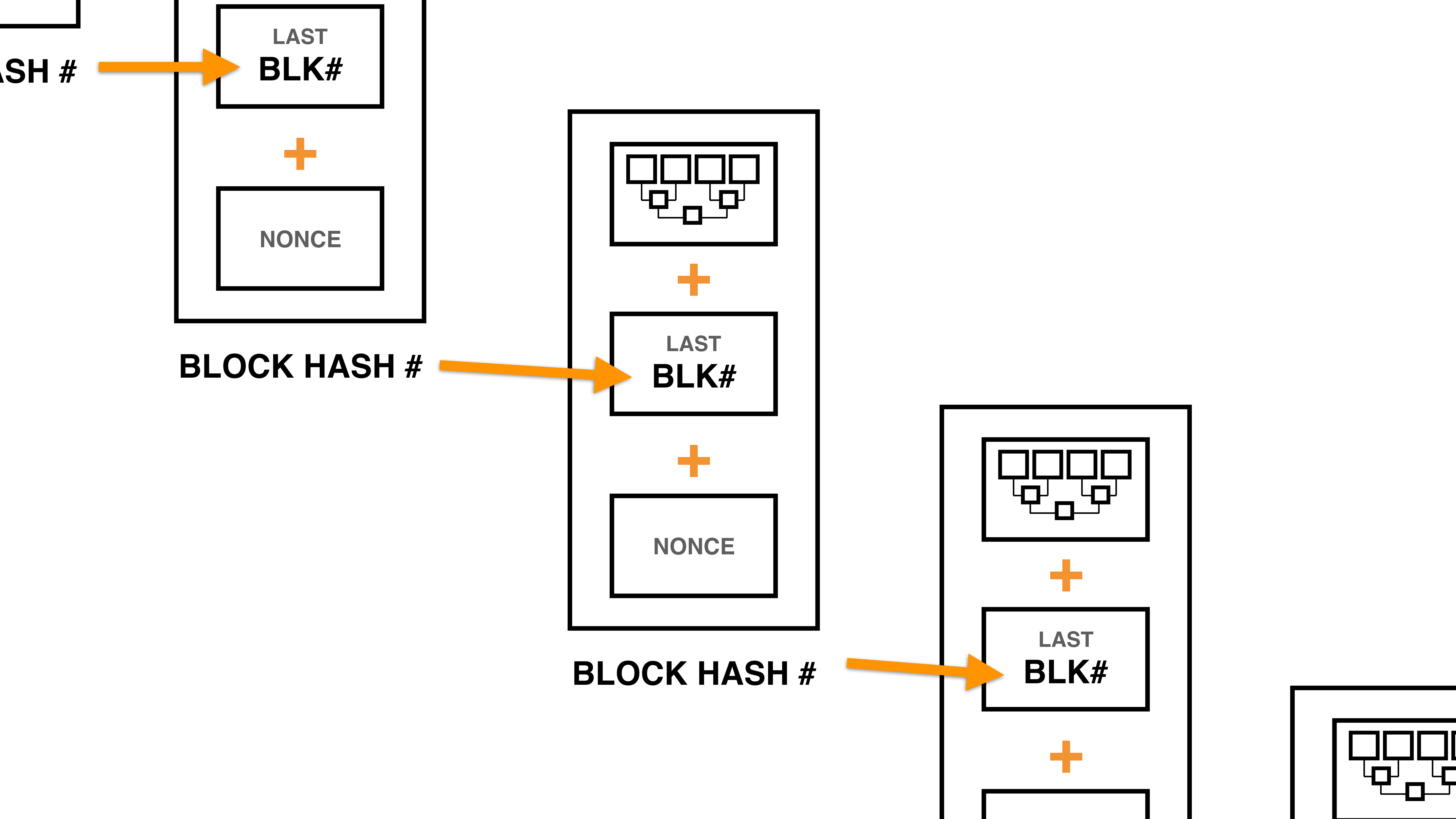


BASICS COMPONENTS OF A BLOCK

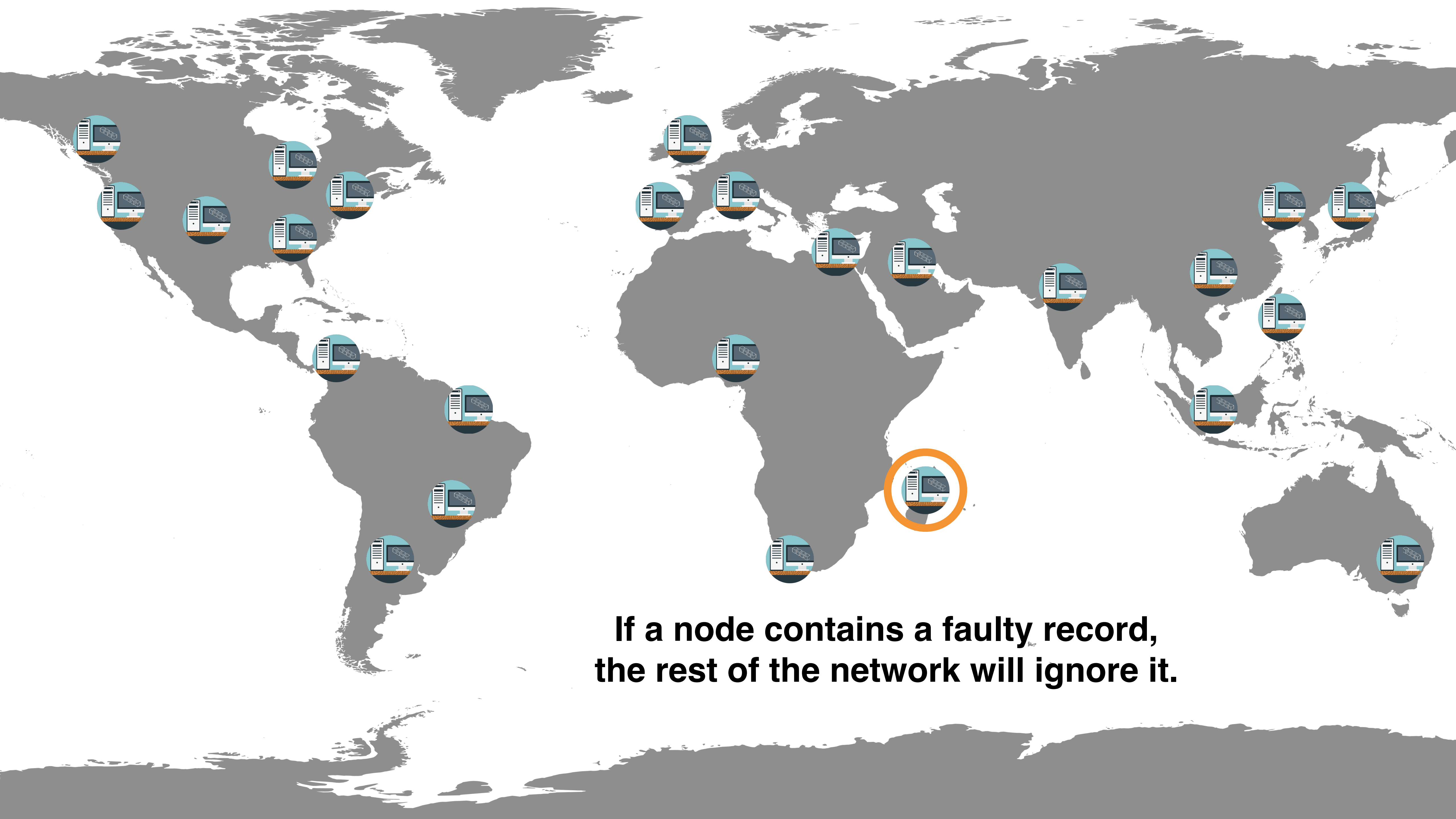
EXAMPLE: BITCOIN BLOCKCHAIN



BLOCK HASH #



**DATA SECURITY IS MAINTAINED BY
HAVING ALL NODES HAVING
A COPY OF THE BLOCKCHAIN**



**If a node contains a faulty record,
the rest of the network will ignore it.**

CROSSROADS



Technical



Implications



IMPLICATIONS

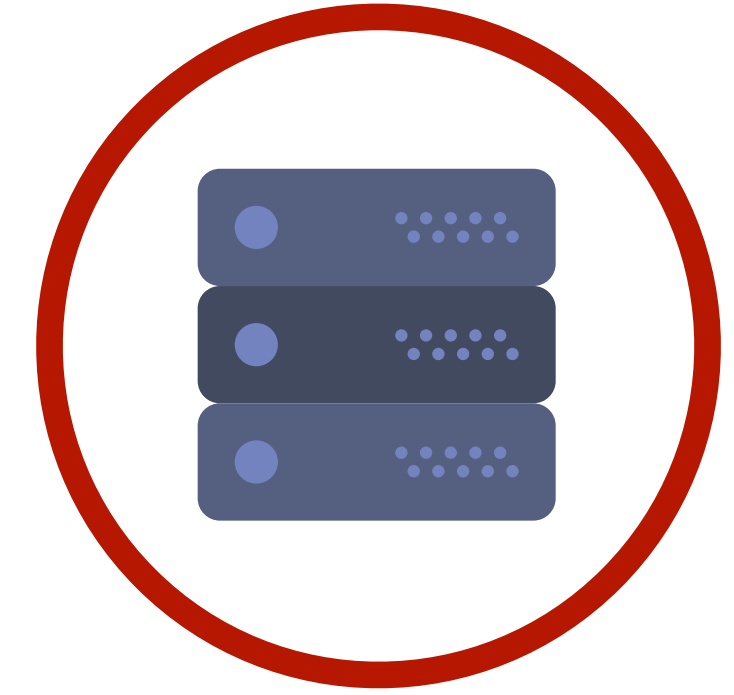
THE ARRIVAL OF BLOCKCHAINS HAS UNLOCKED
A NEW SET OF TOOLS THAT WILL BUILD
THE NEXT WAVE OF APPLICATIONS



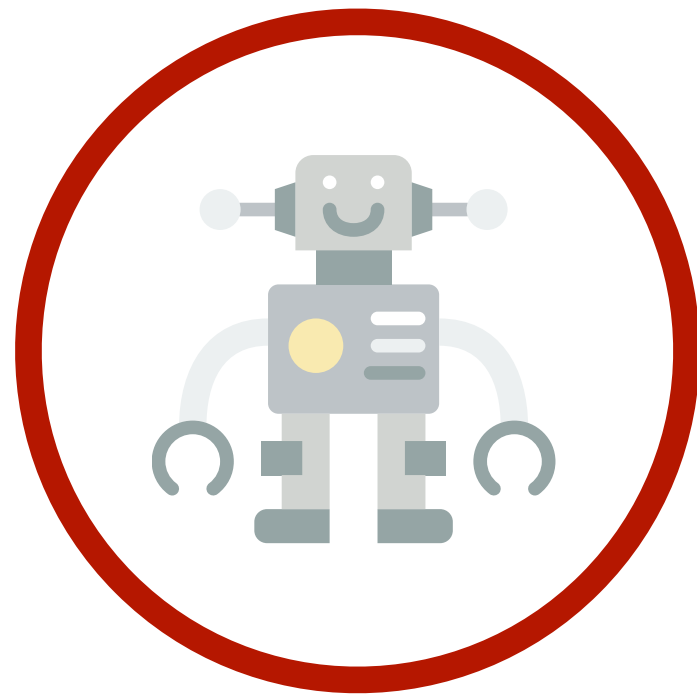
**DECENTRALISED
APPLICATIONS**



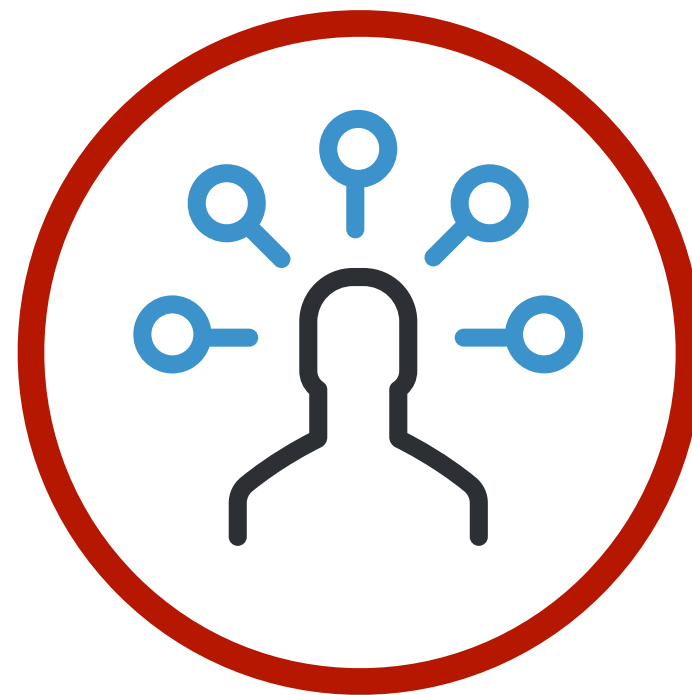
**DECENTRALISED
COMPANIES**



**DECENTRALISED
STORAGE**



**MACHINE
ADDRESSES**



**USER OWNED
ACCOUNTS**



**USER OWNED
DATA**



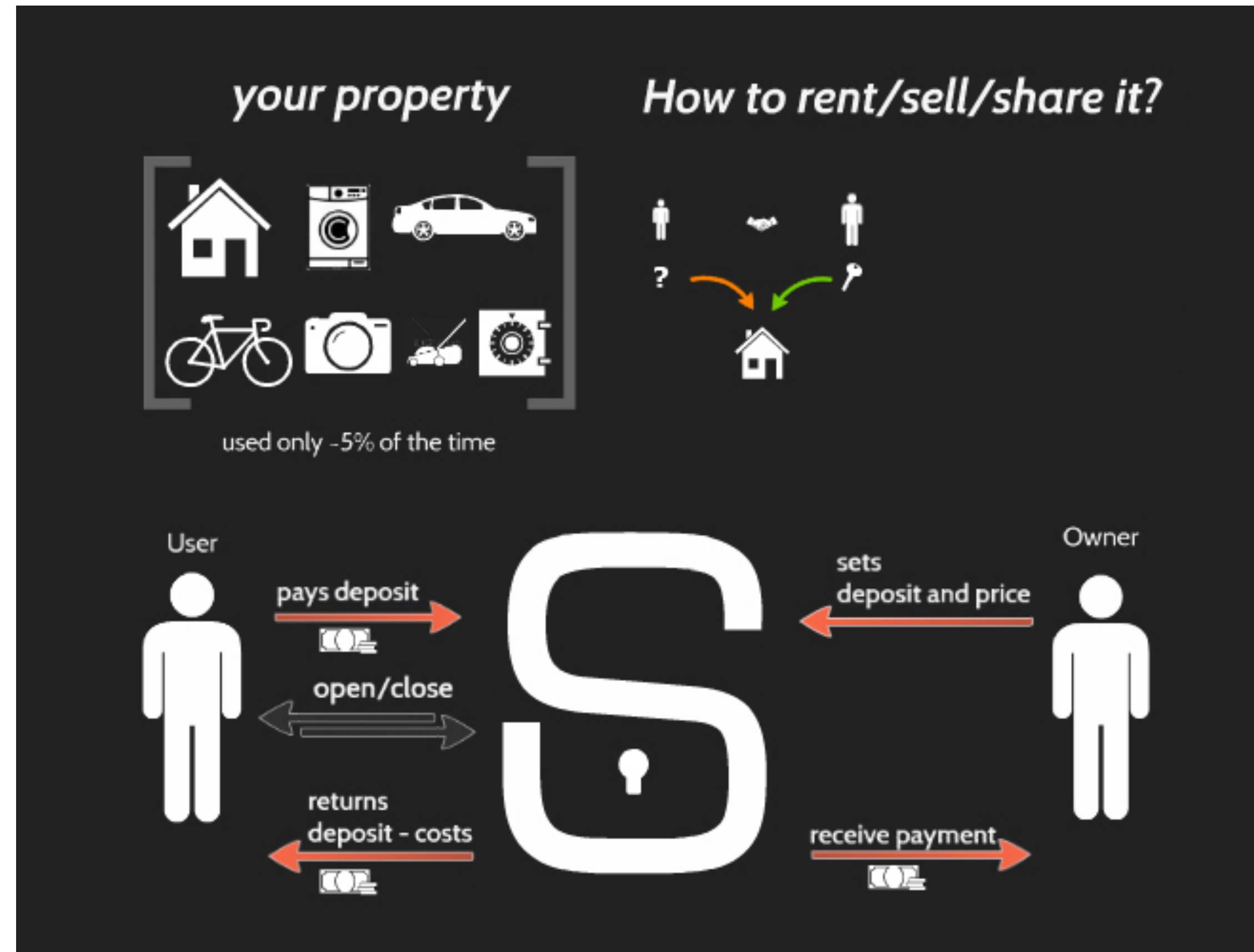
DECENTRALISED APPLICATIONS

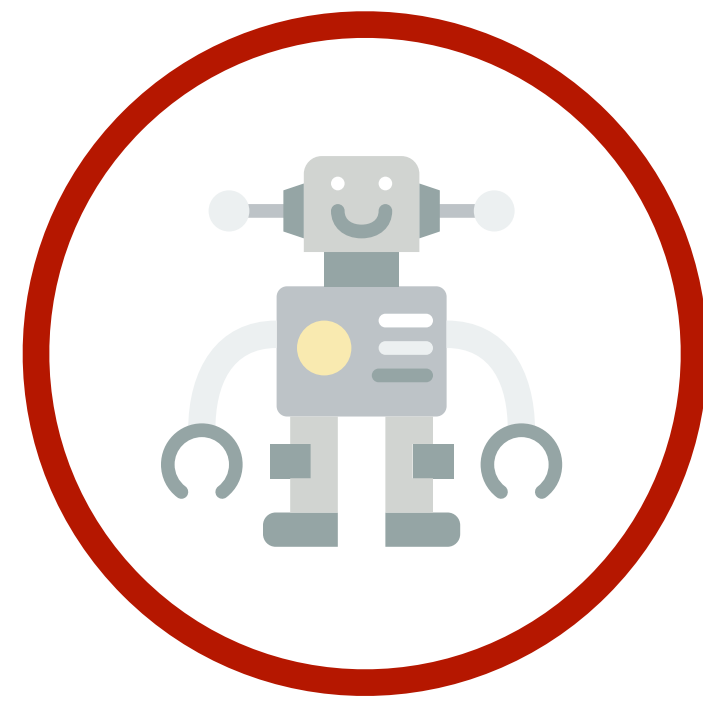
The WeiFund logo, featuring a white upward-pointing arrow inside a circle, followed by the text "WeiFund". Below the logo, the text "WEIFUND IS OPEN-SOURCED CROWD-FUNDING" is displayed in white, bold, uppercase letters against a dark, textured background.

A screenshot of the CryptoKitties website. The top left corner shows the "CryptoKitties" logo and navigation links for "Sign in" and "Marketplace". The main content area features the text "Collectible. Breedable. Adorable." followed by the tagline "Collect and breed digital cats." and a pink "Start meow" button. On the right side, there is a grid of nine colorful, cartoonish digital cat avatars.



DECENTRALISED COMPANIES



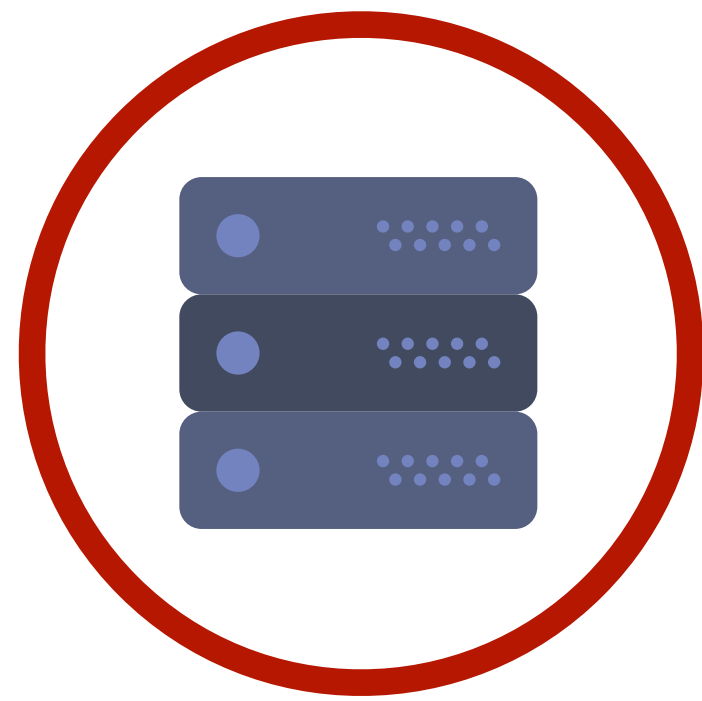


MACHINE ADDRESSES



IOTA
THE ECONOMY OF THINGS

As the Internet-of-Things keep expanding, the need for interoperability and sharing of resources become a necessity. IOTA enables companies to explore new business-2-business models by making every technological resource a potential service to be traded on an open market in real time, with no fees.



**DECENTRALISED
STORAGE**



Filecoin

SIO

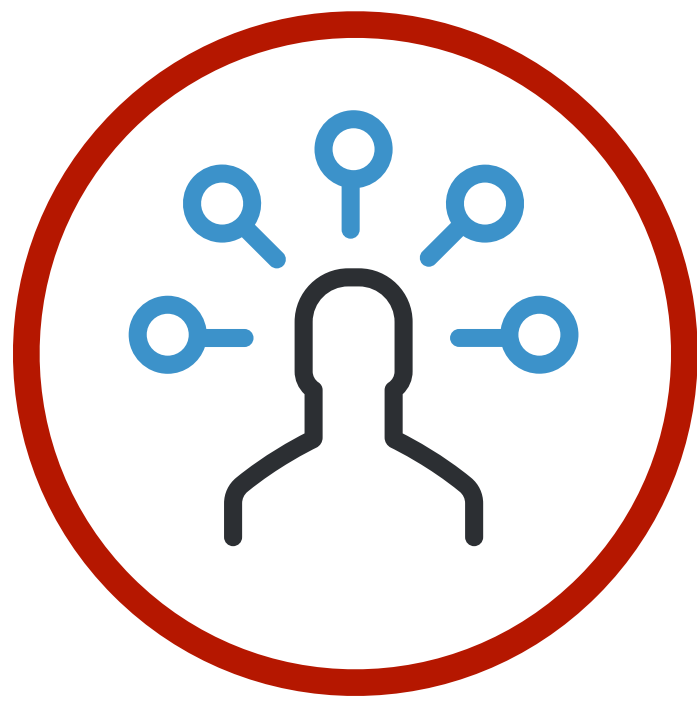


**USER OWNED
DATA**

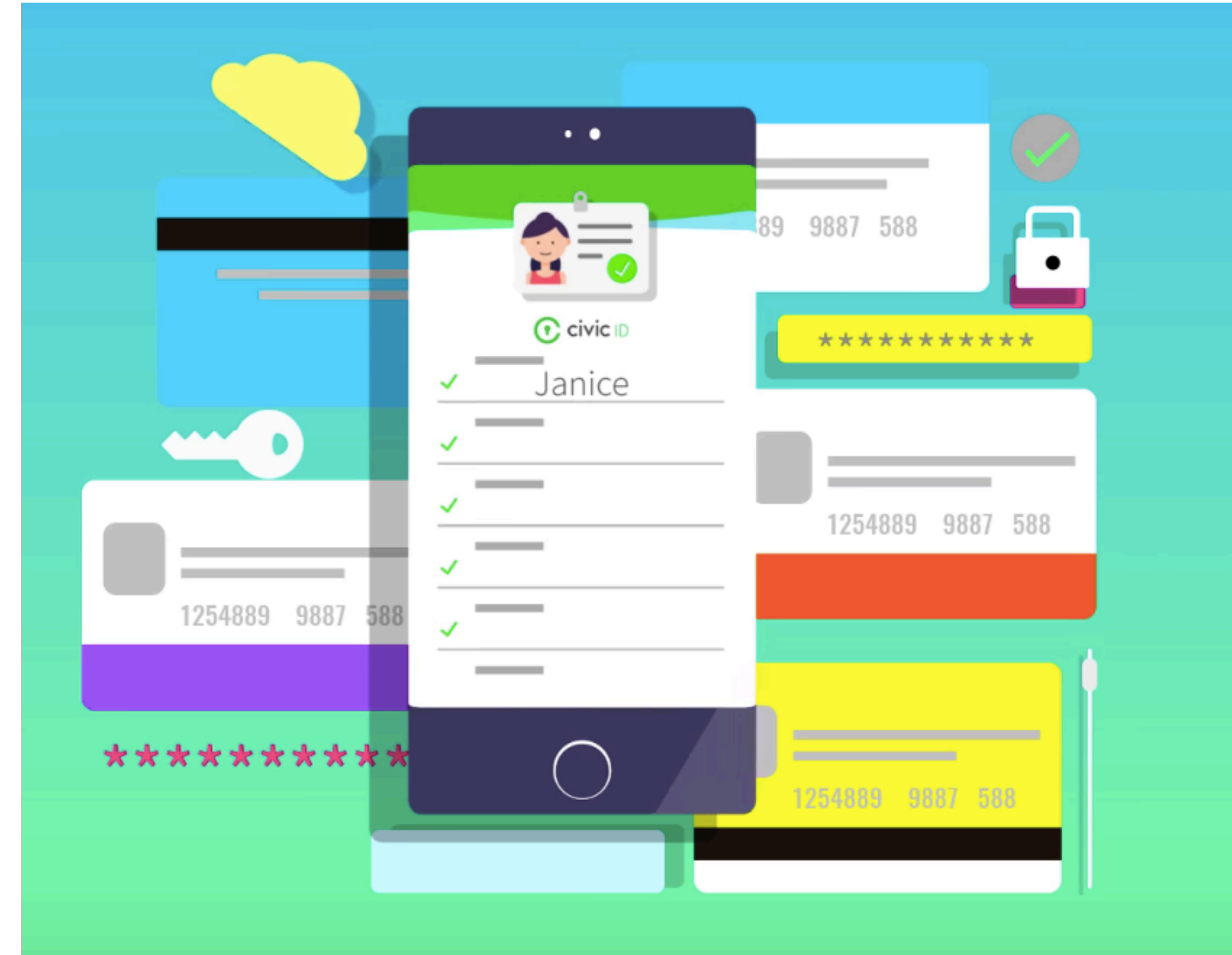


Filecoin

SIO



**USER OWNED
ACCOUNTS**

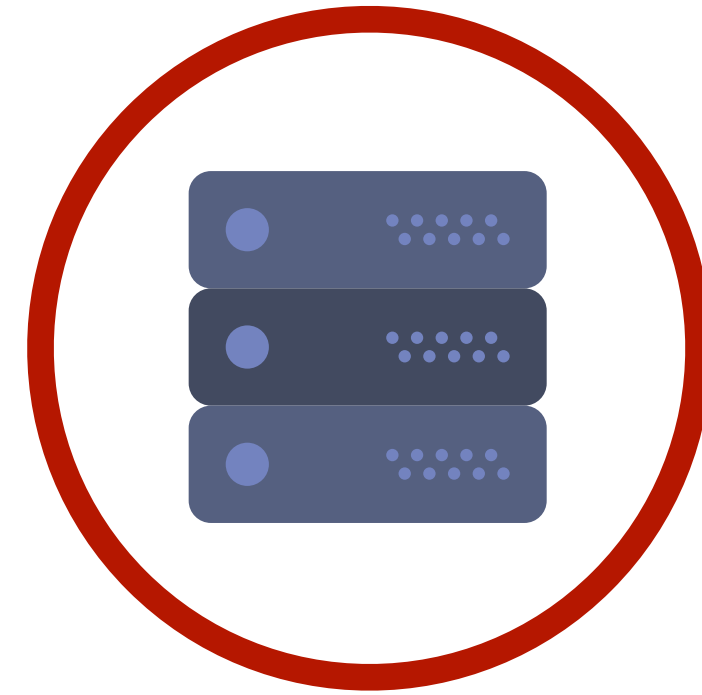




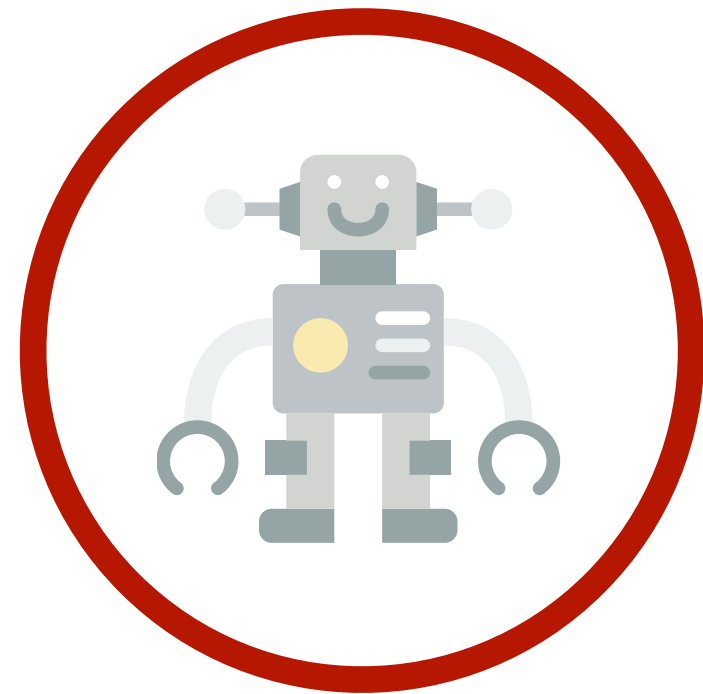
**DECENTRALISED
APPLICATIONS**



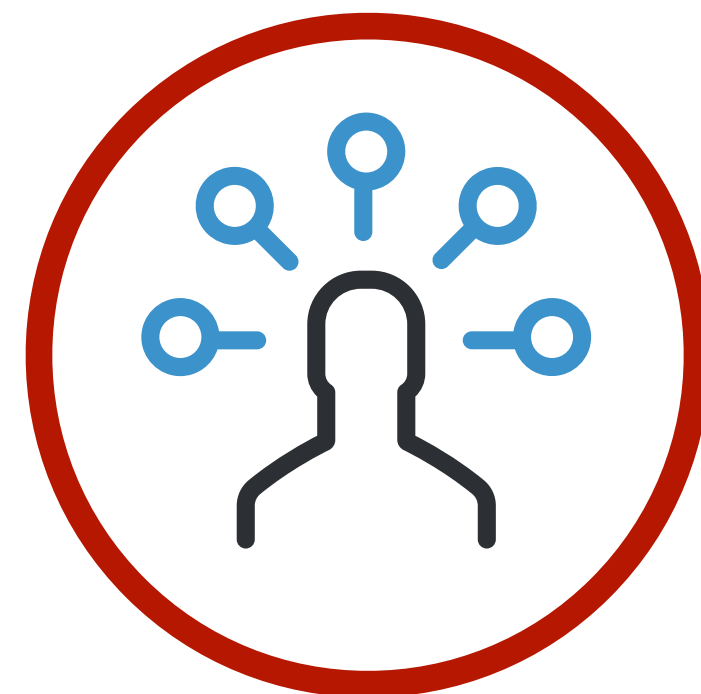
**DECENTRALISED
COMPANIES**



**DECENTRALISED
STORAGE**



**MACHINE
ADDRESSES**



**USER OWNED
ACCOUNTS**



**USER OWNED
DATA**

QUESTIONS?