

Blockchain Demystified

Do We Really Understand It?

Davor Gašparac

Erste Group IT - Head of Group Corporates Division

Global Blockchain & Smart Contracts Summit

Berlin, 19th March, 2018

*The views and ideas expressed in this presentation
are those of the presenter and should therefore
not be reported as representing the views
of the Erste Group.*

IMAGINE...

...it doesn't work as you expect.

What is Blockchain?



Seriously - what is Blockchain?

Solution?

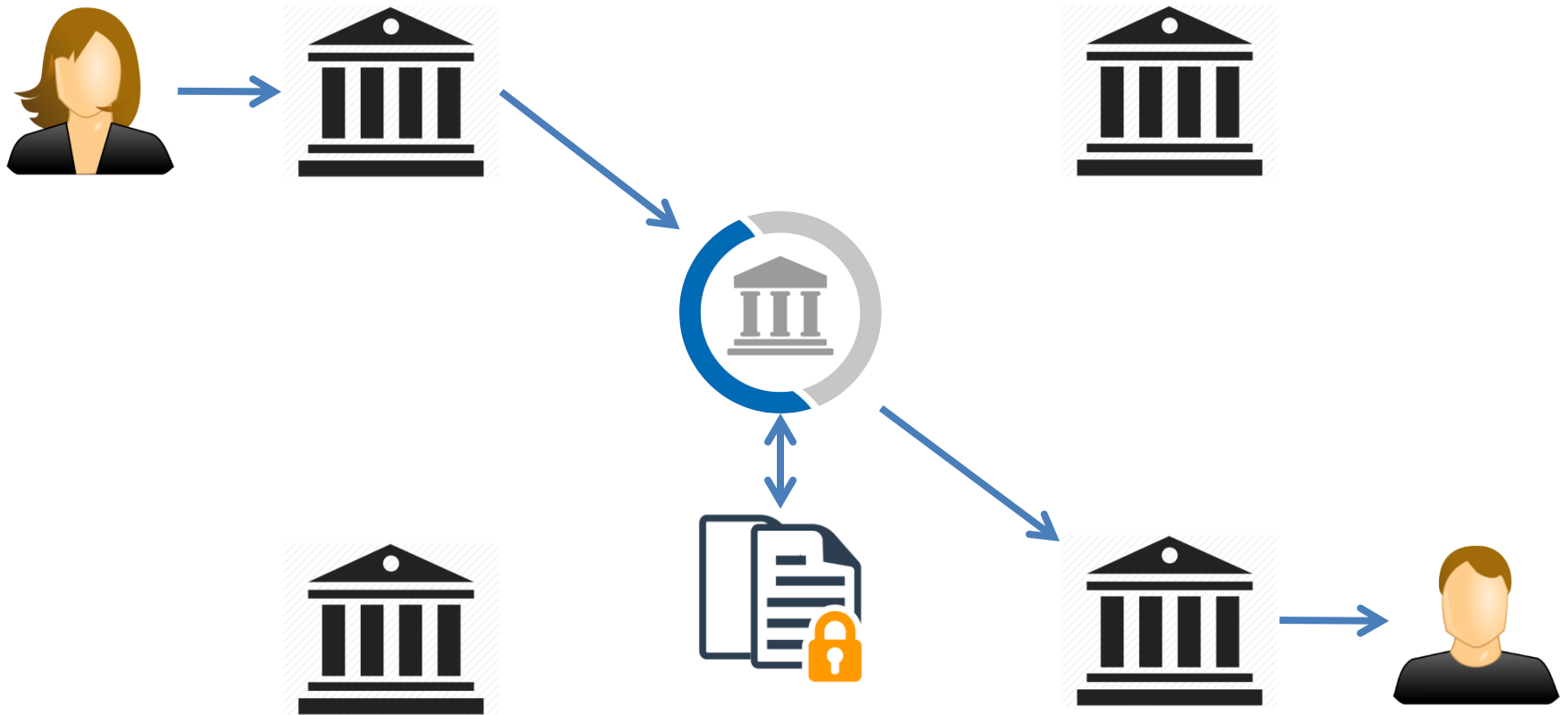
Technology?

Protocol?

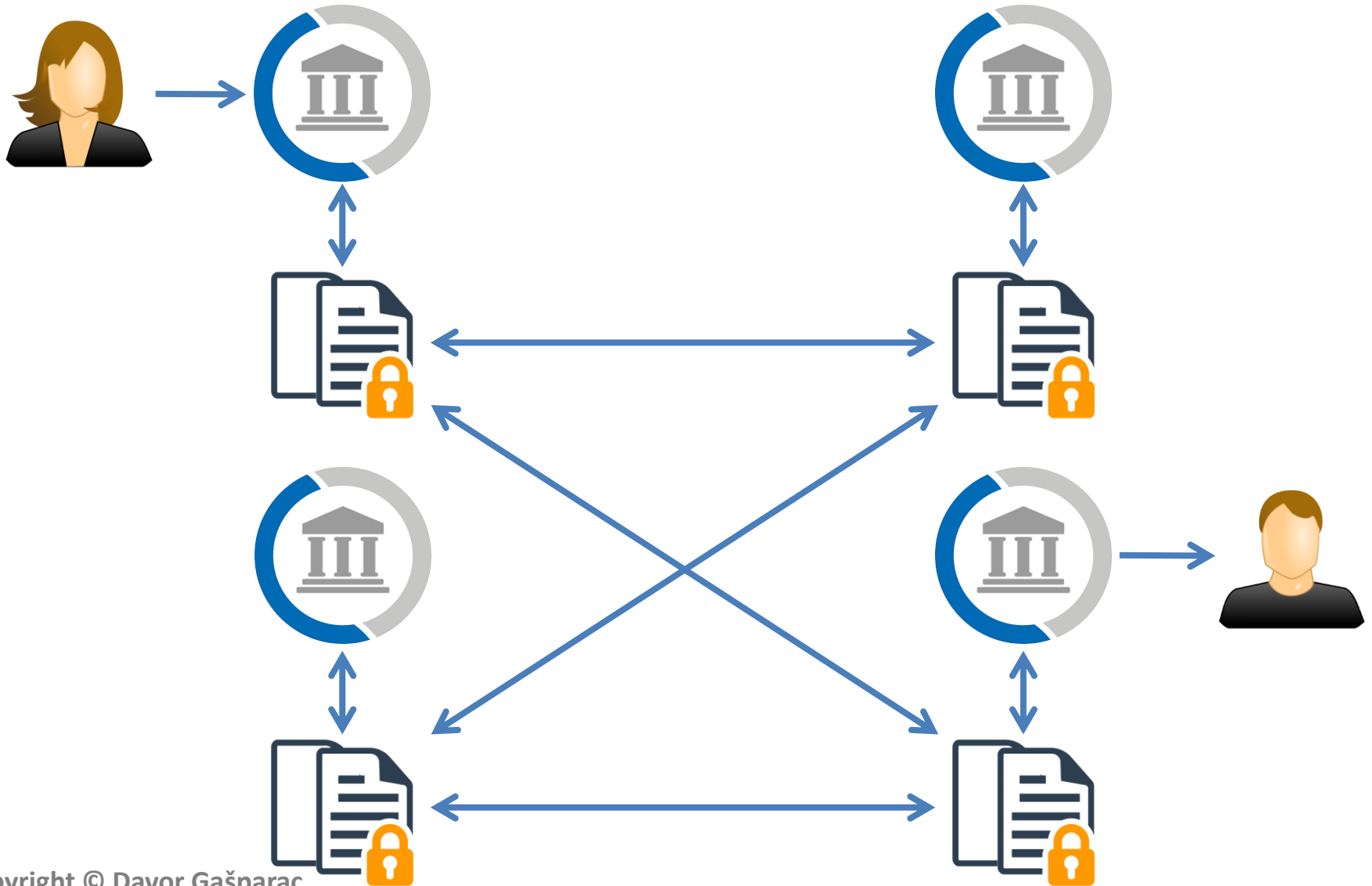
Algorithm?

Network?

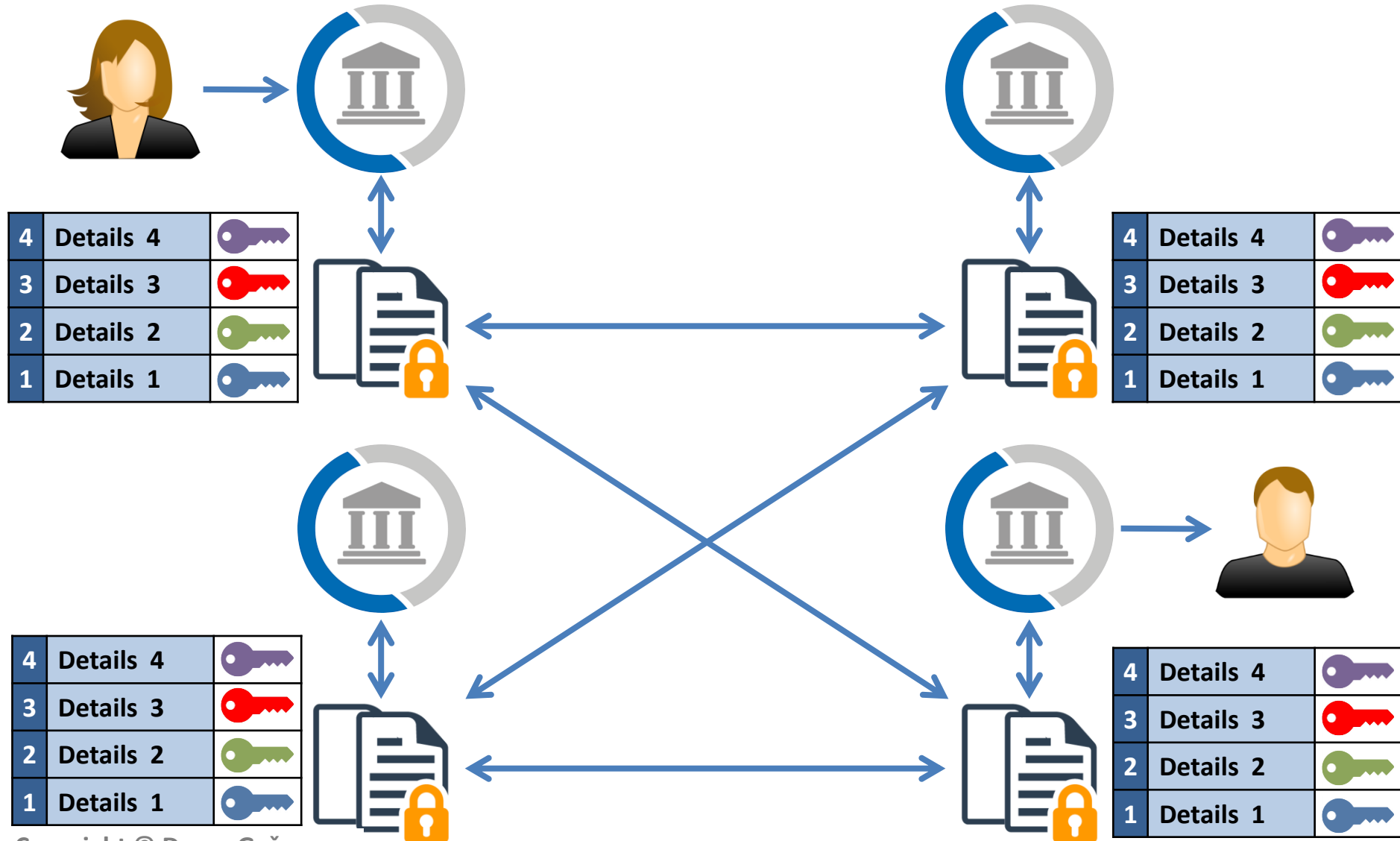
Centralized ledger



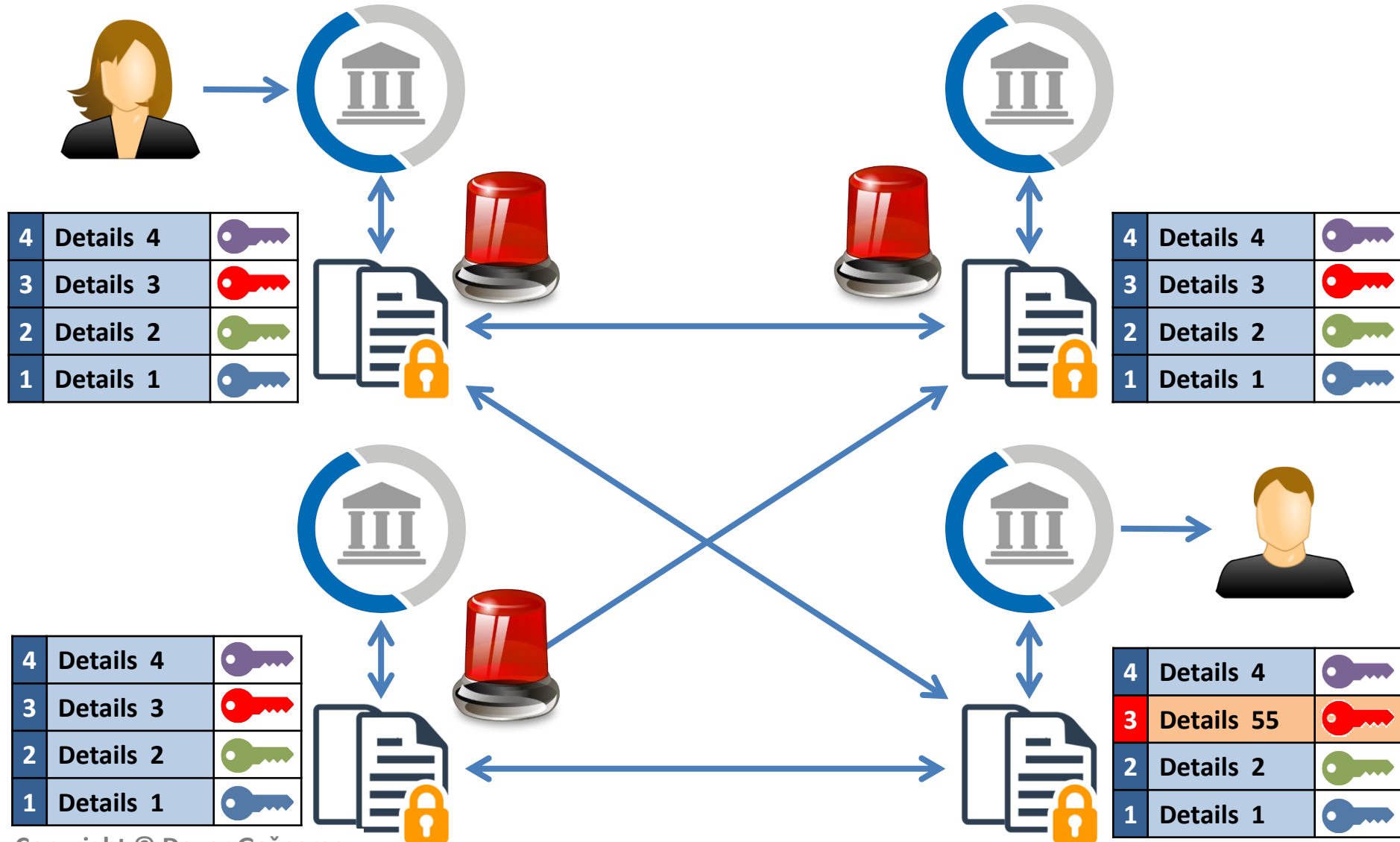
Distributed ledger



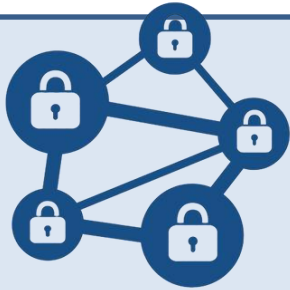
How does it work?



How does it work?



Key promises of Blockchain



RESILIENCE

Distributed systems are more robust than centralised, hence harder to compromise (no single point of error)



TRANSPARENCY

Distributed ledgers provide an immutable transaction trail (verifiable history of transactions) which prevents past blocks to be altered, thus stops fraud, abuse and manipulation. It also makes transaction fully auditable at any time.



COST EFFICIENCY

By removing intermediary, Blockchain enables near real-time settlement of recorded transactions, thus reducing cost, friction and risk.

Bitcoin energy consumption index



Bitcoin energy consumption index

Description	Value
Bitcoin's current estimated annual electricity consumption* (TWh)	55.07
Annualized global mining revenues	\$7,575,022,299
Annualized estimated global mining costs	\$2,753,313,698
Country closest to Bitcoin in terms of electricity consumption	Israel
Estimated electricity used over the previous day (KWh)	150,866,504
Implied Watts per GH/s	0.227
Total Network Hashrate in PH/s (1,000,000 GH/s)	27,786
Electricity consumed per transaction (kWh)	788.00
Number of U.S. households that could be powered by Bitcoin	5,098,729
Number of U.S. households powered for 1 day by the electricity consumed for a single transaction	26.63
Bitcoin's electricity consumption as a percentage of the world's electricity consumption	0.25%



Years to reach 50 million users

