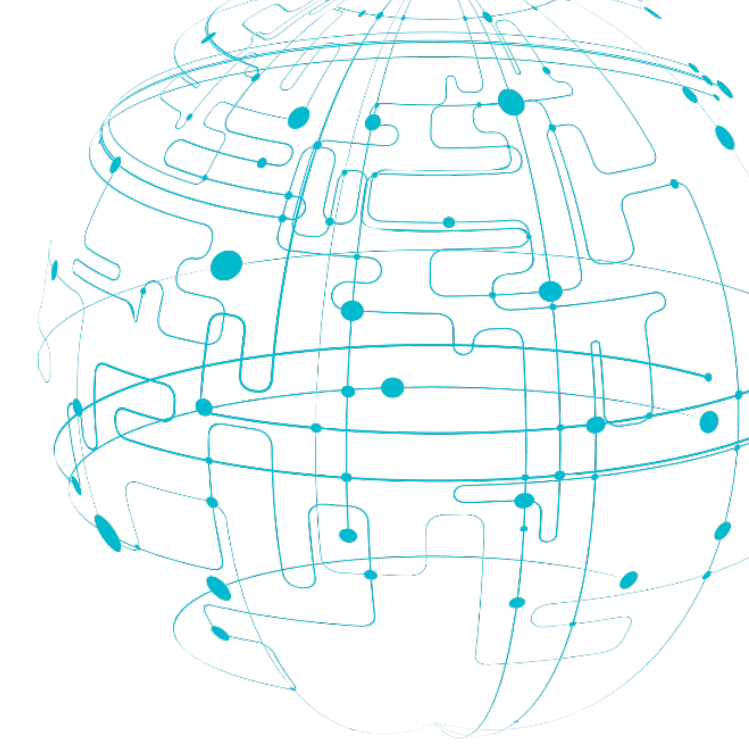


faizod.

WIE DIE BLOCKCHAIN-TECHNOLOGIE DIE ZUKUNFT VERÄNDERN WIRD

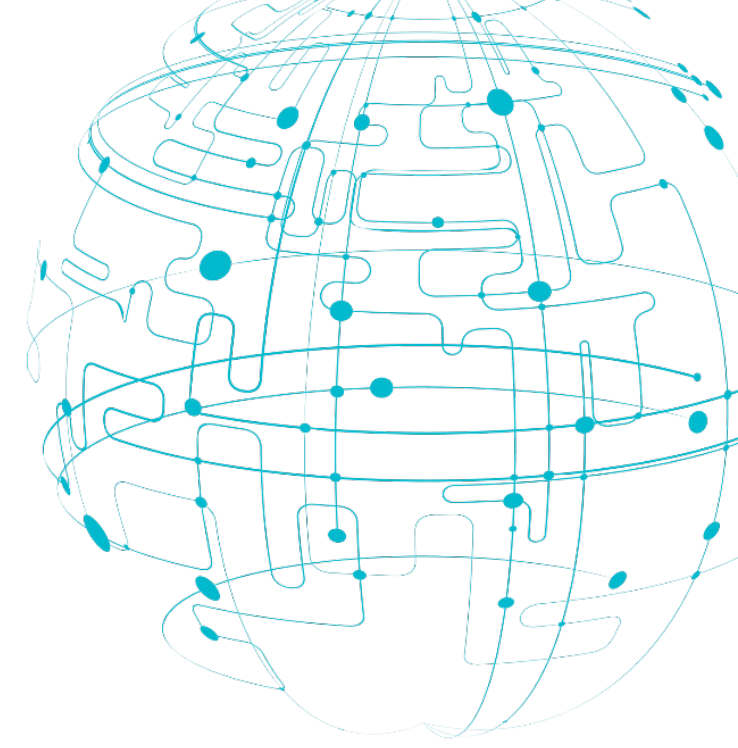
18.07.2017

faizod.



BLOCKCHAIN?

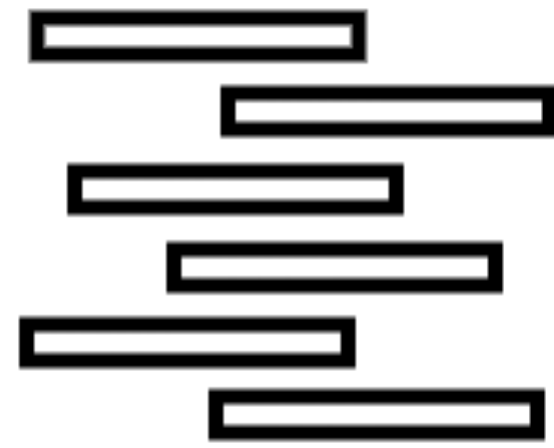
faizod.



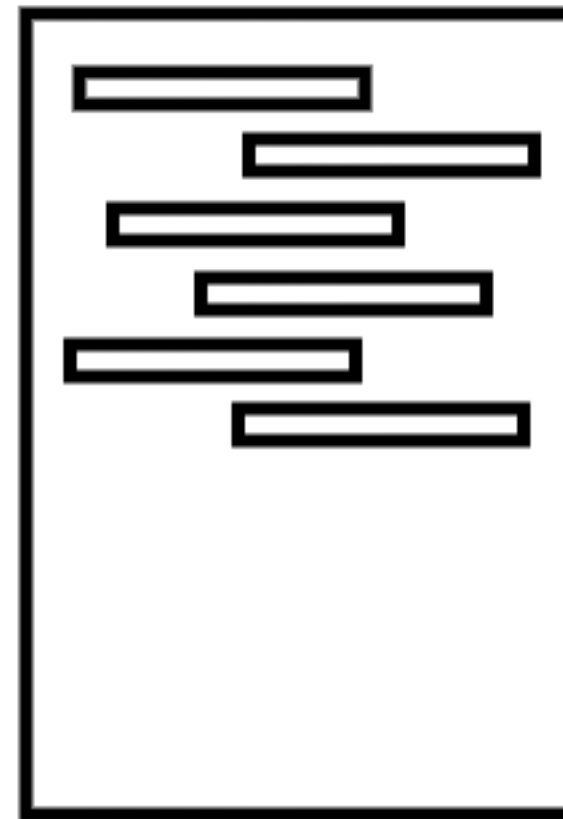
IS A DATABASE
IN WHICH STORED DATA
CAN NOT BE
DELETED OR MODIFIED

faizod.

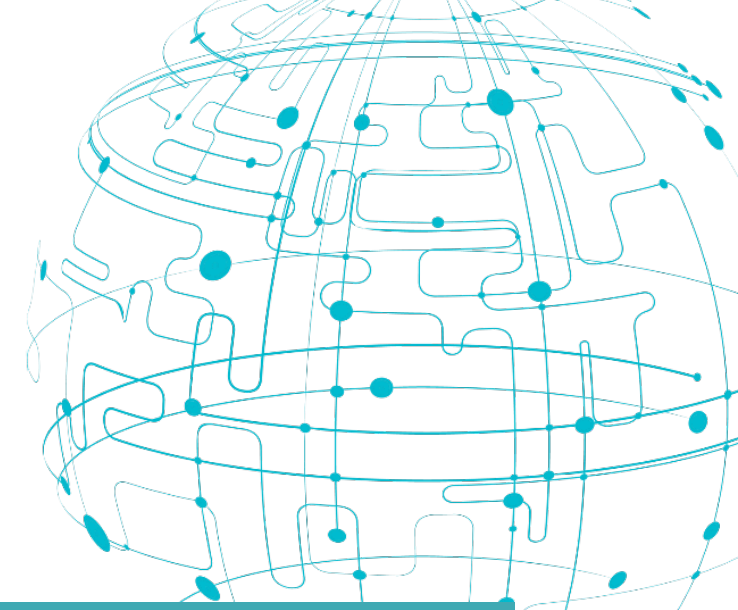
TRANSACTION



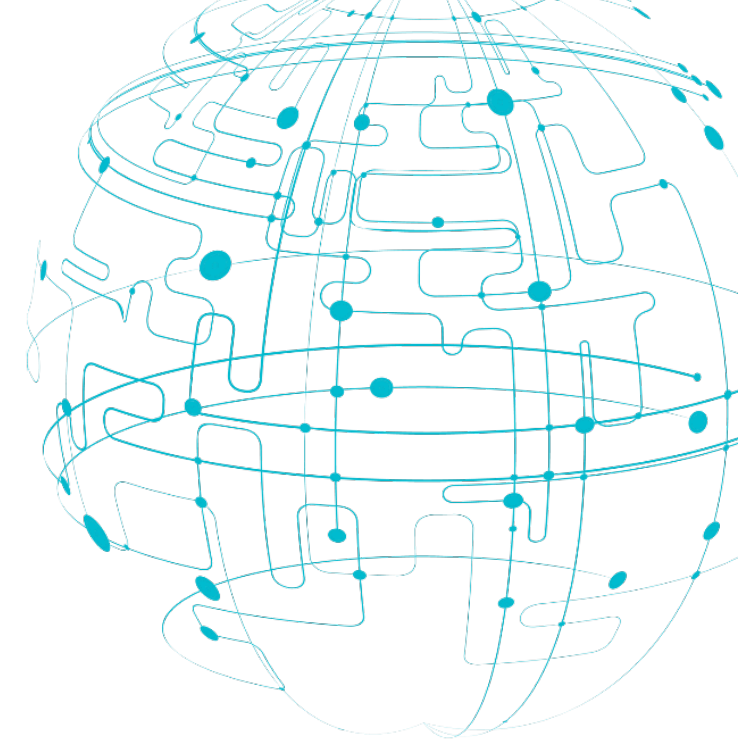
BLOCK



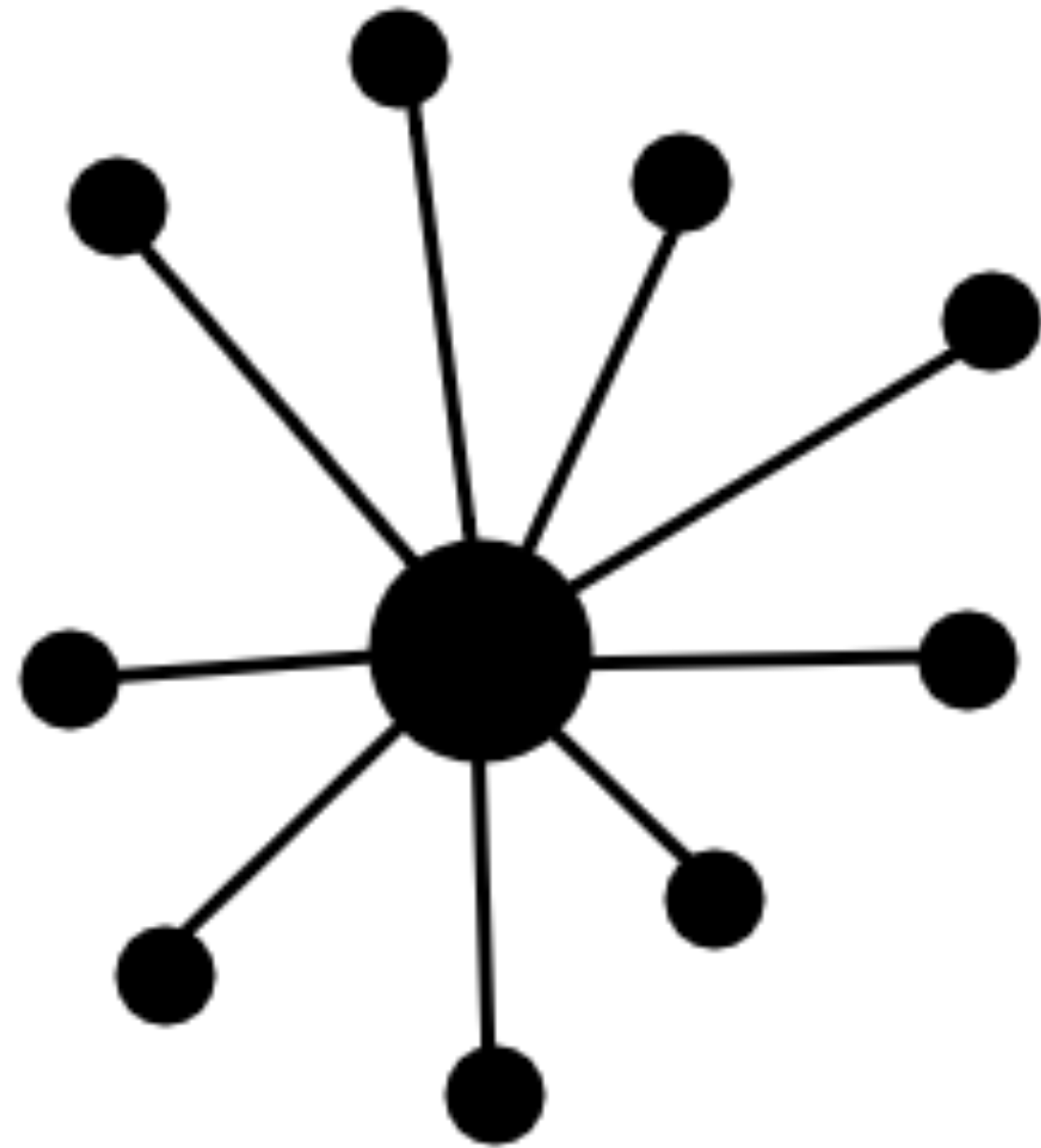
HASH VALUE



faizod.

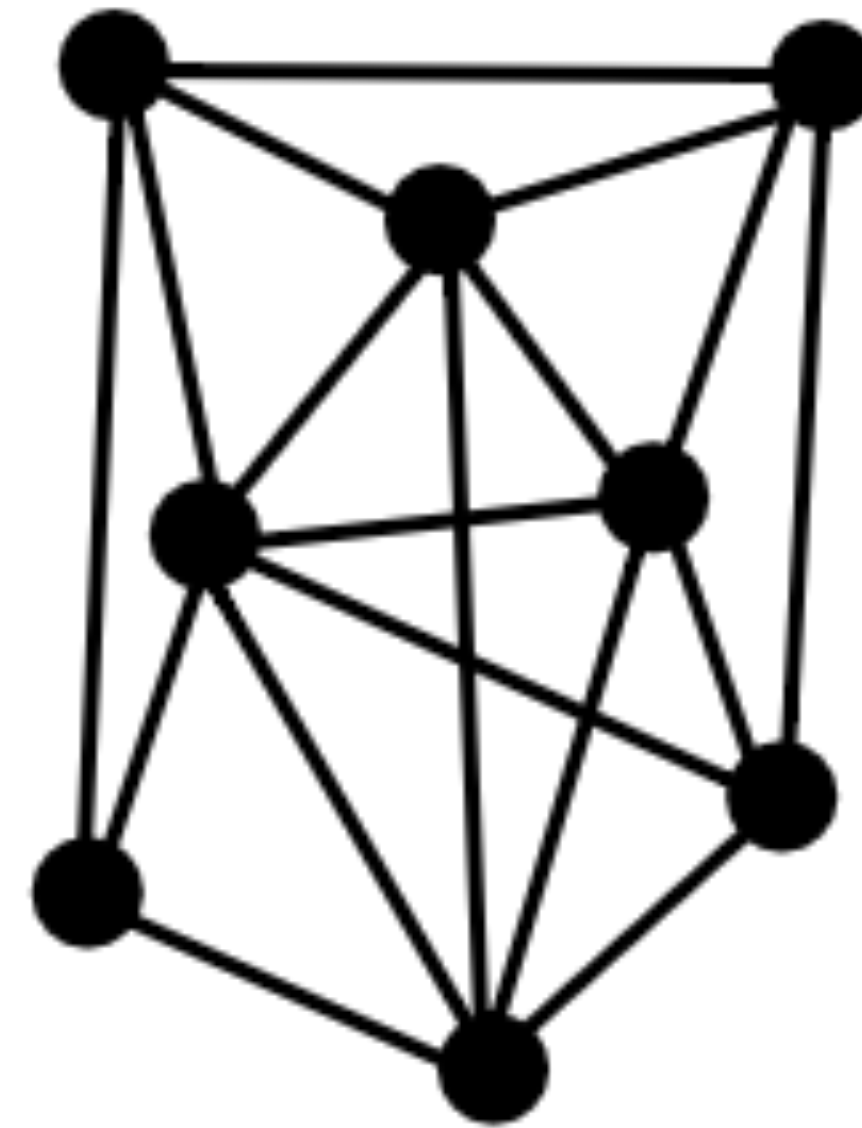


TRADITIONAL DATABASE



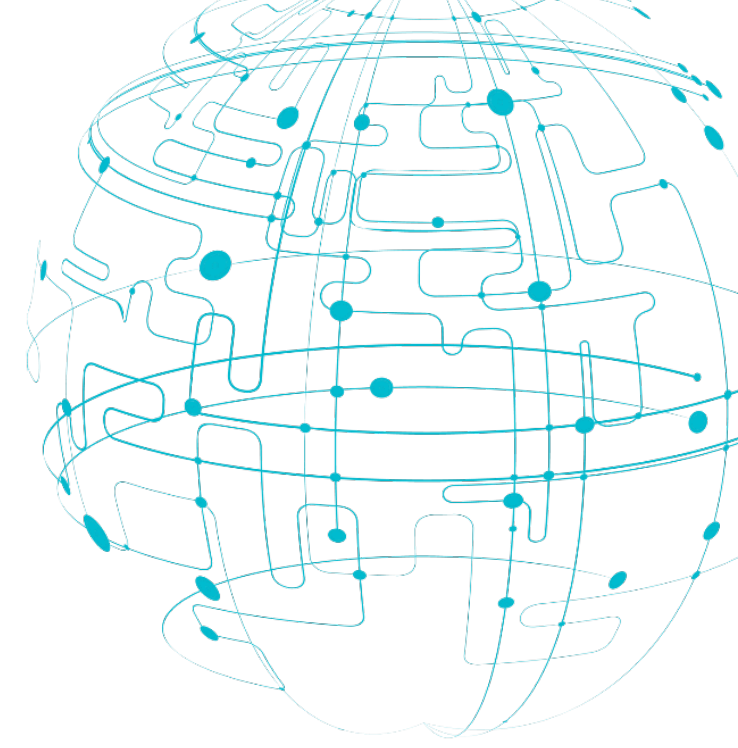
centralized

BLOCKCHAIN

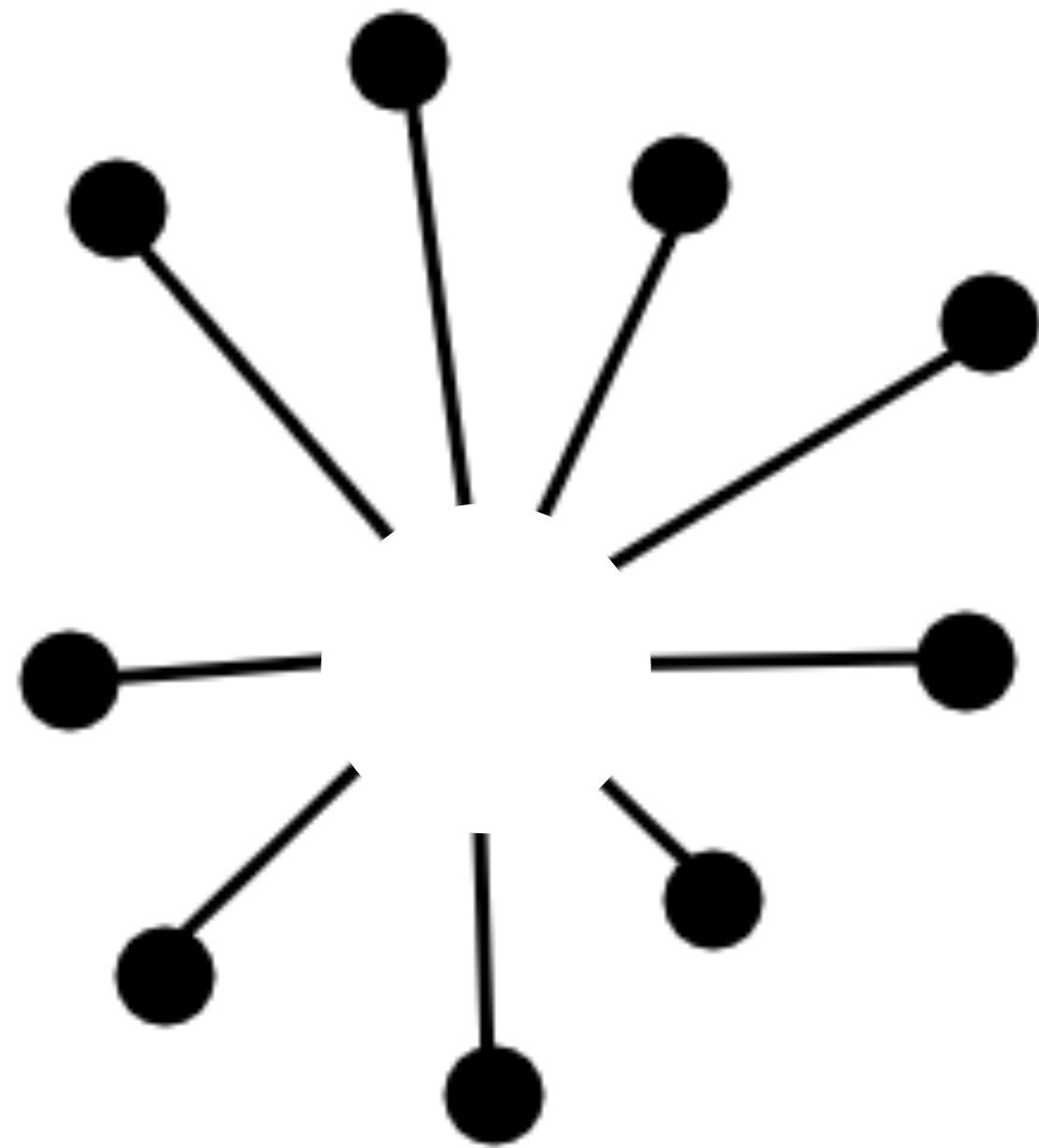


distributed

faizod.

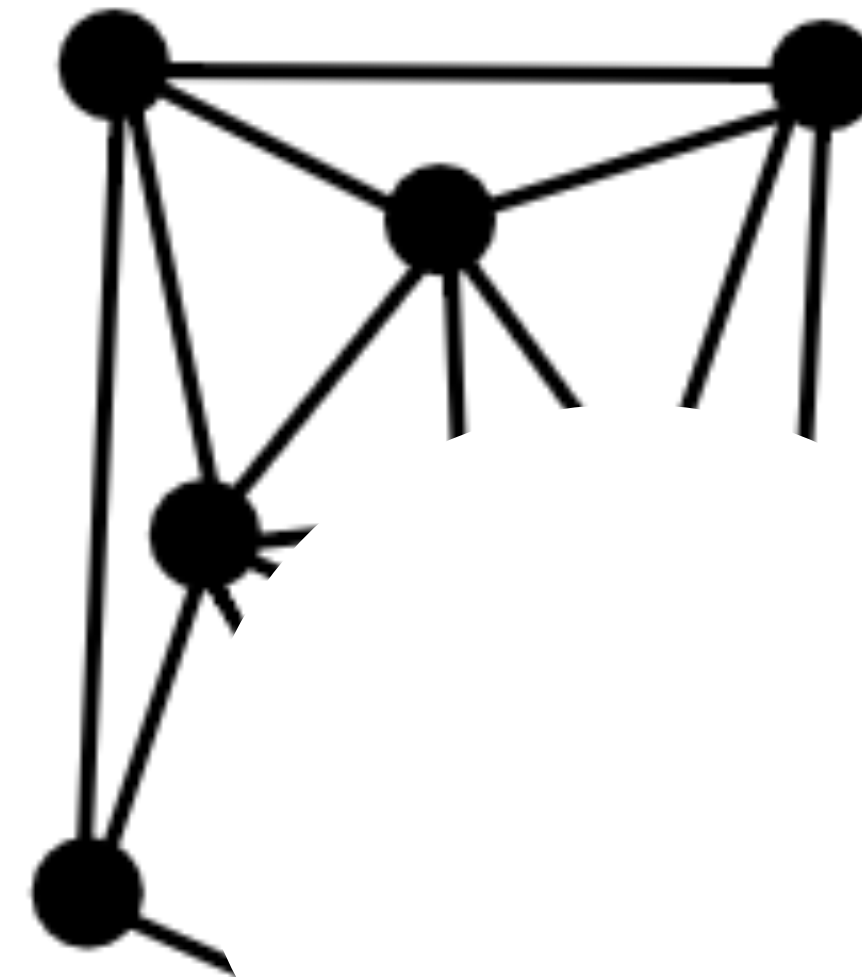


TRADITIONAL DATABASE

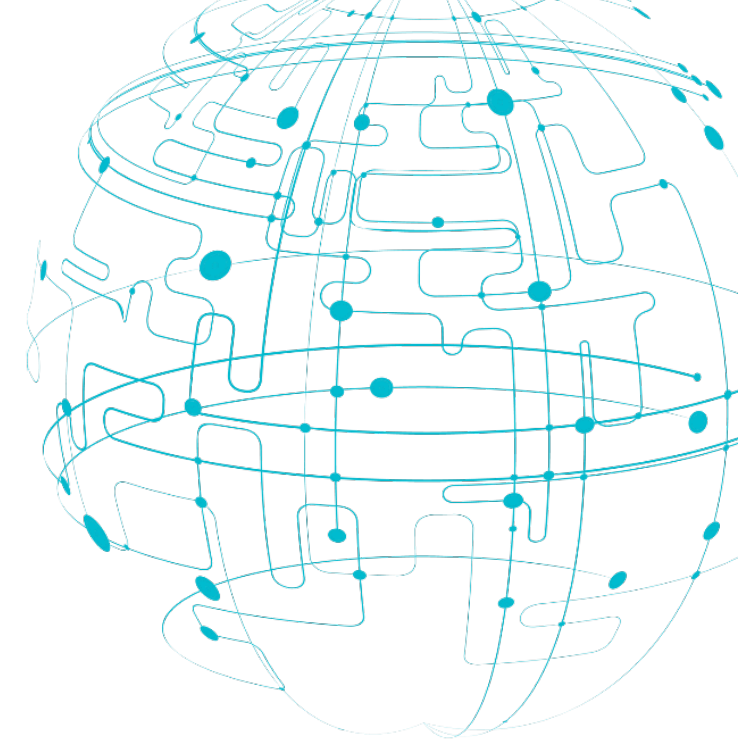


centralized

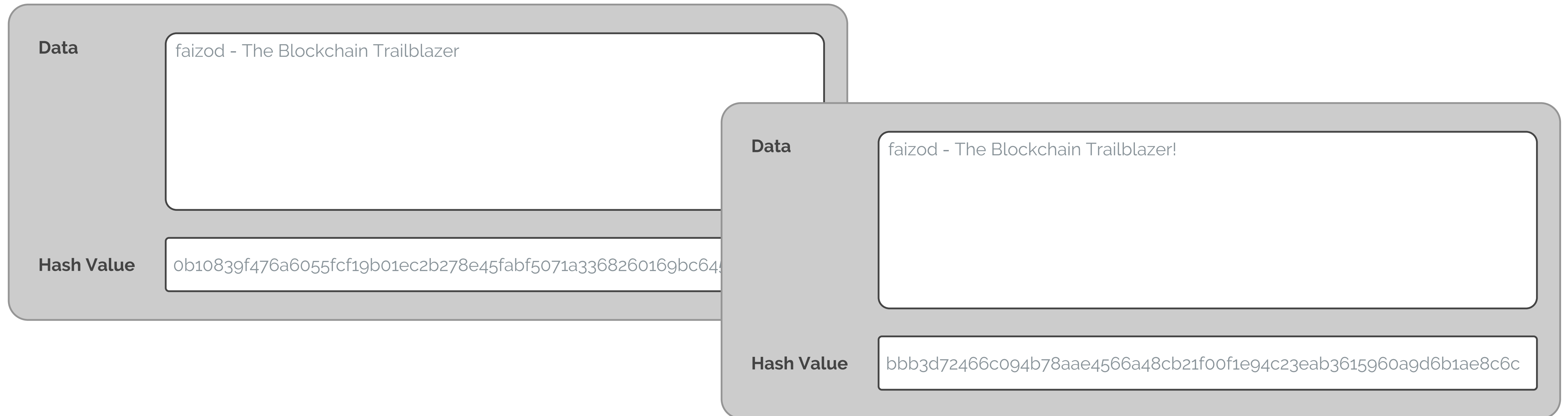
BLOCKCHAIN



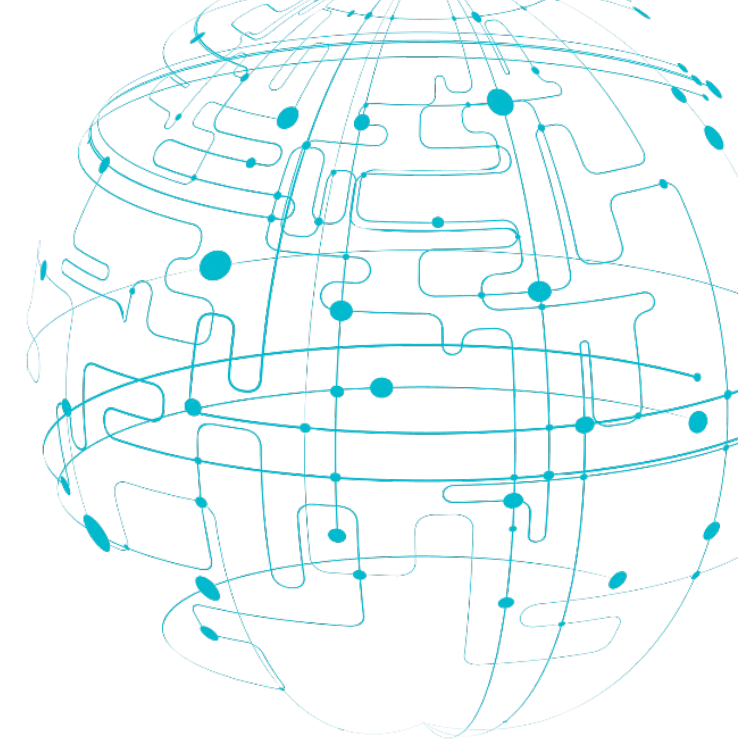
distributed



HASH VALUE



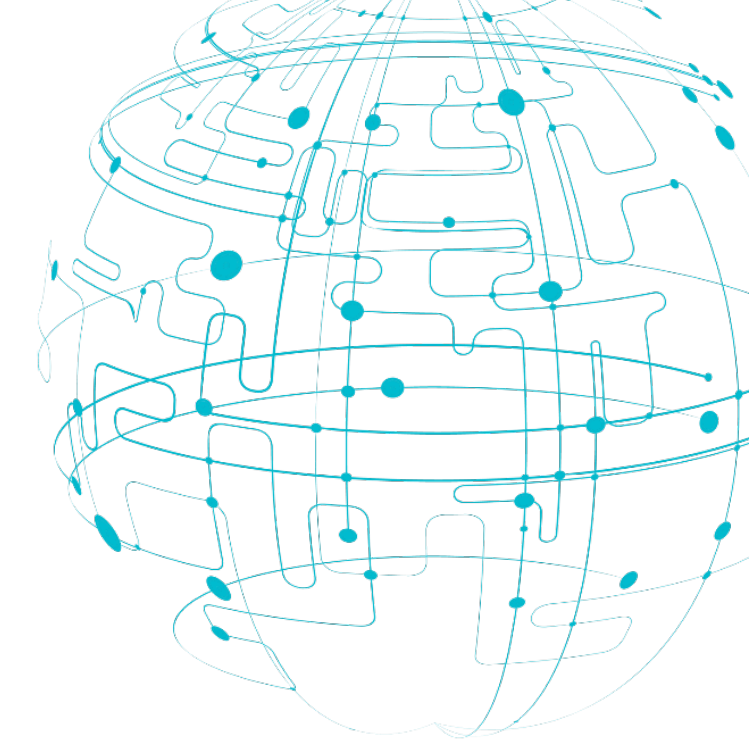
faizod.



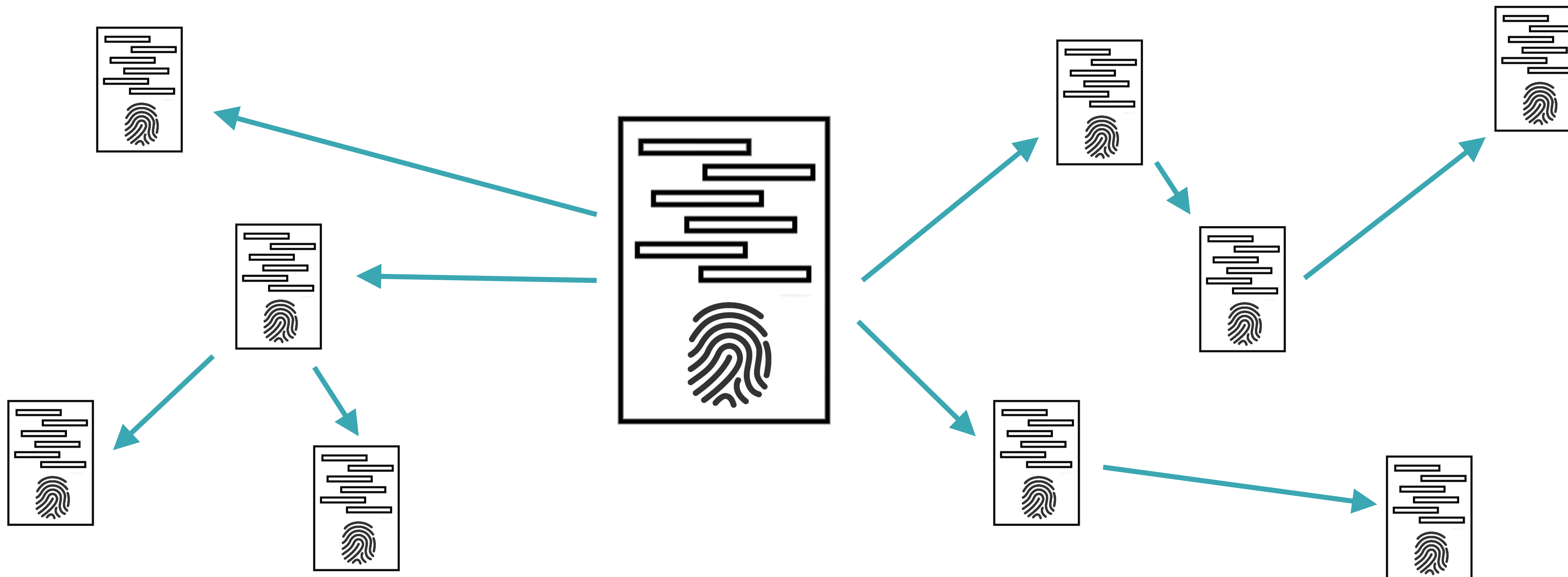
BLOCK BUILDING



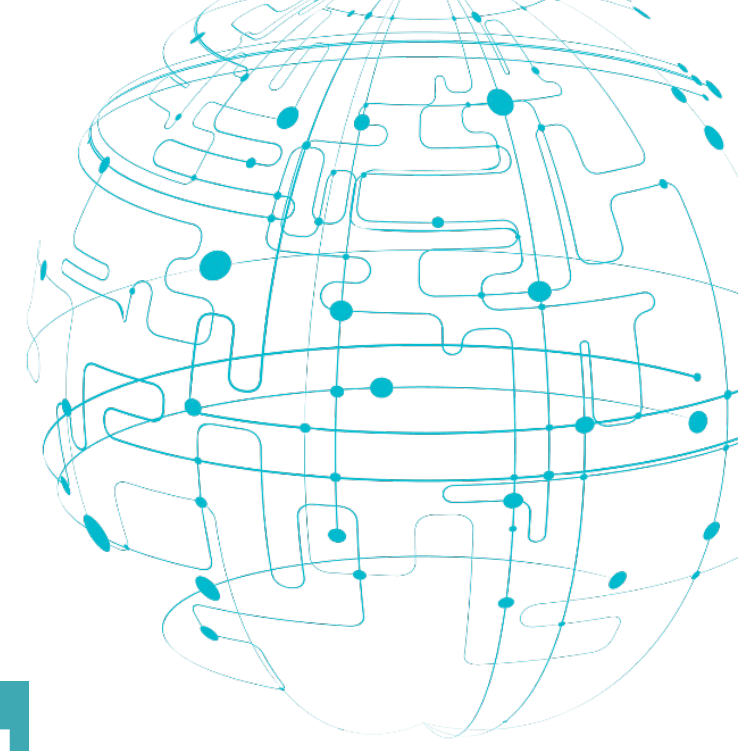
faizod.



DISTRIBUTION



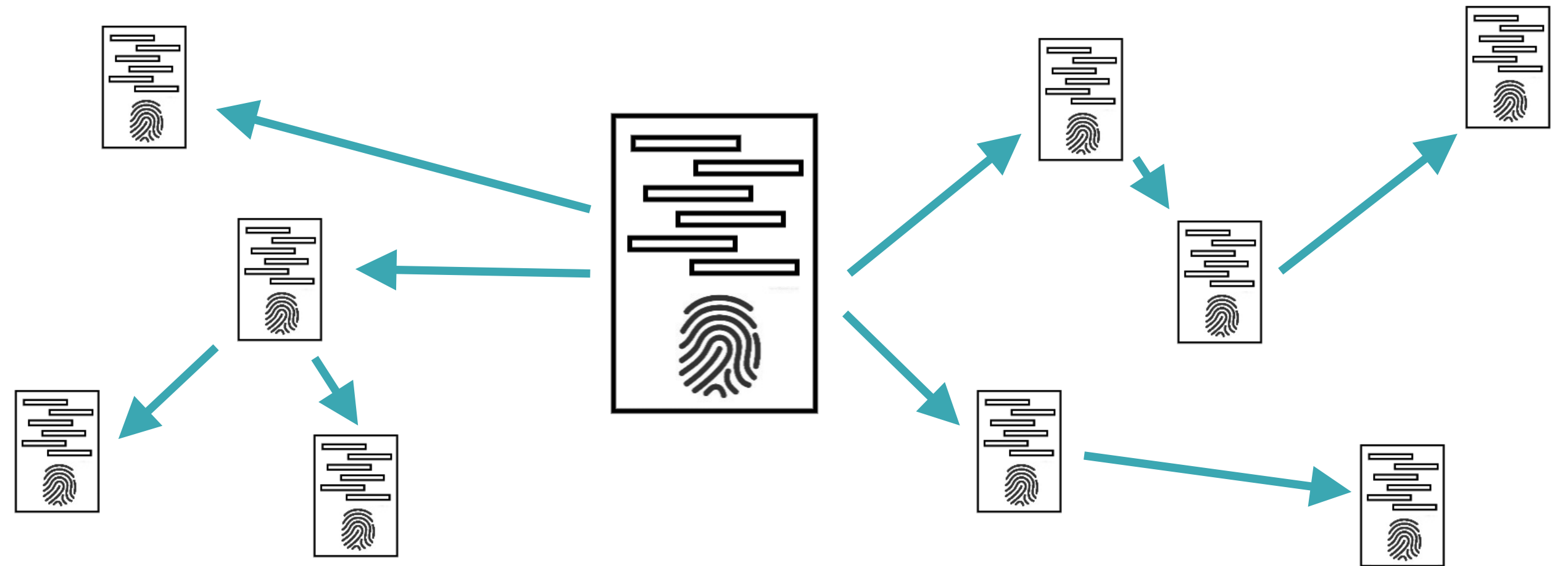
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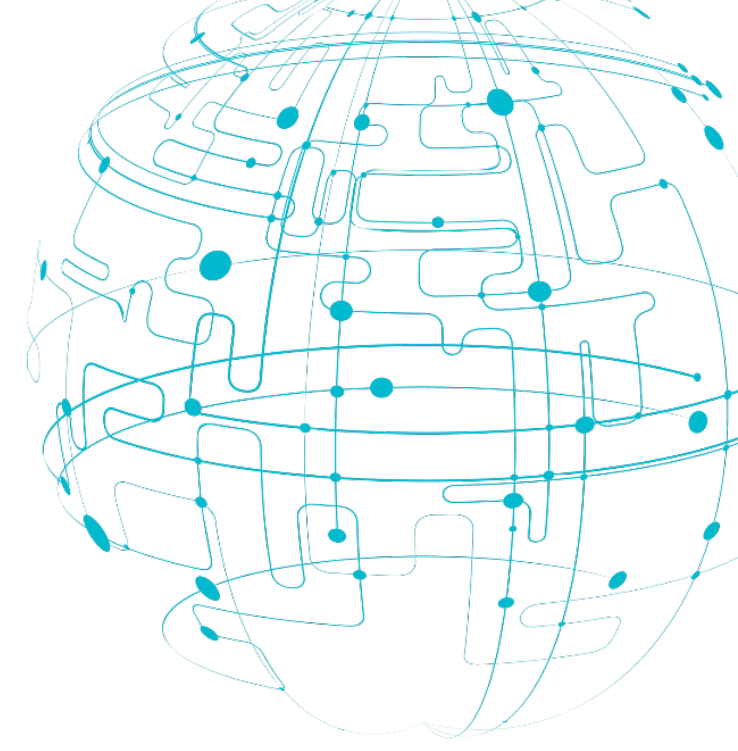
BLOCK BUILDING



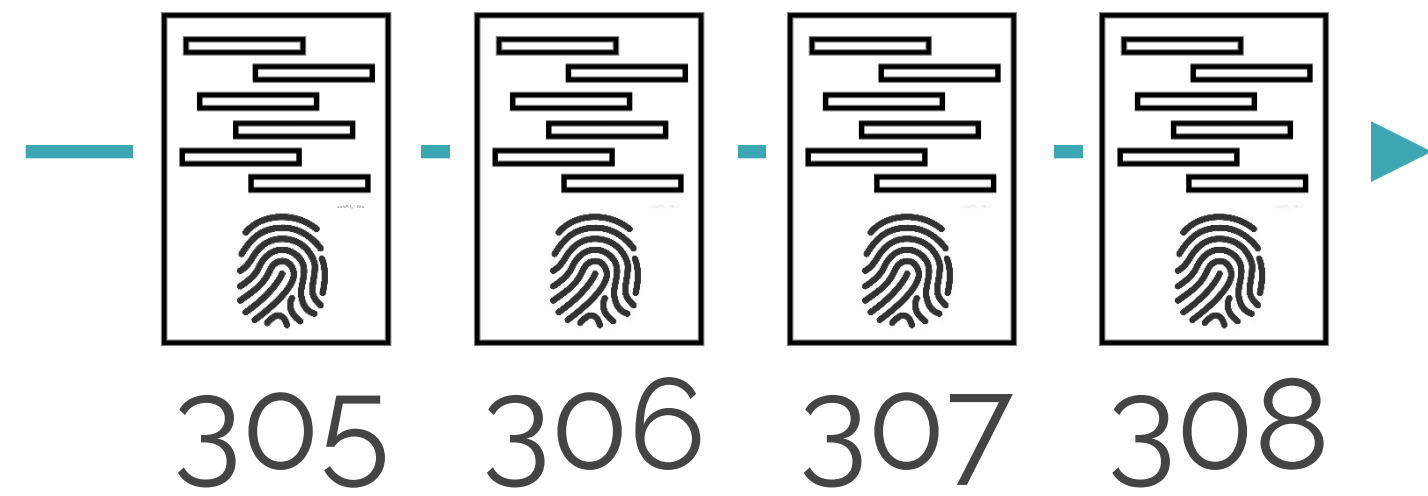
DISTRIBUTION



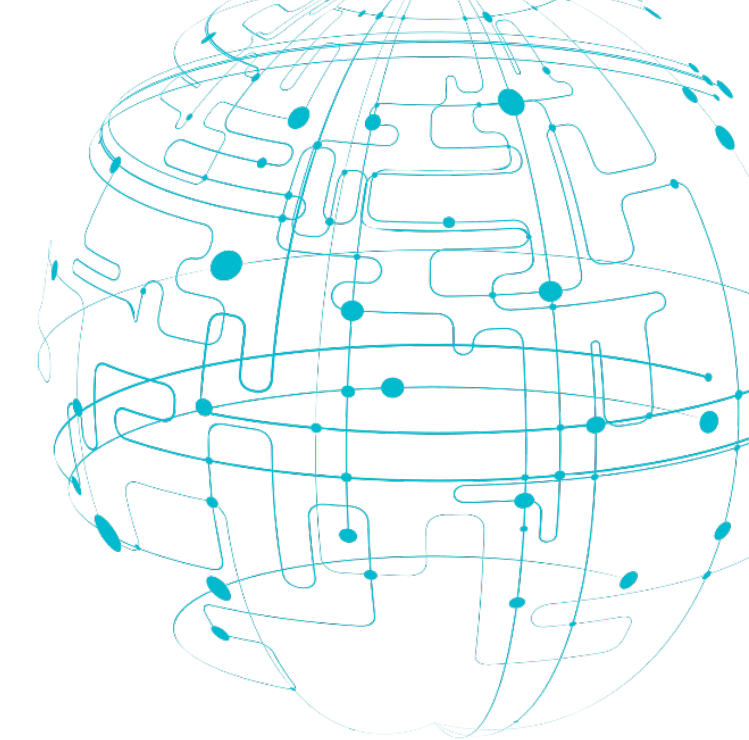
faizod.



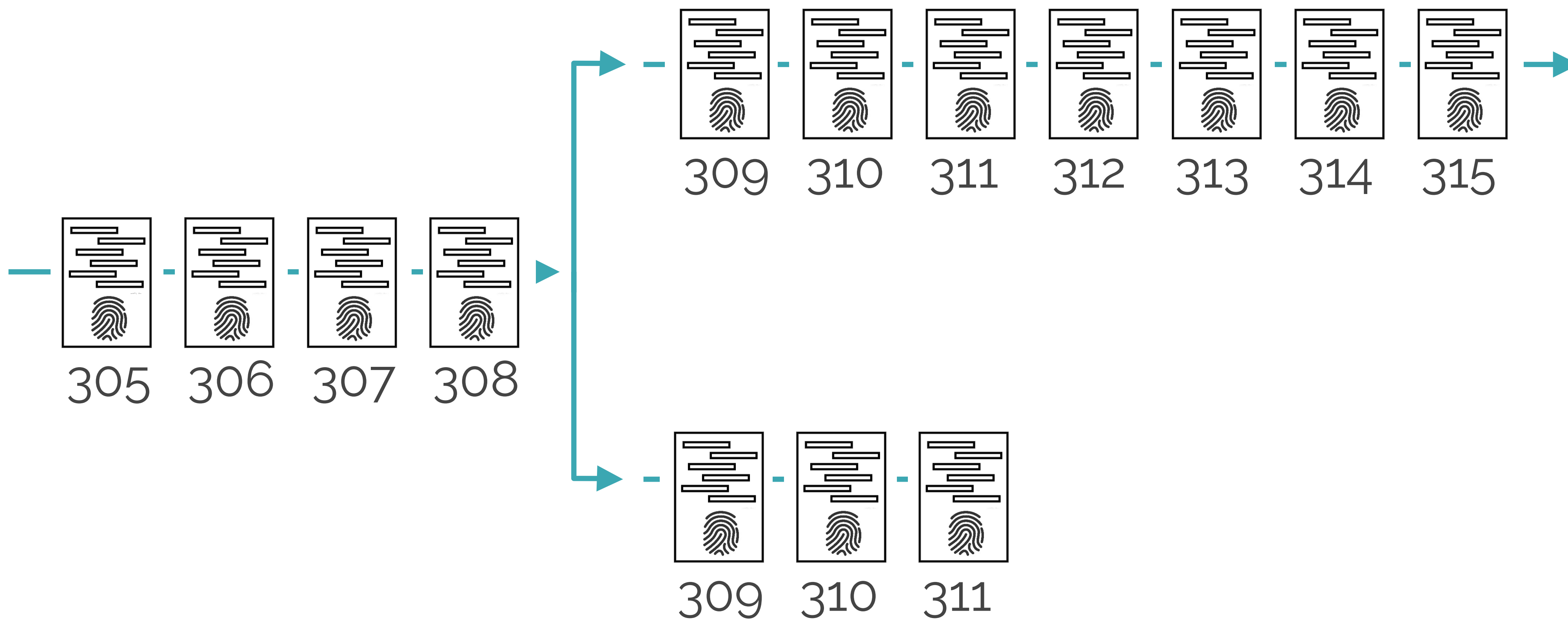
DEFENSE



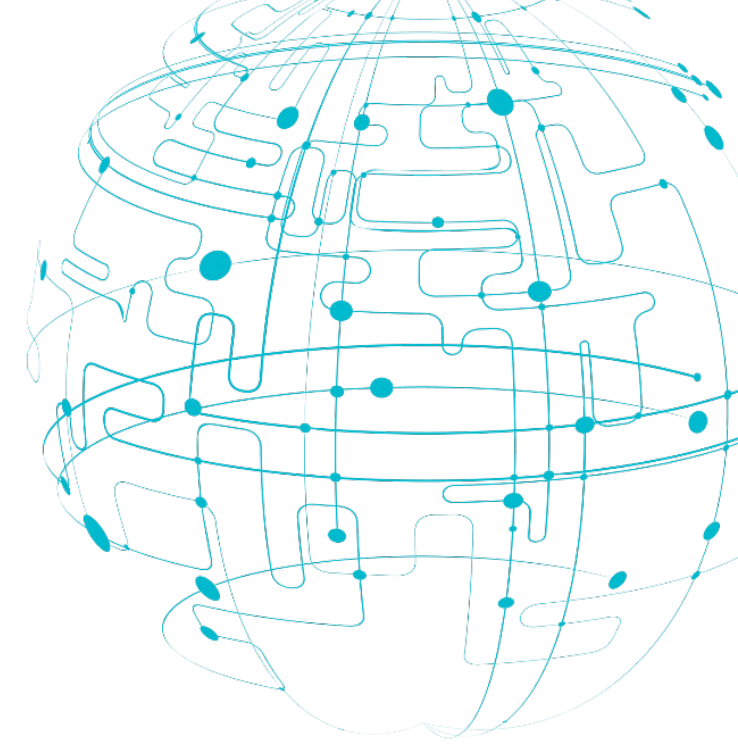
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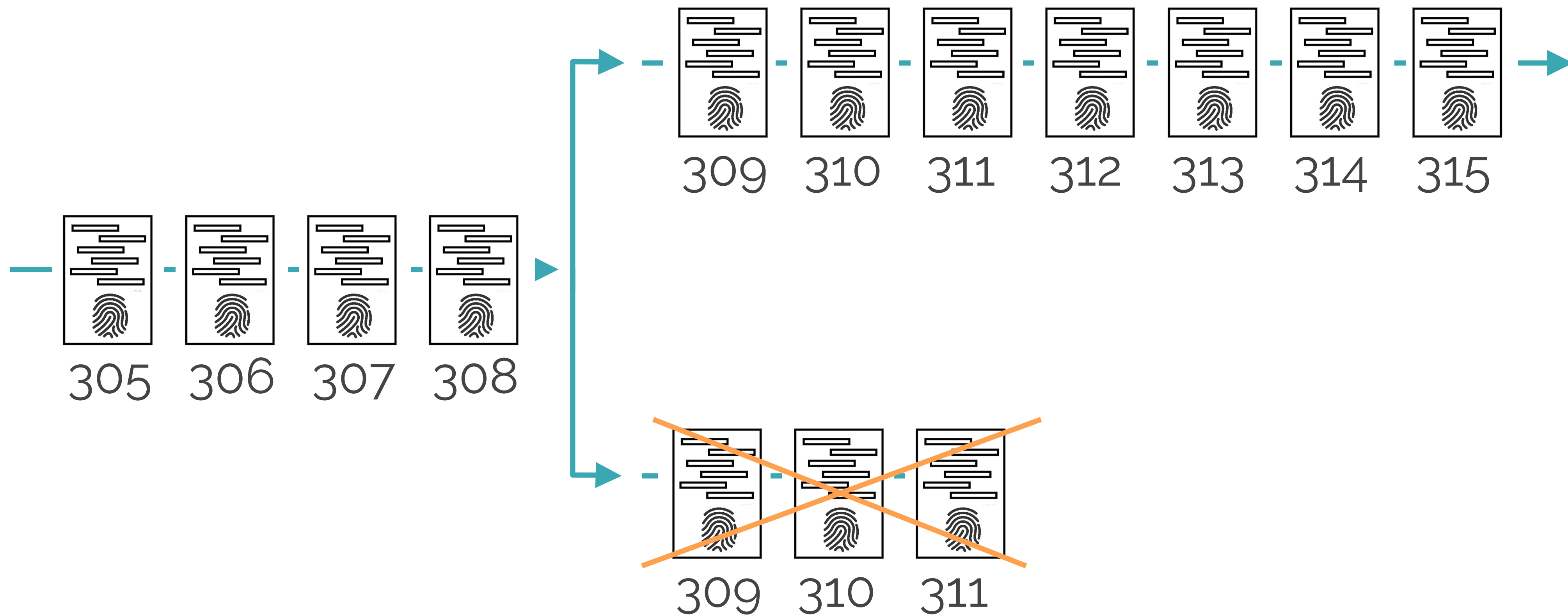
DEFENSE



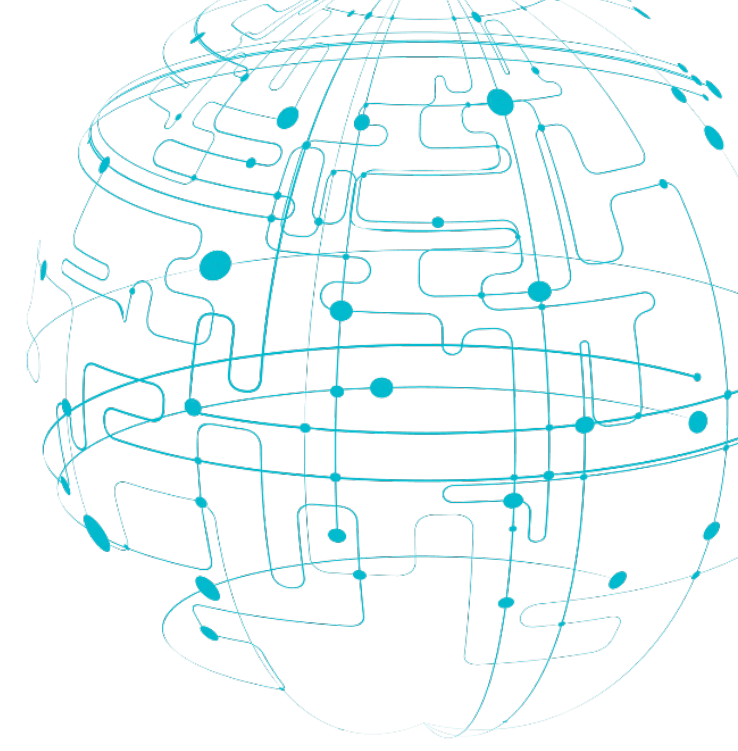
faizod.



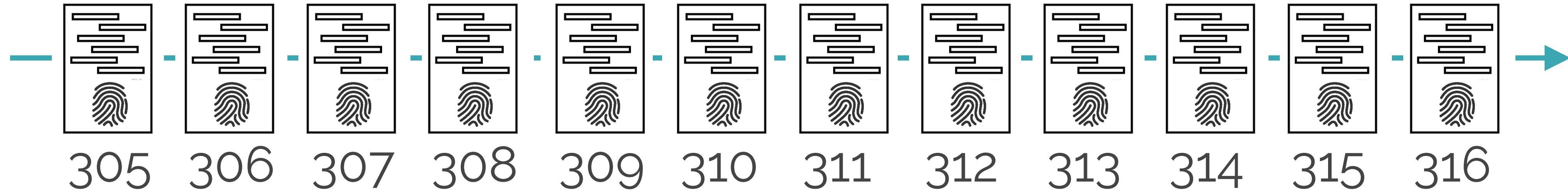
DEFENSE



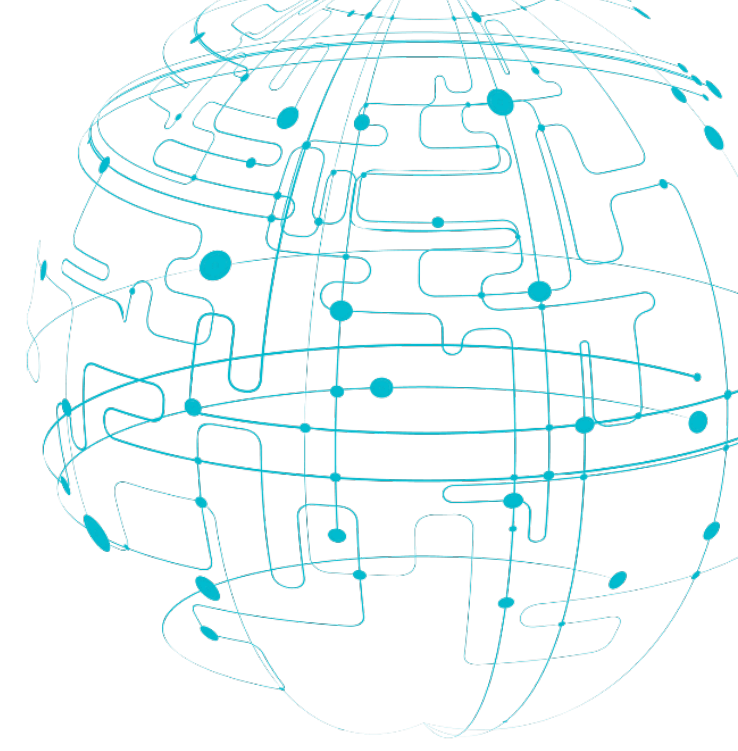
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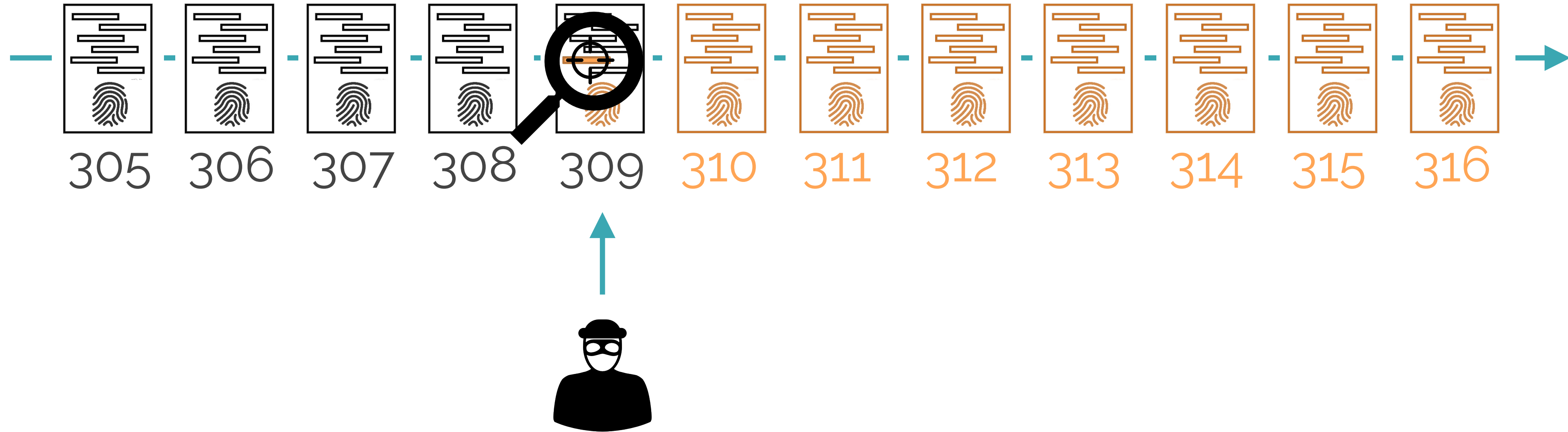
MANIPULATION



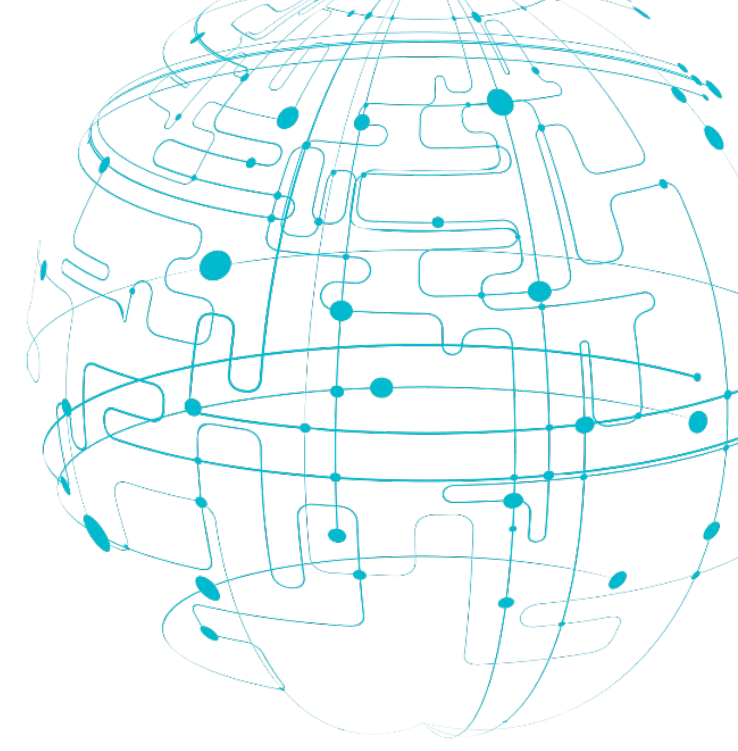
faizod.



MANIPULATION



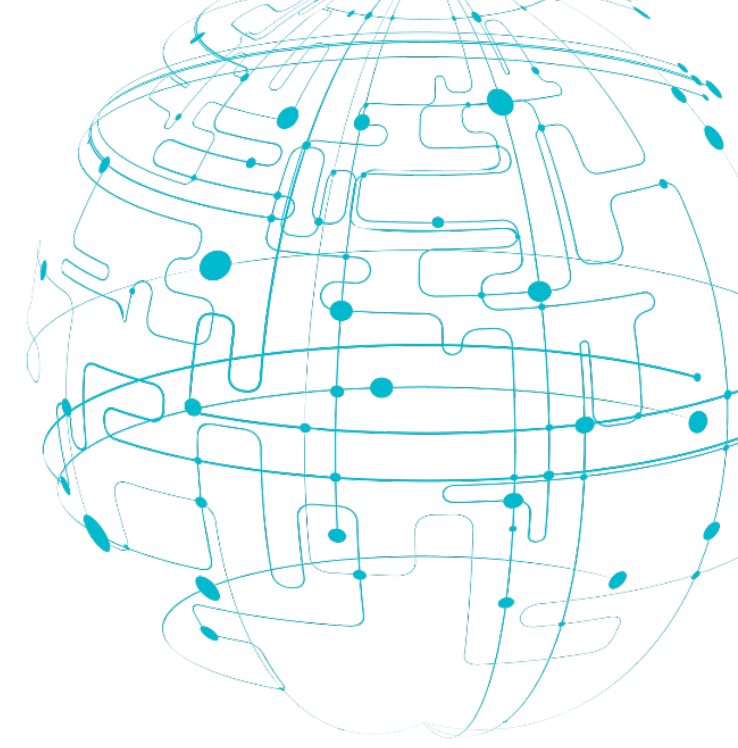
faizod.



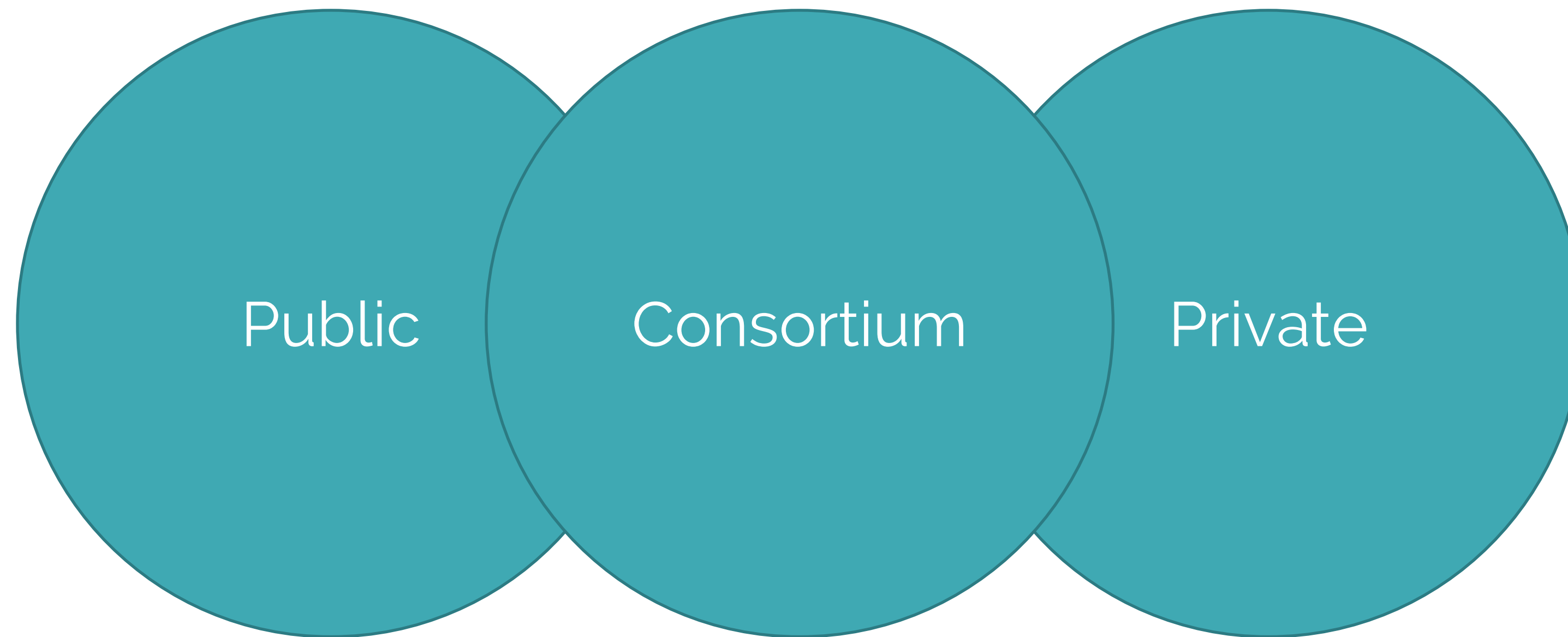
MANIPULATION



faizod.



TYPES OF BLOCKCHAIN



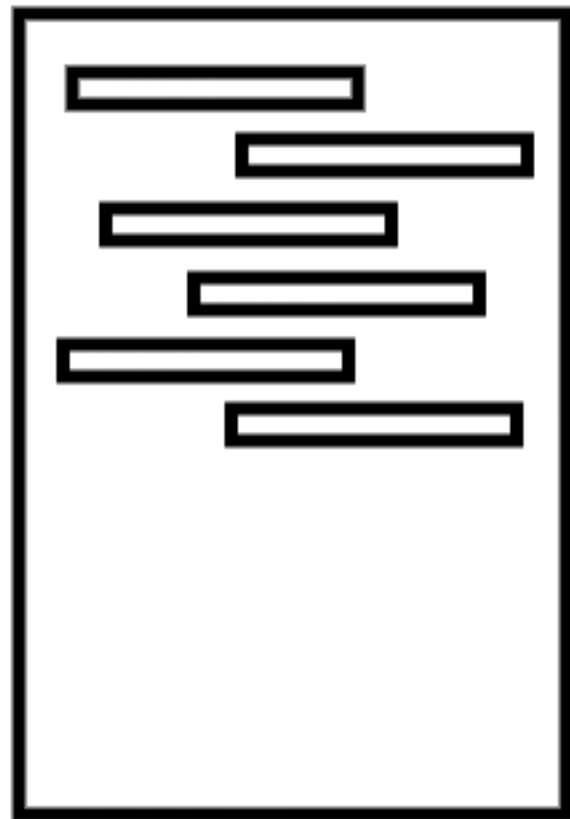
faizod.

BLOCK

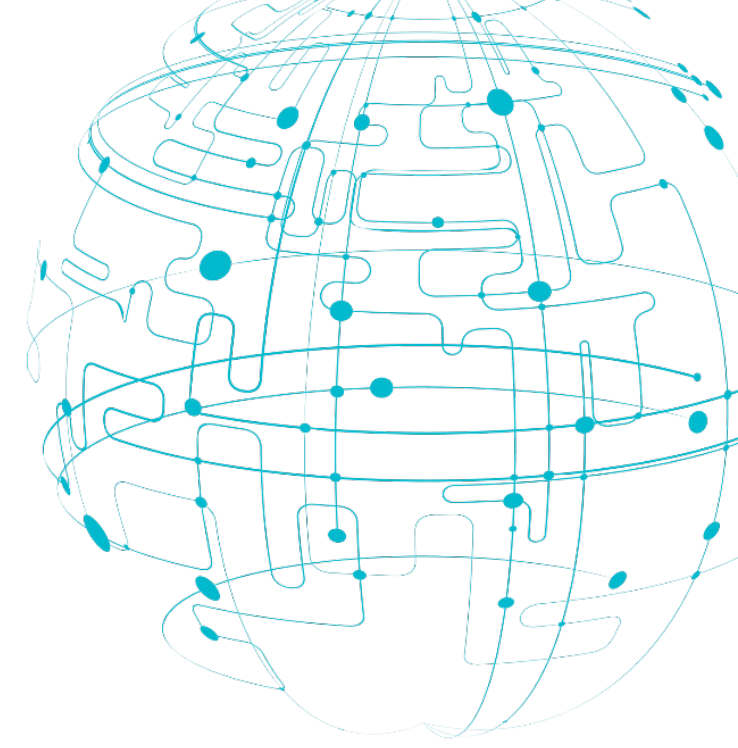
HASH VALUE



MINER



faizod.



DIFFICULTY



Number: 195710, Date: 2012-08-26

000000000000000048685527be9721b82365f7c630820311773f9ec696a09e8aa47

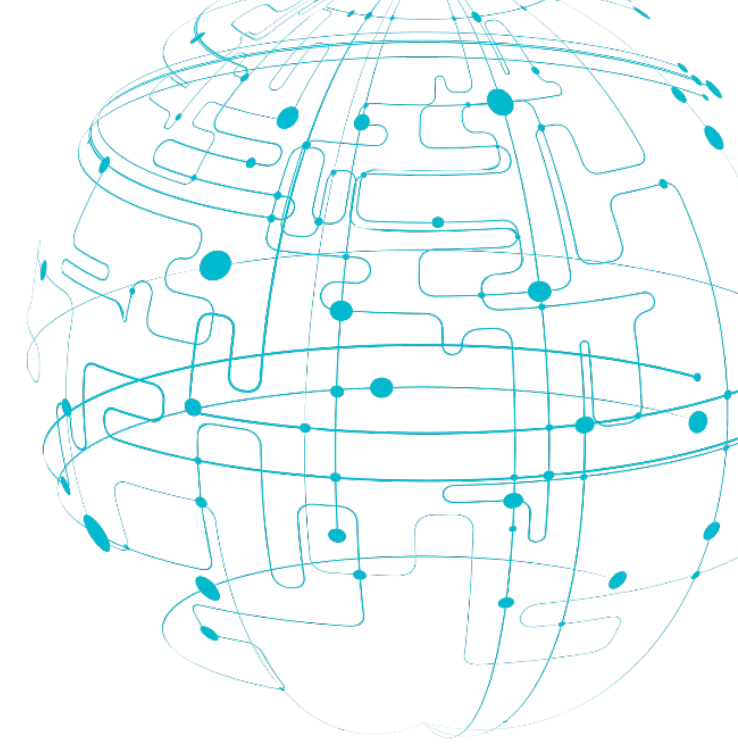
Number: 420570, Date: 2016-07-13

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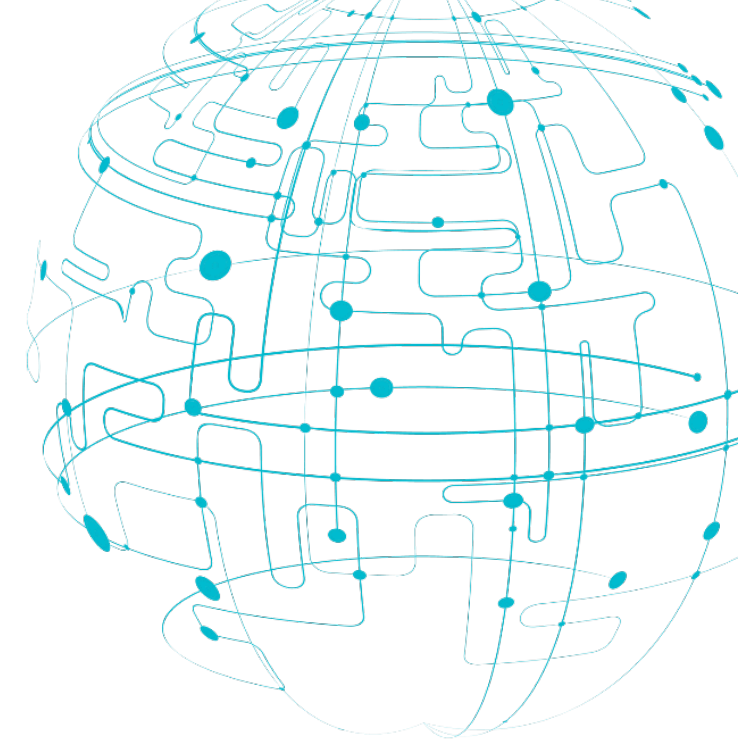


dice $2^{69,6}$ times a 256 bit number ...

faizod.



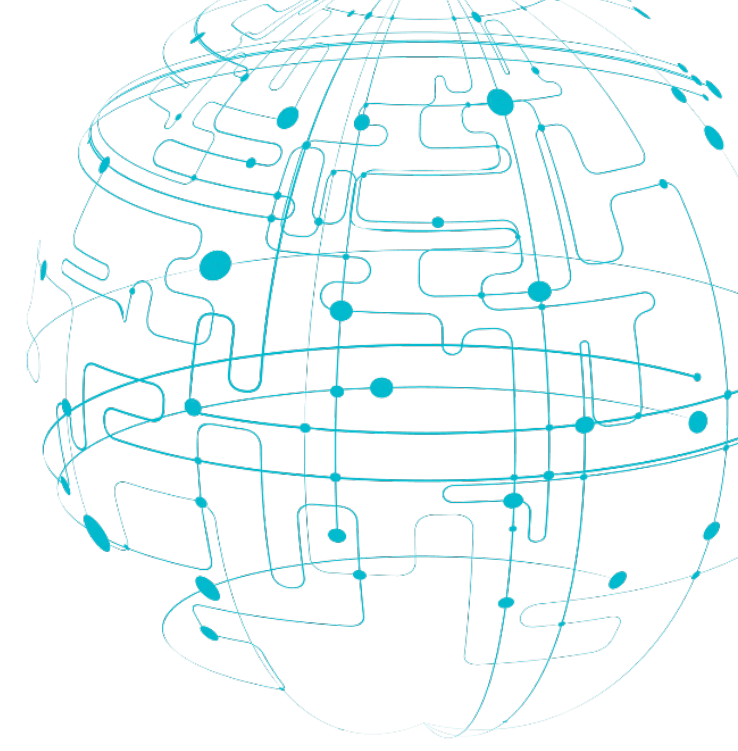
BITCOIN?



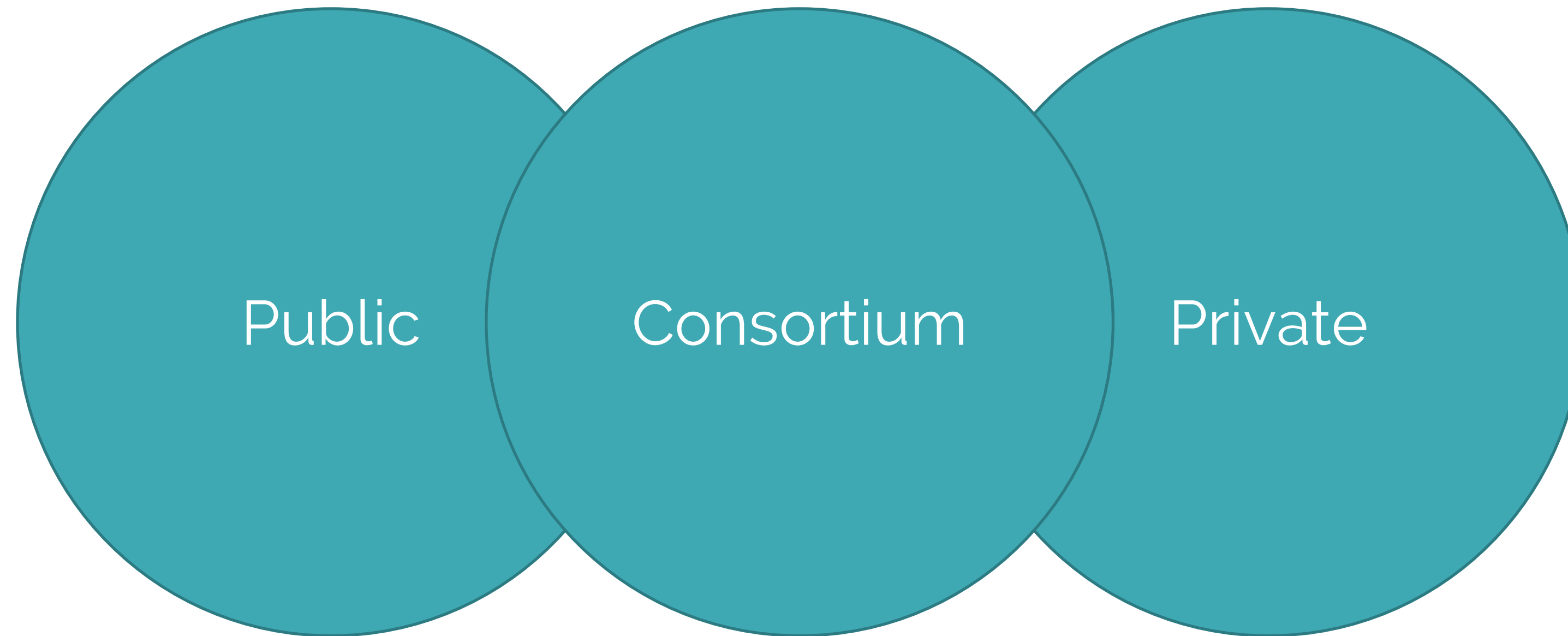
1BTC = 2400\$, \$55,303,200.-

Höhe	Alter	Transaktionen	Insgesamt gesendet	Weitergeleitet von	Größe (kB)
475527	8 minutes	2083	23,043.24 BTC	SlushPool	998.07
475526	26 minutes	2047	12,076.15 BTC	GBMiners	998.25
475525	35 minutes	2253	9,185.38 BTC	SlushPool	998.04
475524	42 minutes	2407	5,456.62 BTC	Bixin	998.18

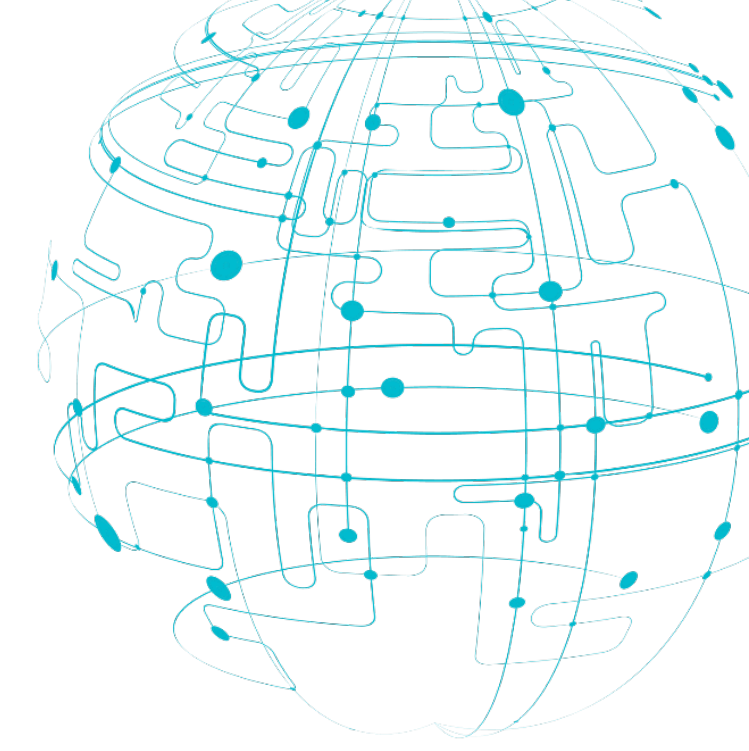
faizod.



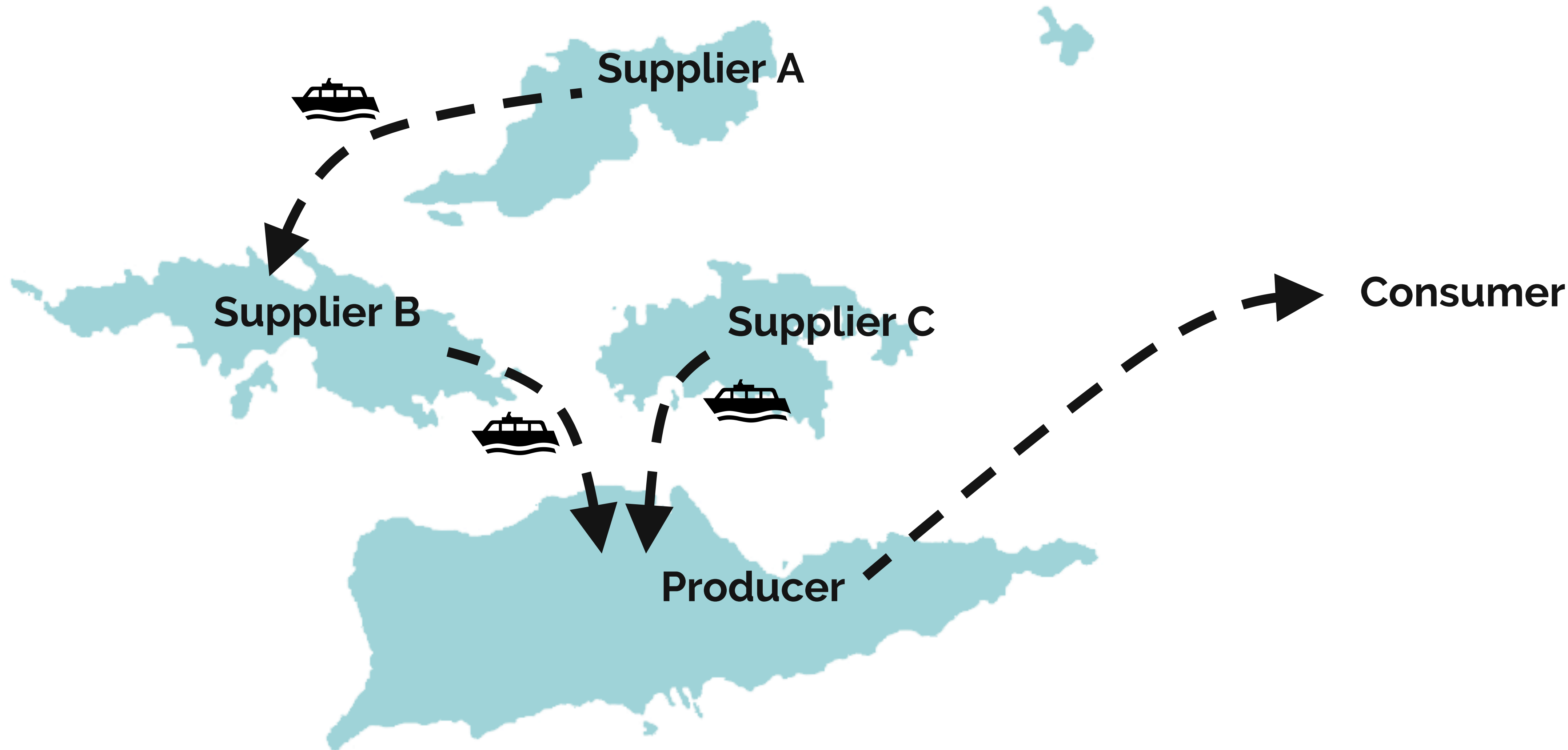
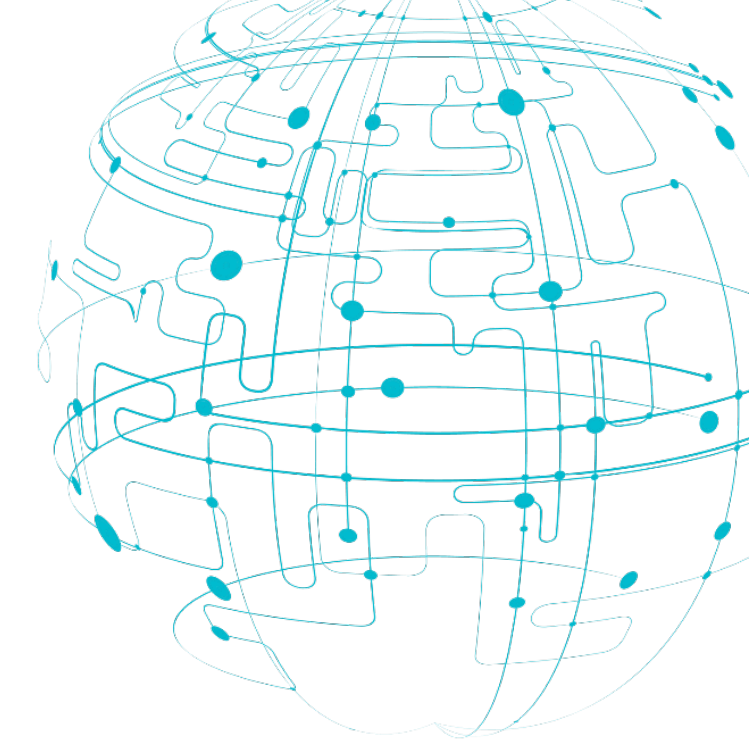
TYPES OF BLOCKCHAIN



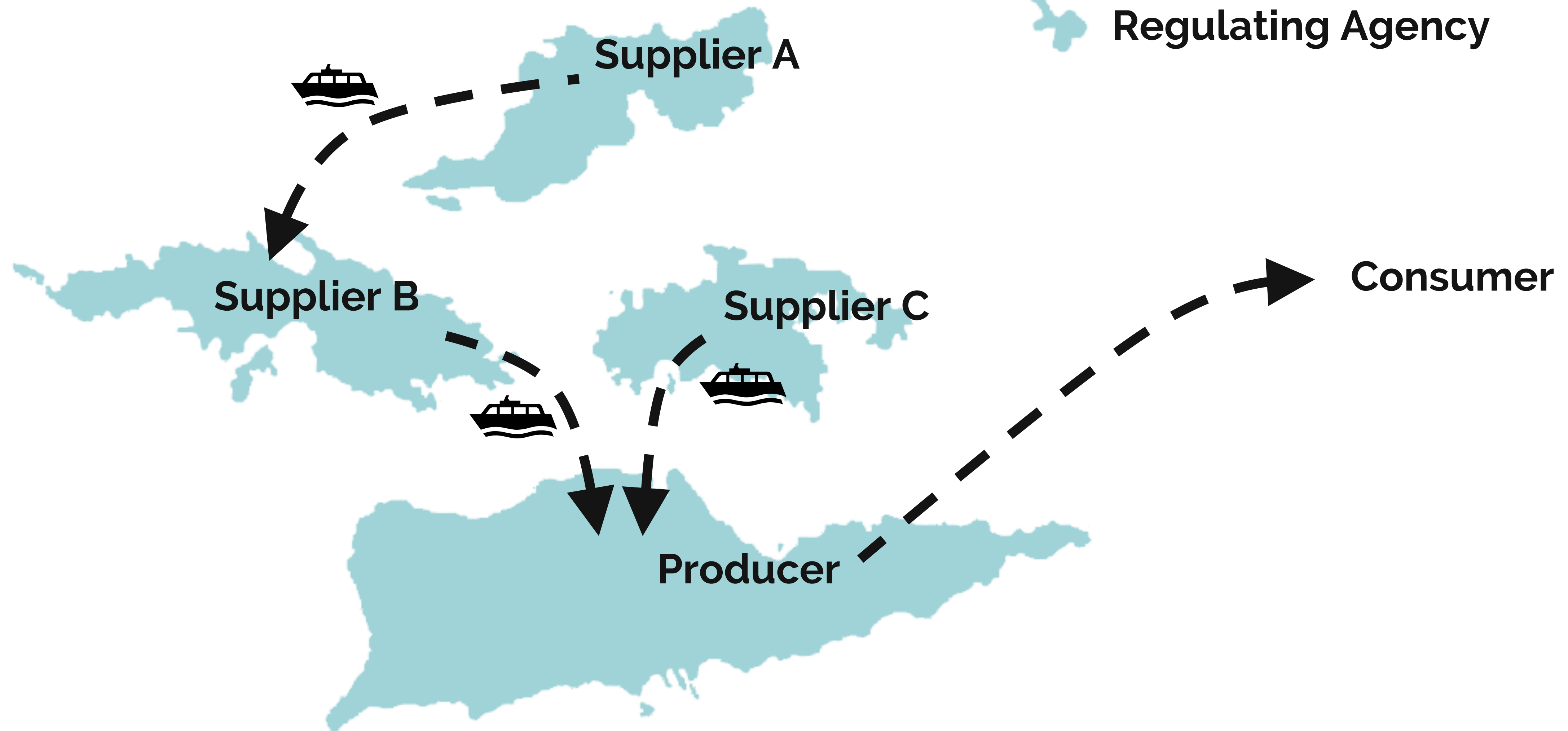
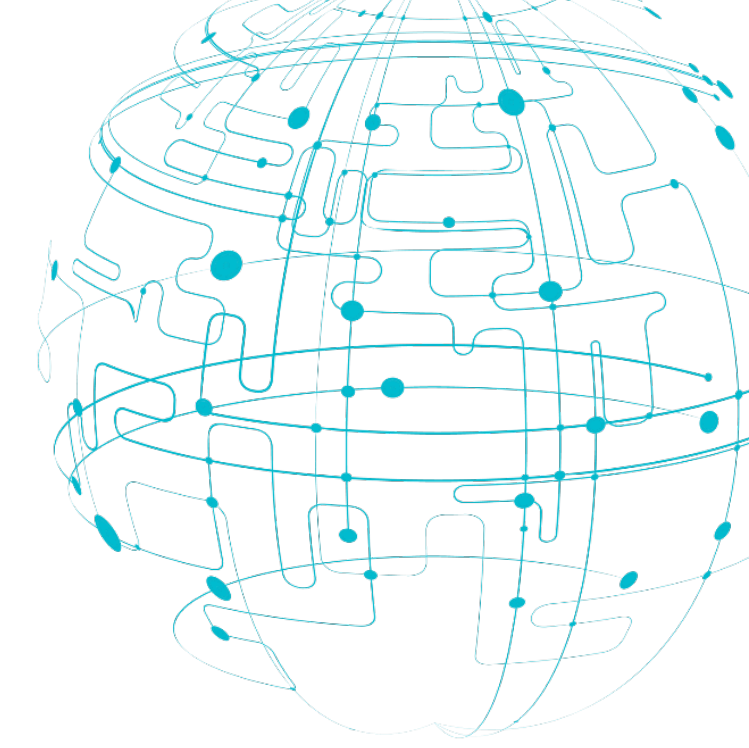
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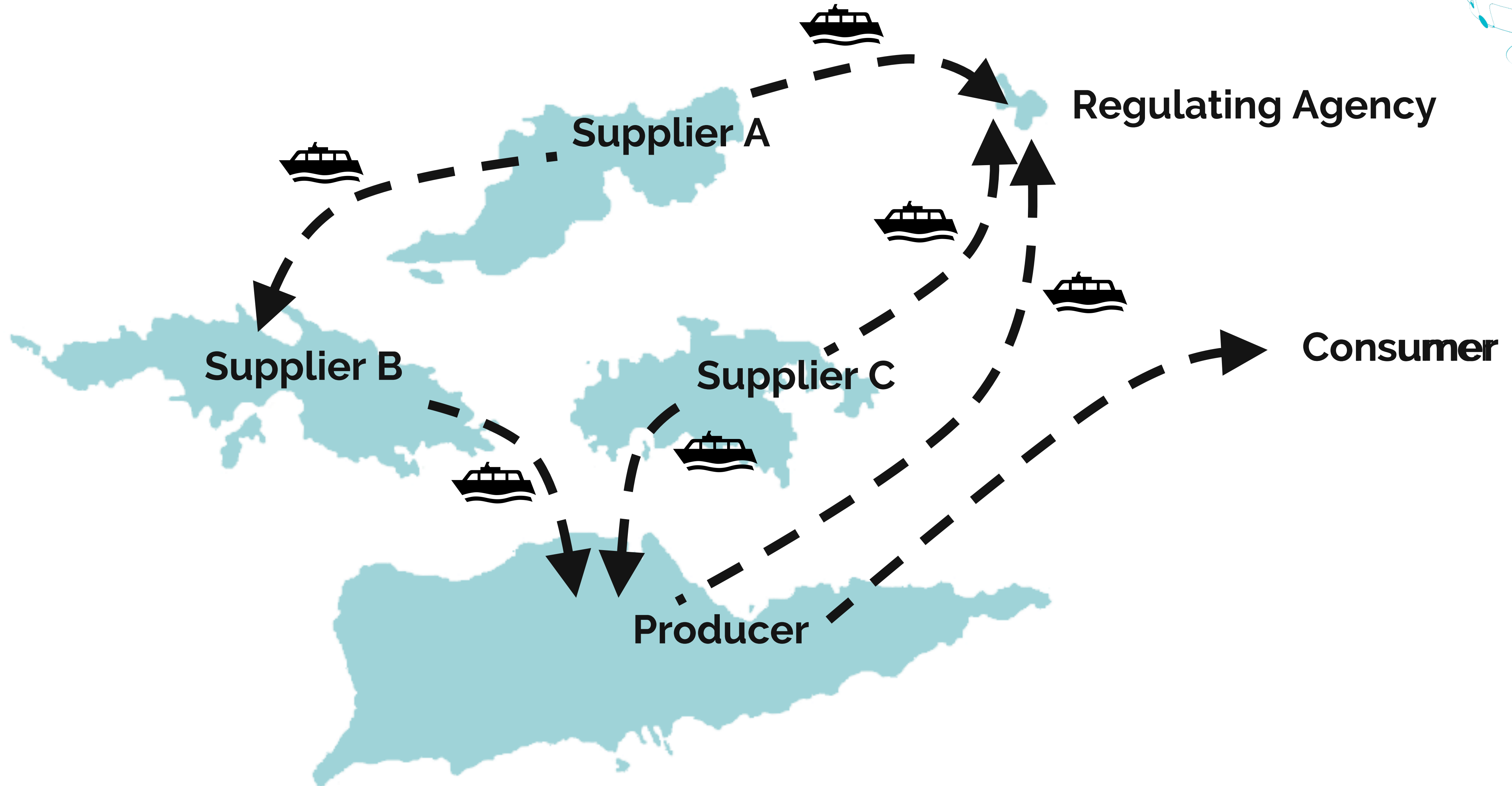
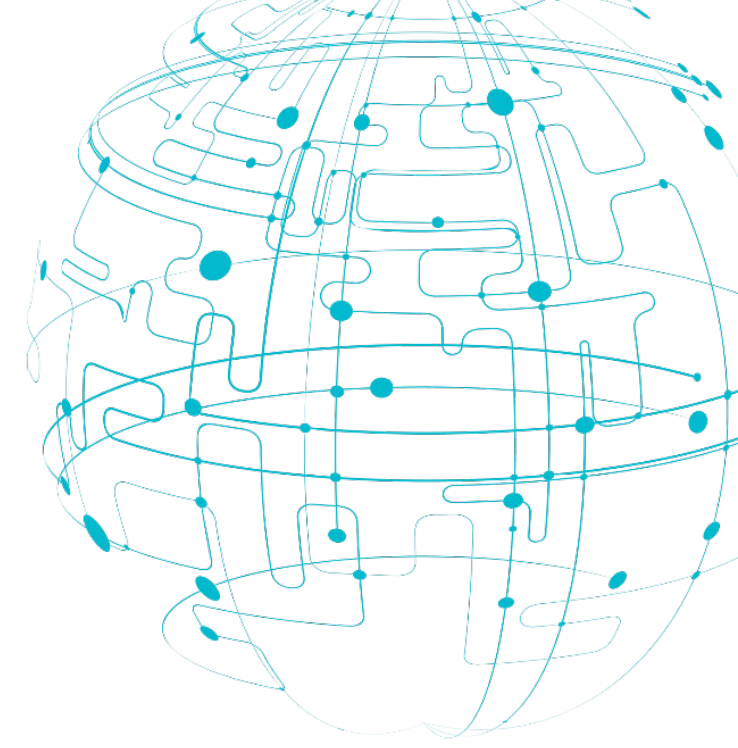
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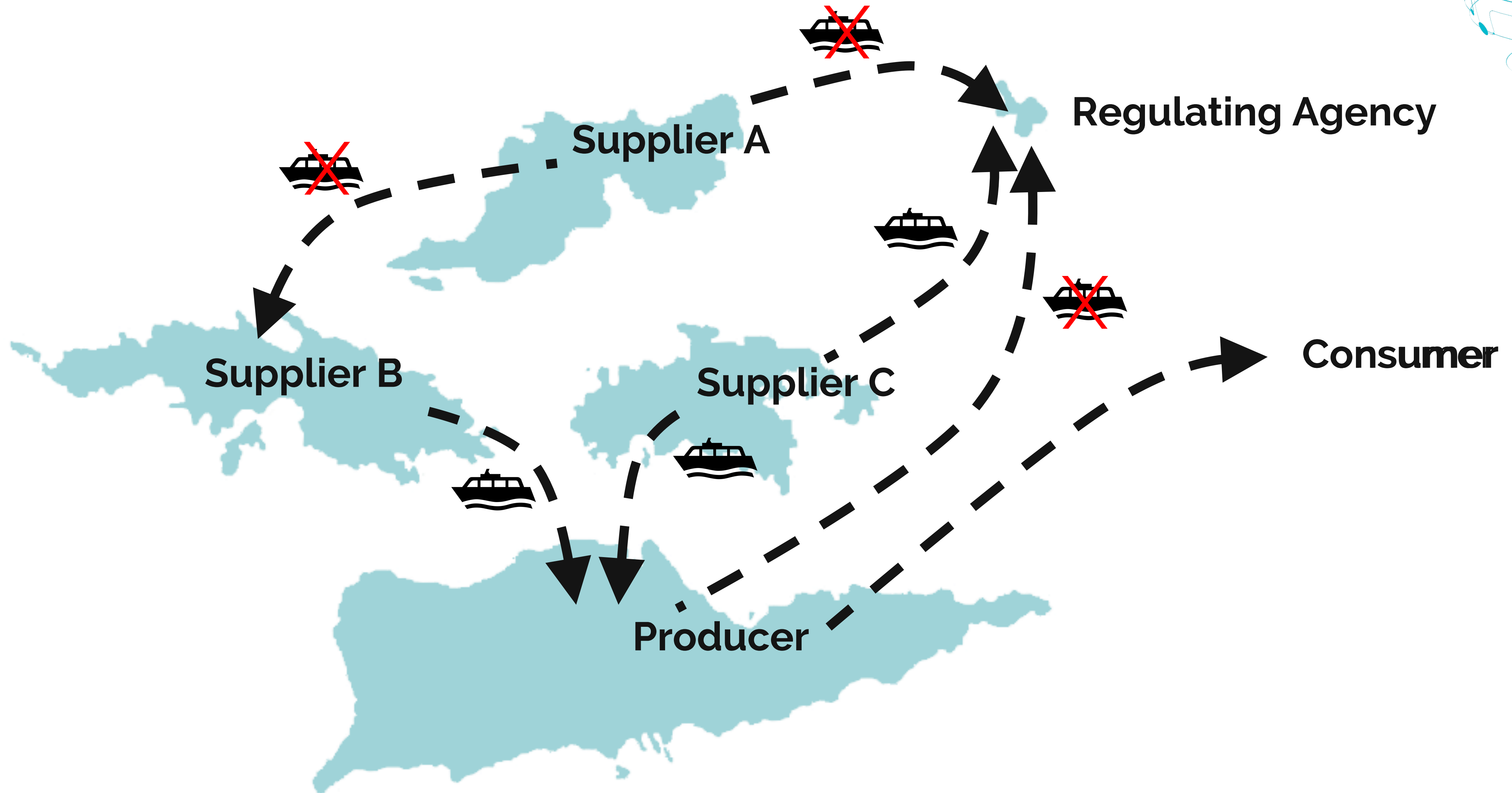
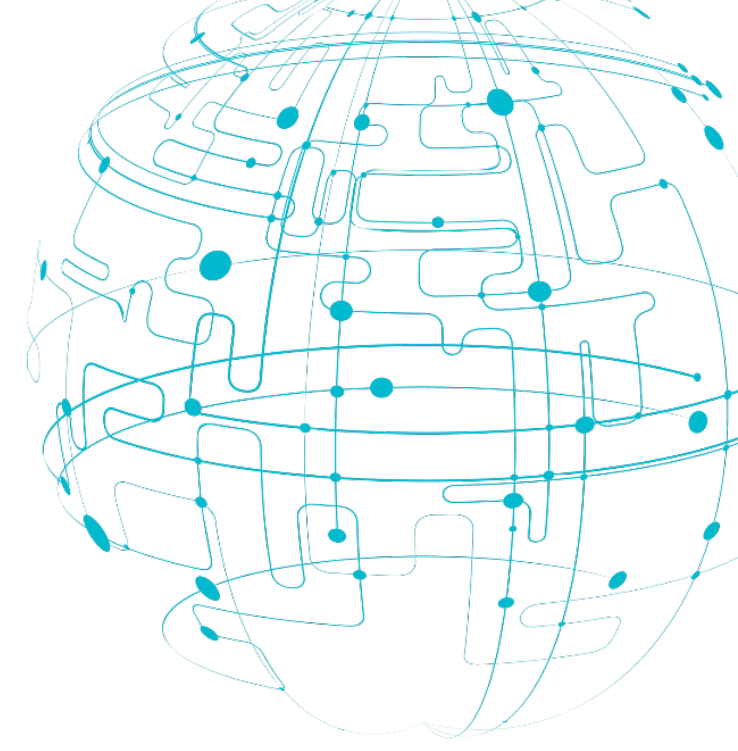
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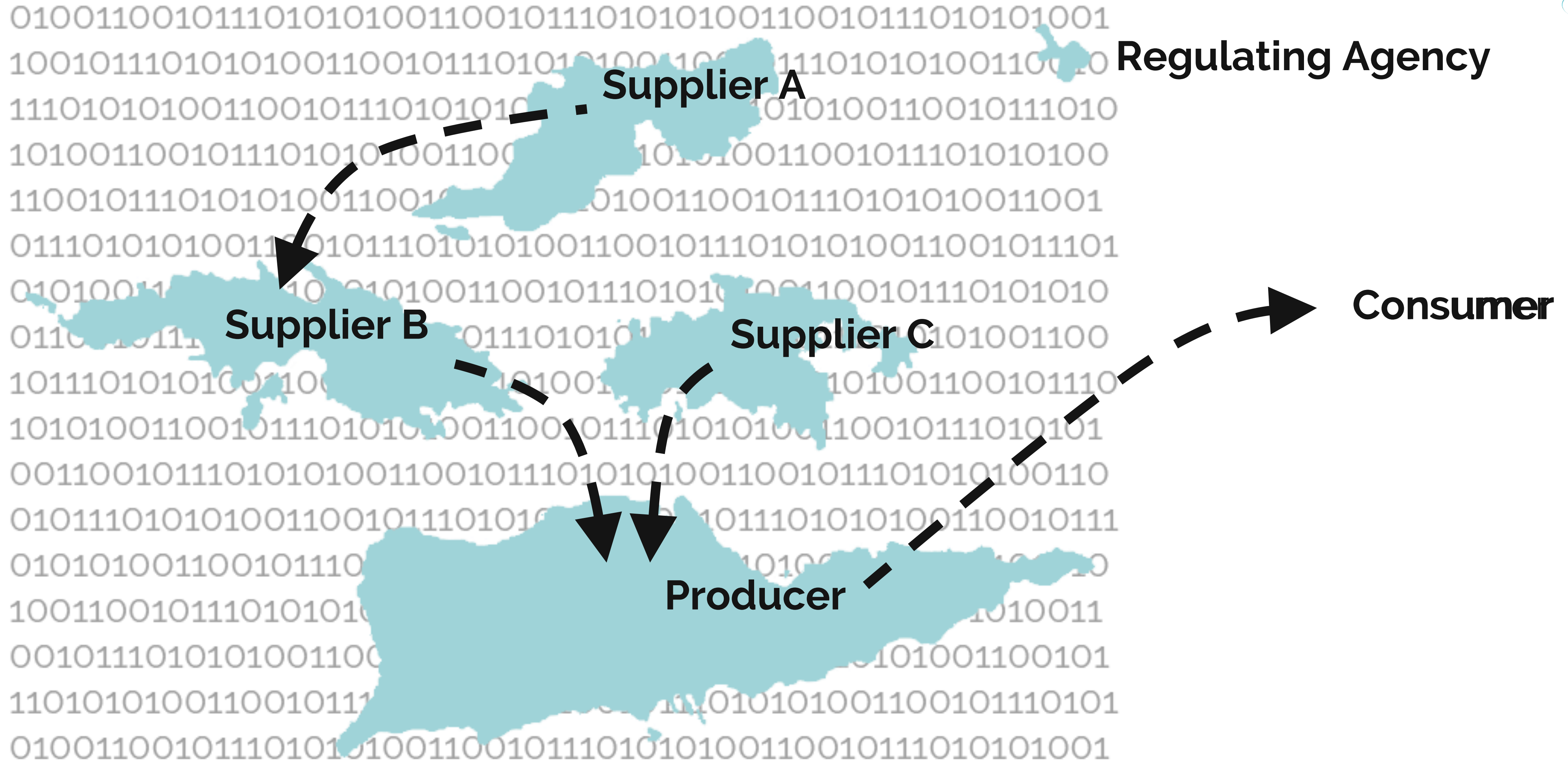
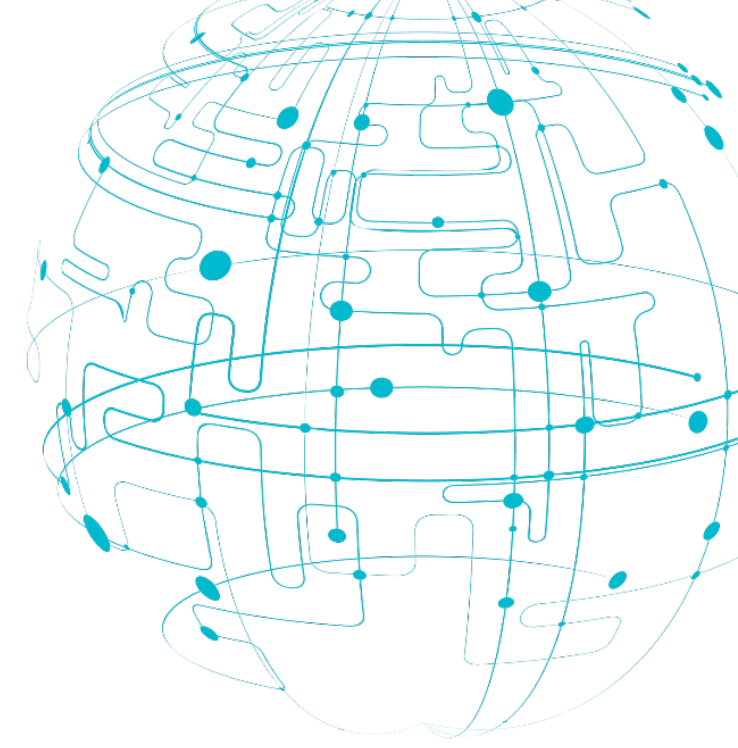
faizod.



faizod.



faizod.



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ADVANTAGES

manipulation safety

reliability

transparency

across systems

process acceleration

DISADVANTAGES

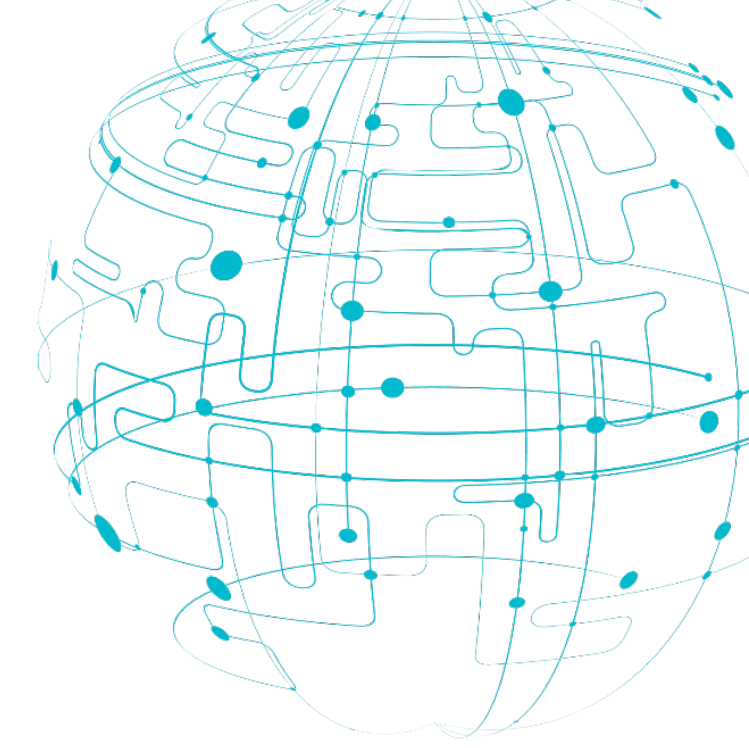
resource requirements

scalability of hardware

(still) difficult integration in IT

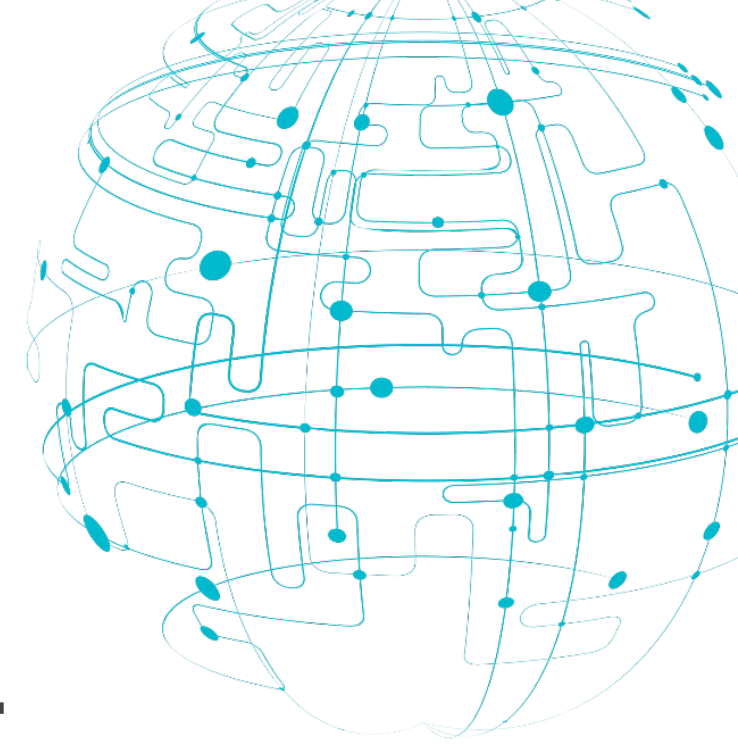
data throughput

faizod.



SMART CONTRACT

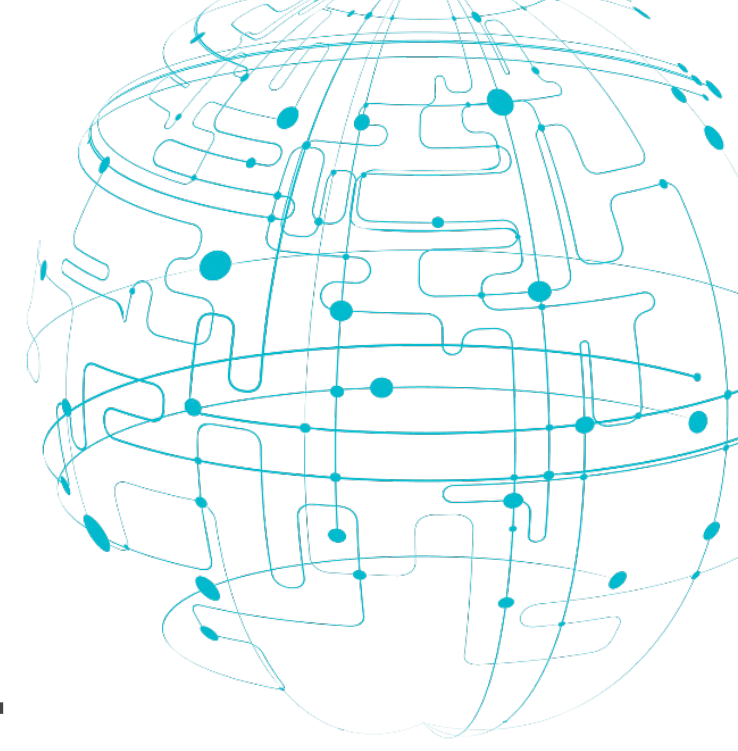
faizod.



„A contract is the written fixation of at least two declarations of intent. At the end it will be confirmed, that the contracting parties have understood the contract text and agree with it. “

(<https://de.wikipedia.org/wiki/Vertrag>)

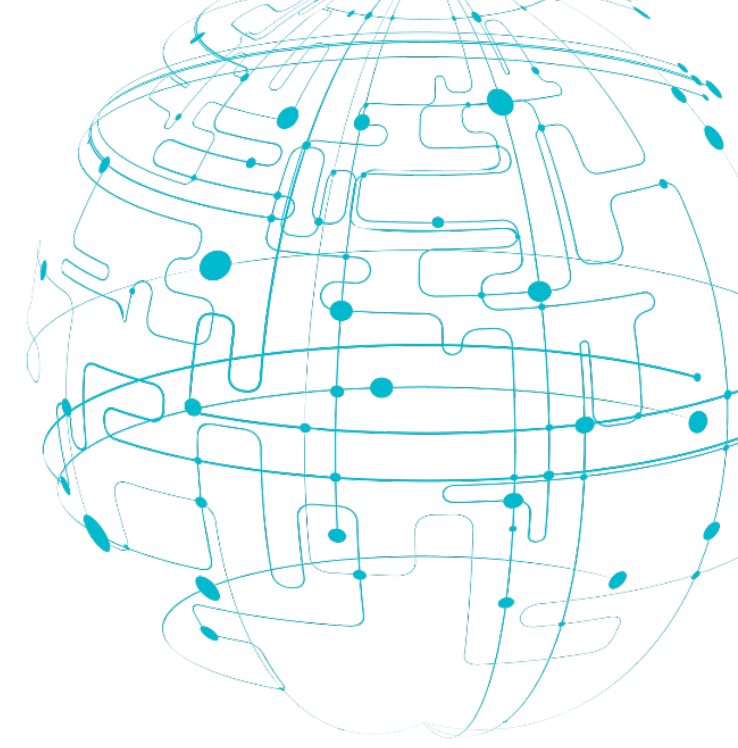
faizod.



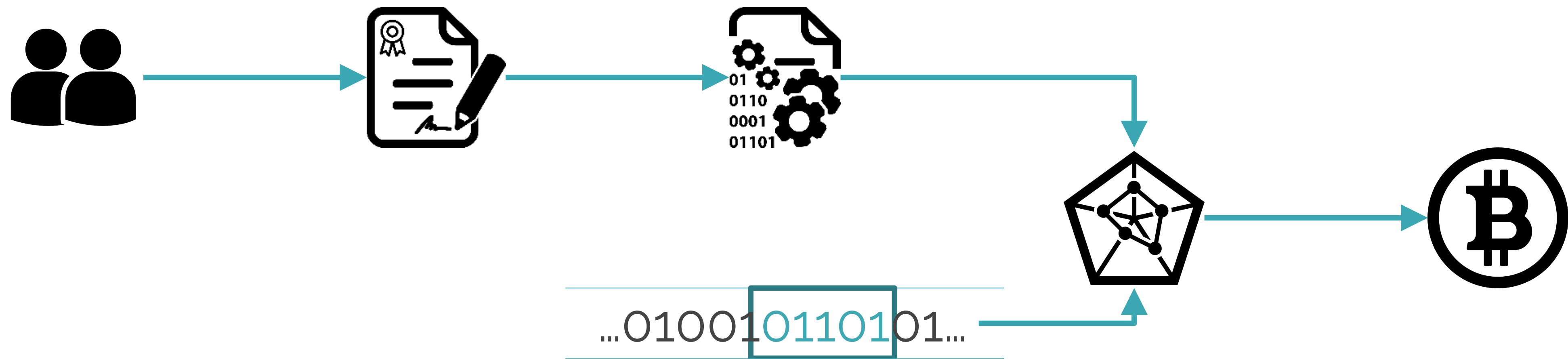
„A contract is the **written fixation** of at least **two declarations** of intent. At the end it will be **confirmed**, that the **contracting parties** have **understood** the contract text and **agree with it.**“

(<https://de.wikipedia.org/wiki/Vertrag>)

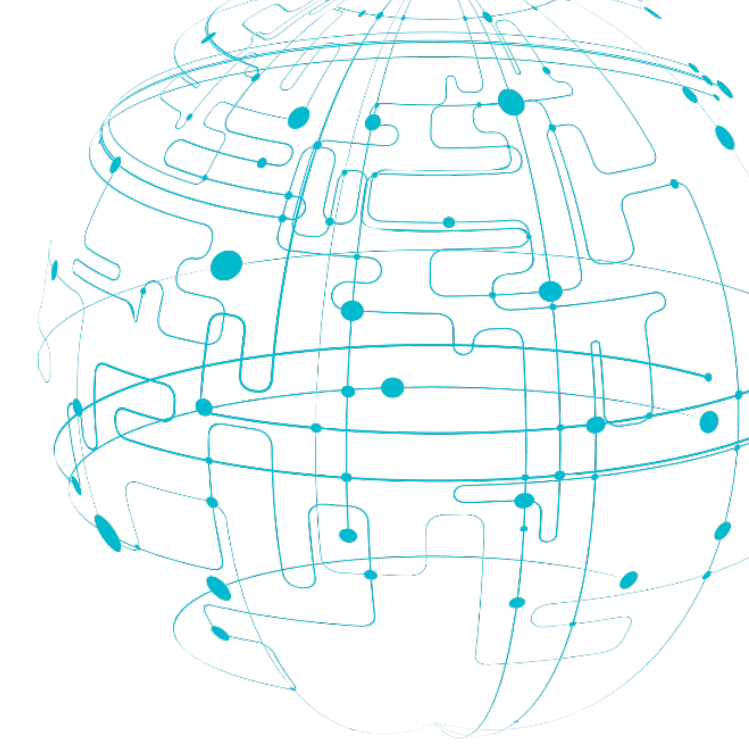
faizod.



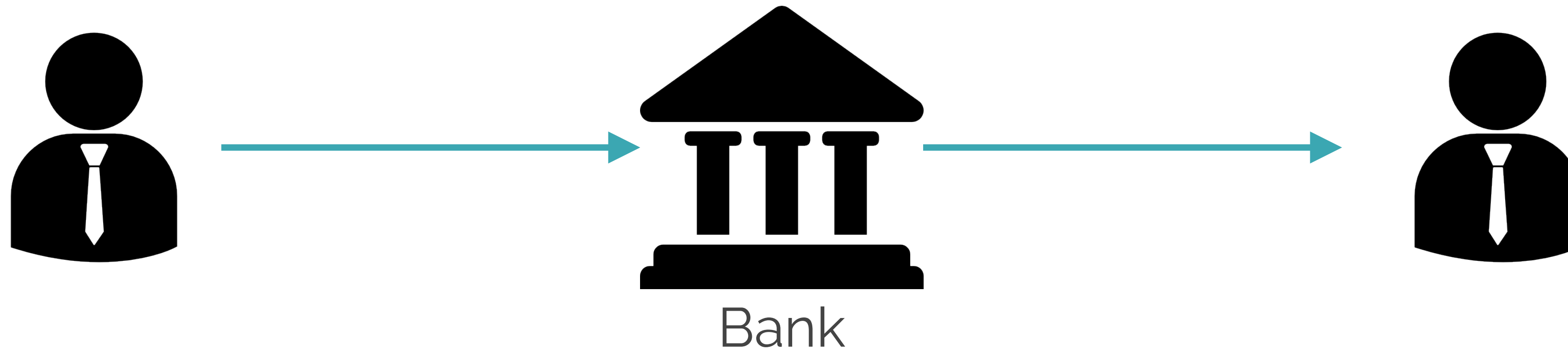
SMART CONTRACT



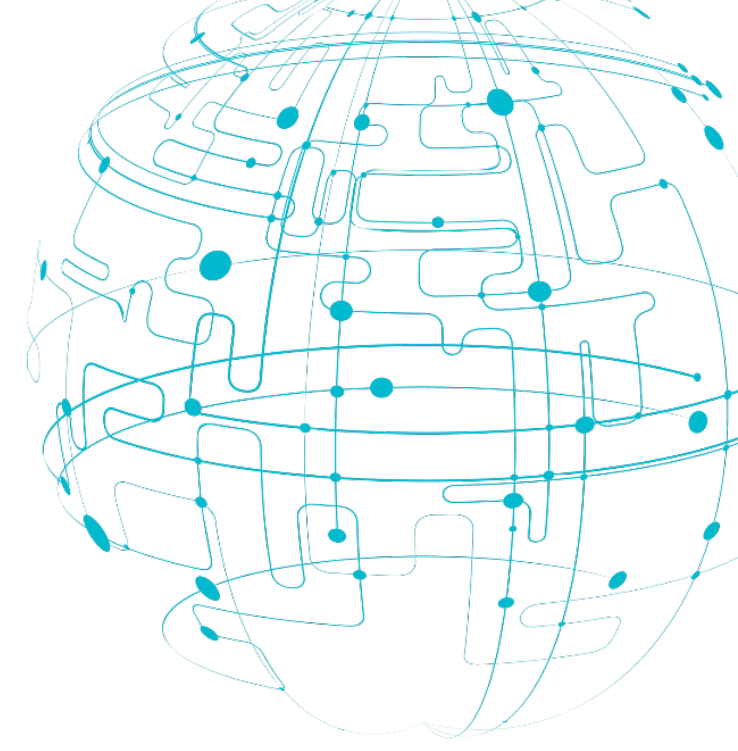
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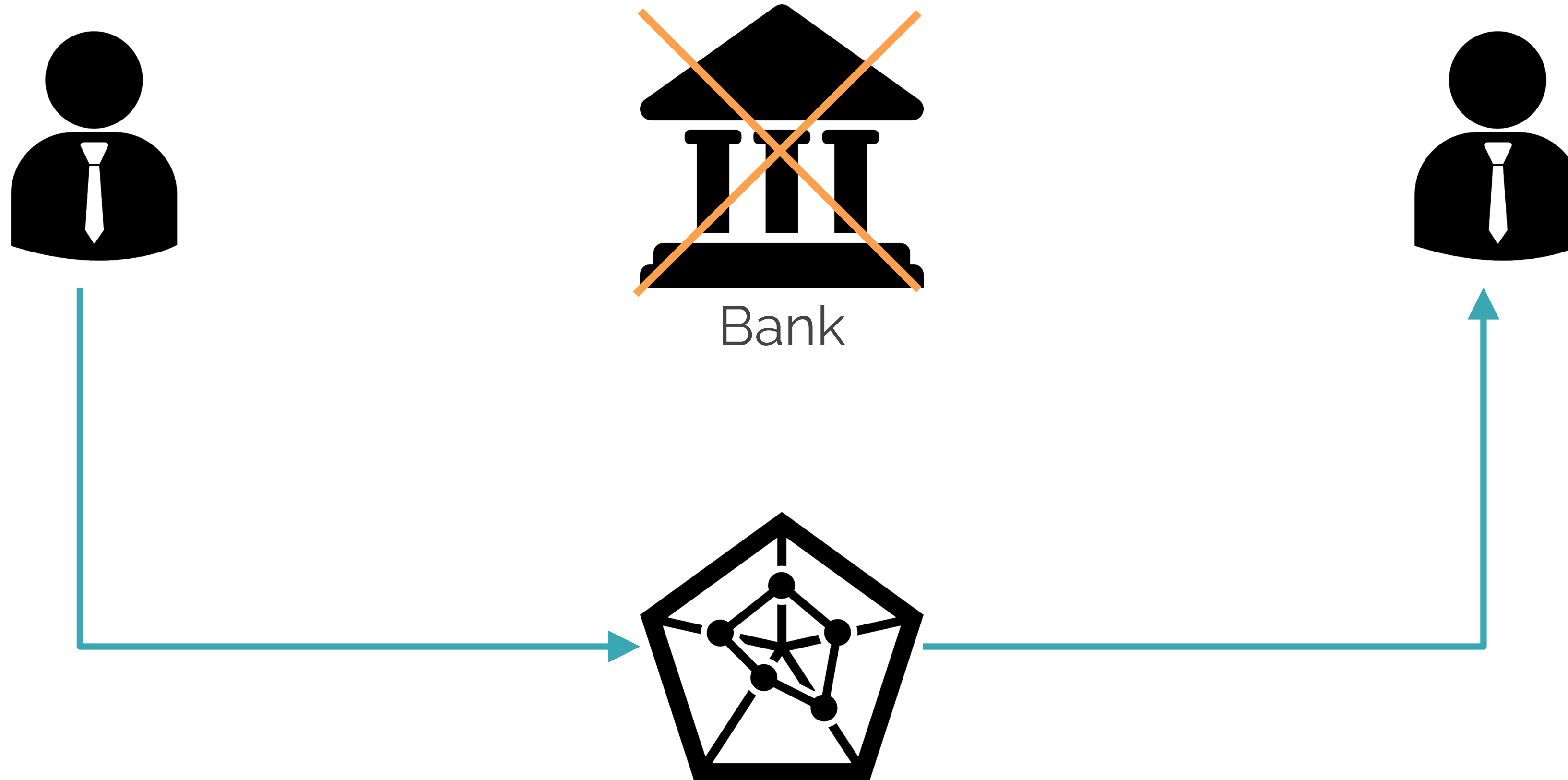
SMART CONTRACT



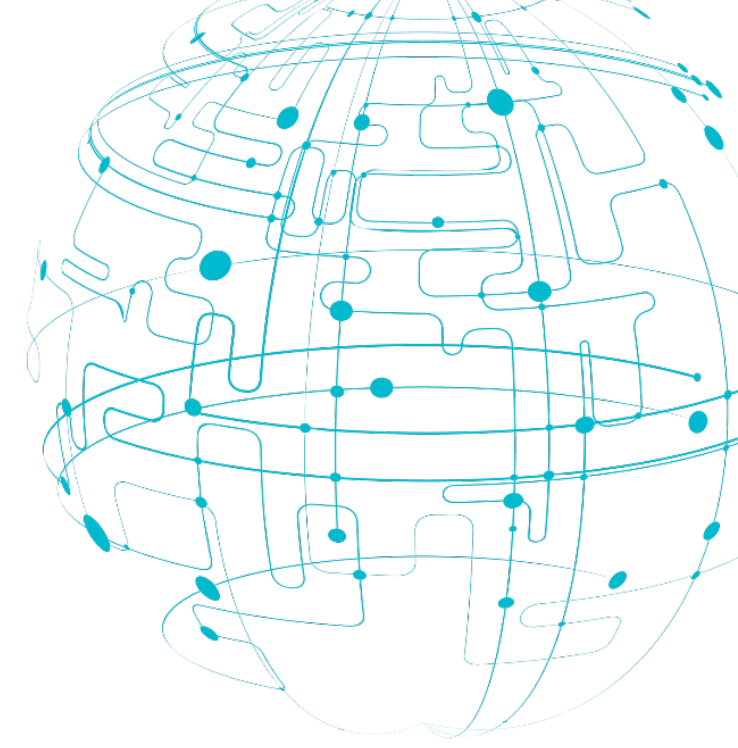
faizod.



SMART CONTRACT



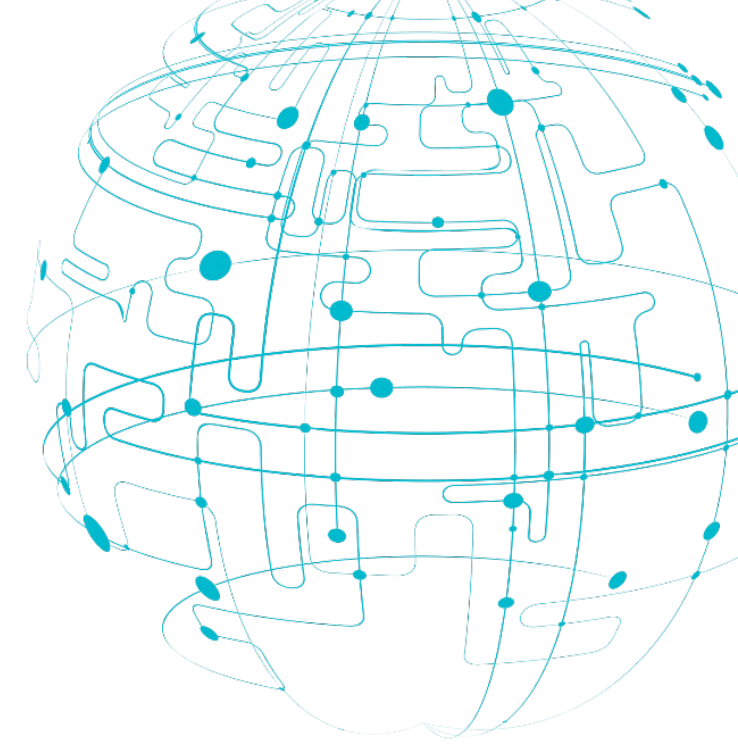
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SMART CONTRACT FOR INDUSTRY

Chaincode / Smart Contract = Plausibility / Validity checks

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SOLUTIONS

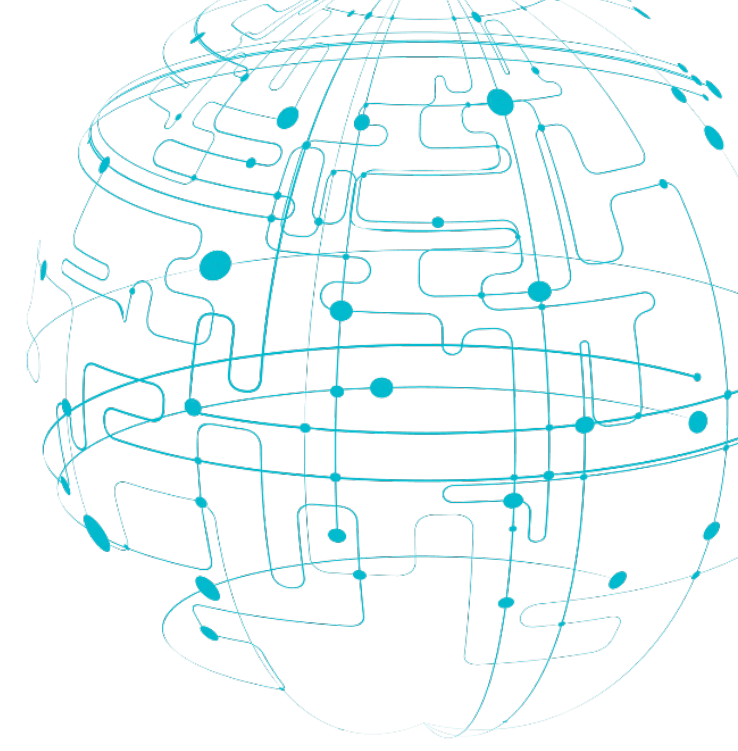
Bitcoin - <https://bitcoin.org/> - since 2009

Ethereum - <https://www.ethereum.org/> - since 2015

Hyperledger – since aprox. 2017

Public Chains ... are **inadequately suited** for industry

faizod.



JUMP IN

Ethereum

Create image

Image roll out on partner

Create smart contracts

Hyperledger

Configure services

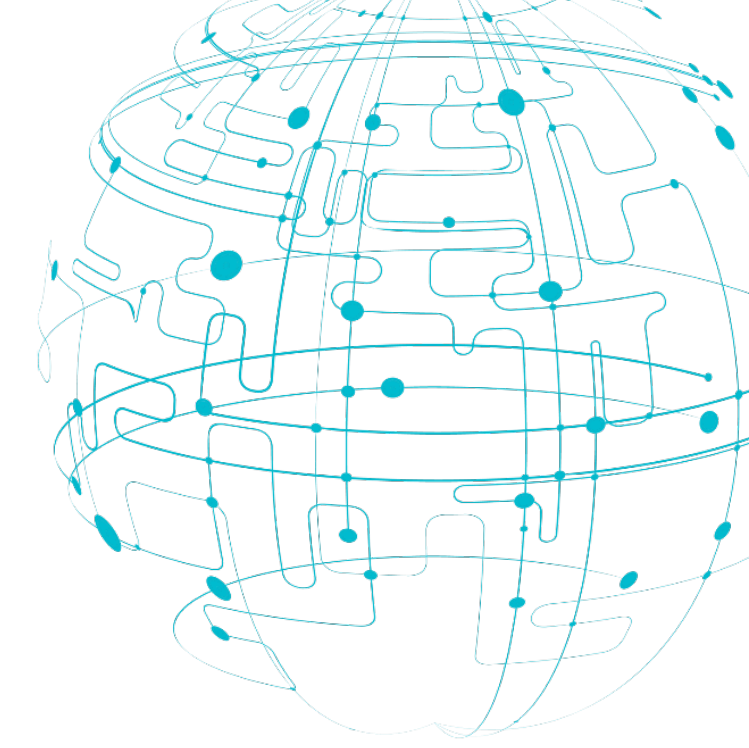
Create image

Image roll out on partner

Verification through chaincode

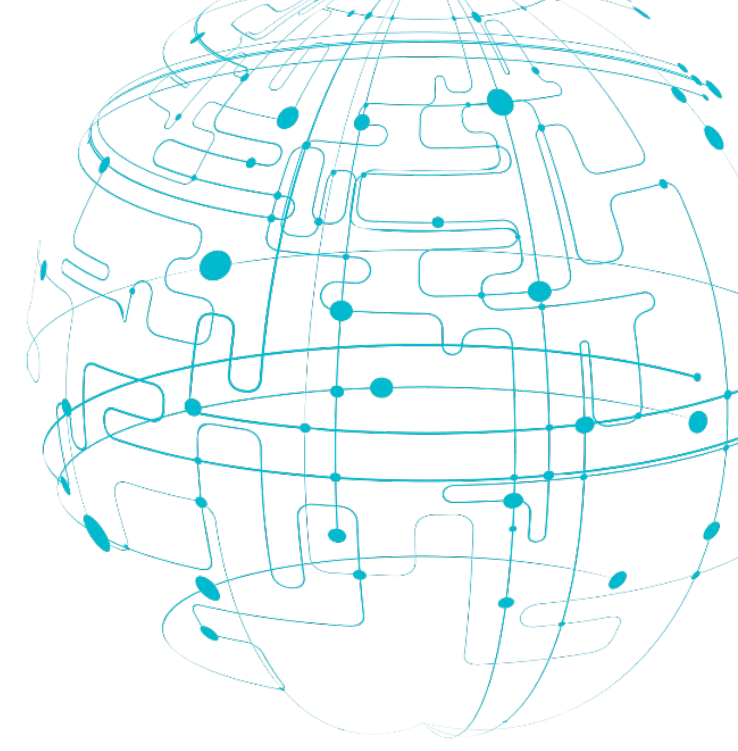
Create connectors

faizod.



A BLOCKCHAIN IS NOT ...

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Quickly search the database

Simple in data security

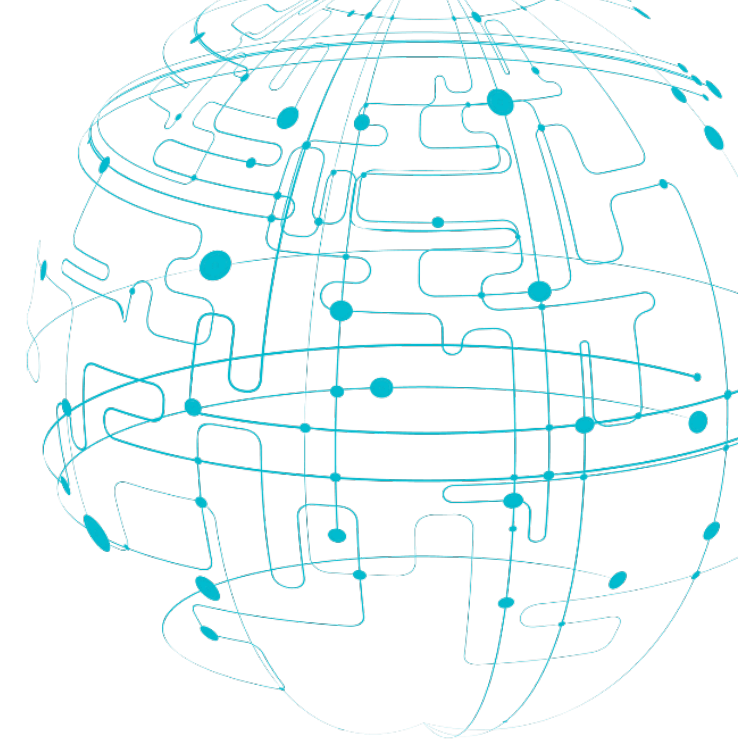
Simple to controll

Inexpensive

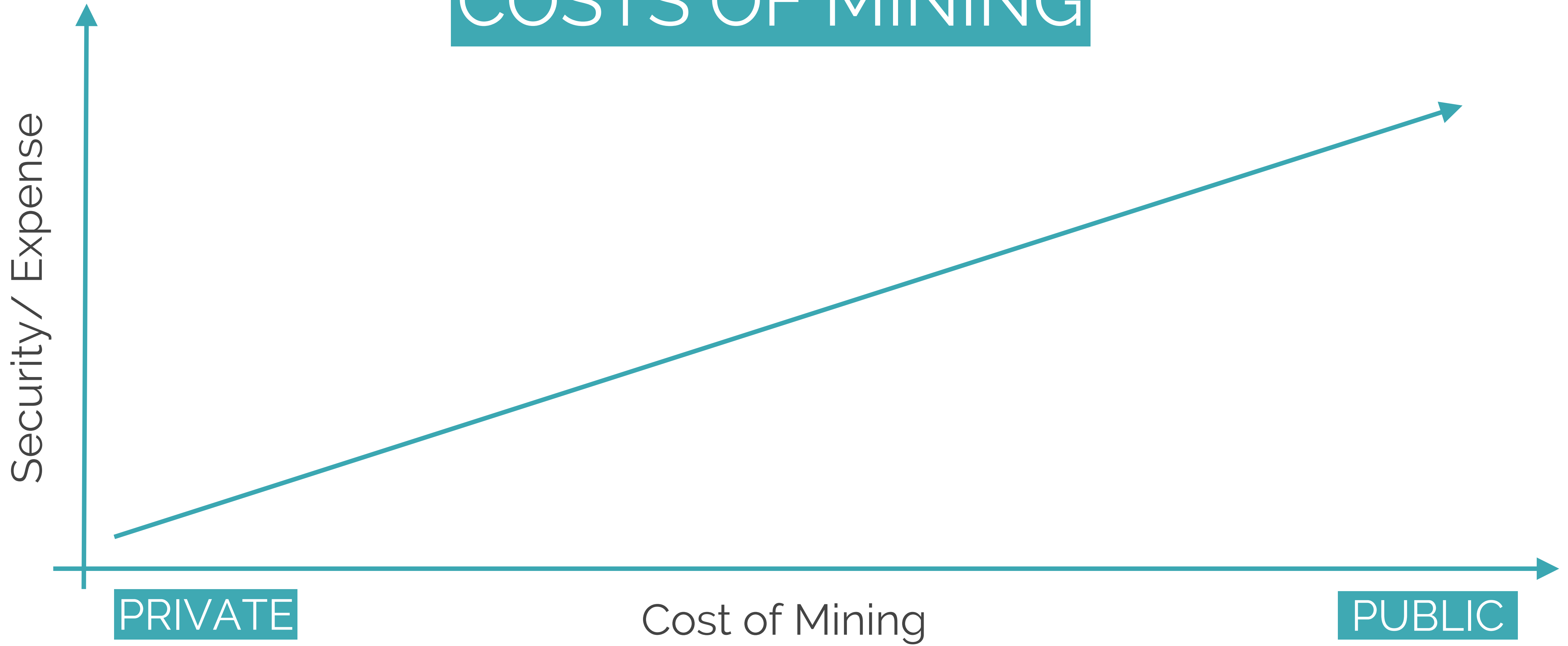
Simple to administer

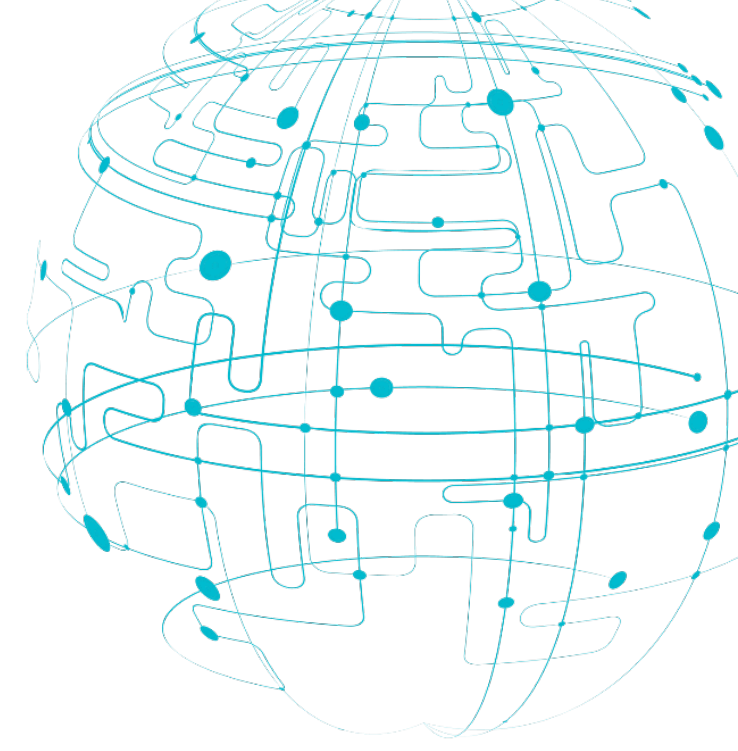
Problem-solver for everything

faizod.



COSTS OF MINING

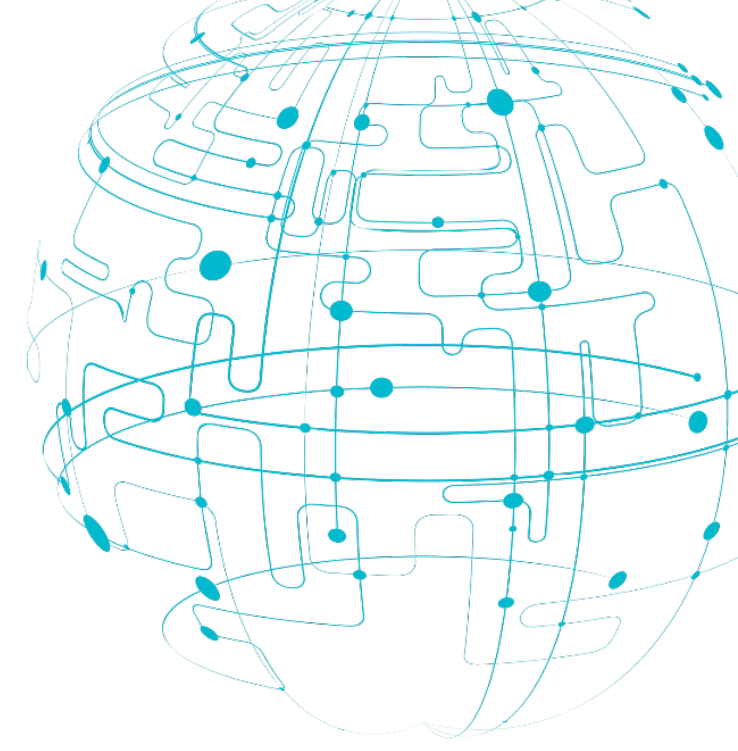




MINING CONCEPTS



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SECURITY

HIGH

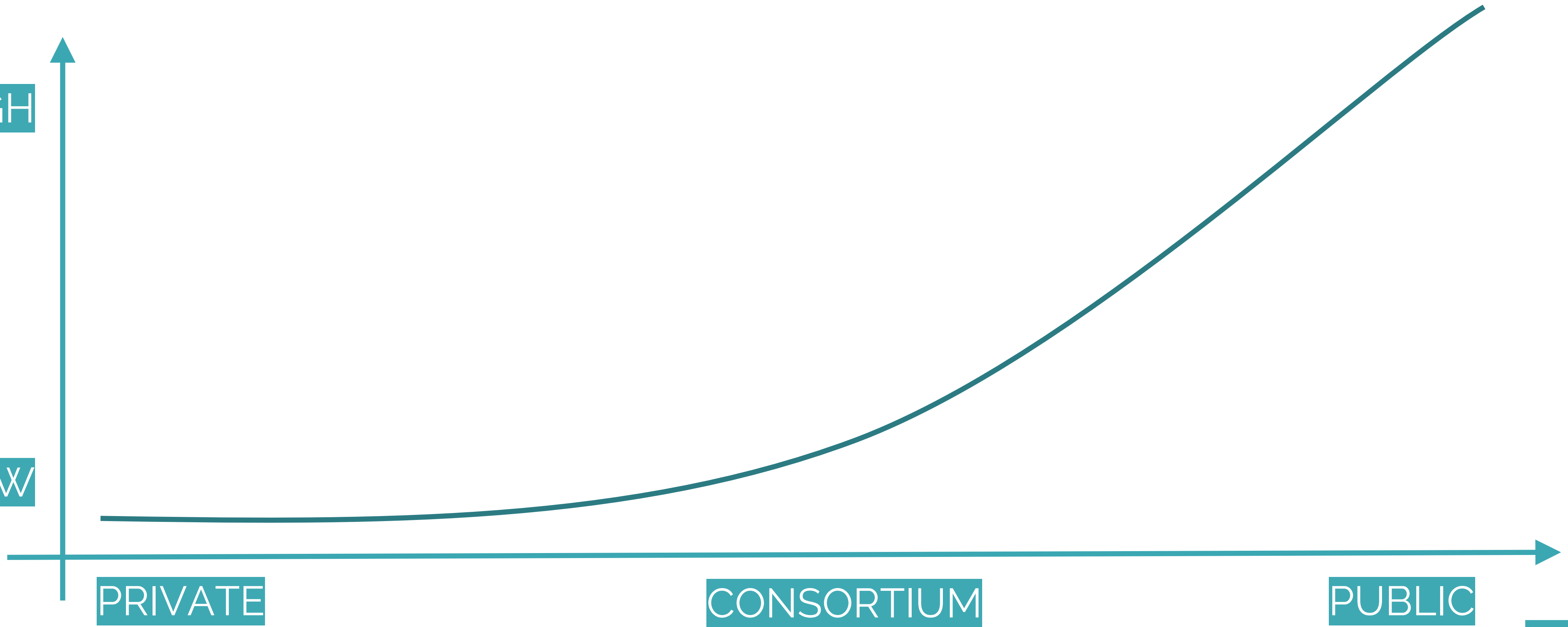
LOW

PRIVATE

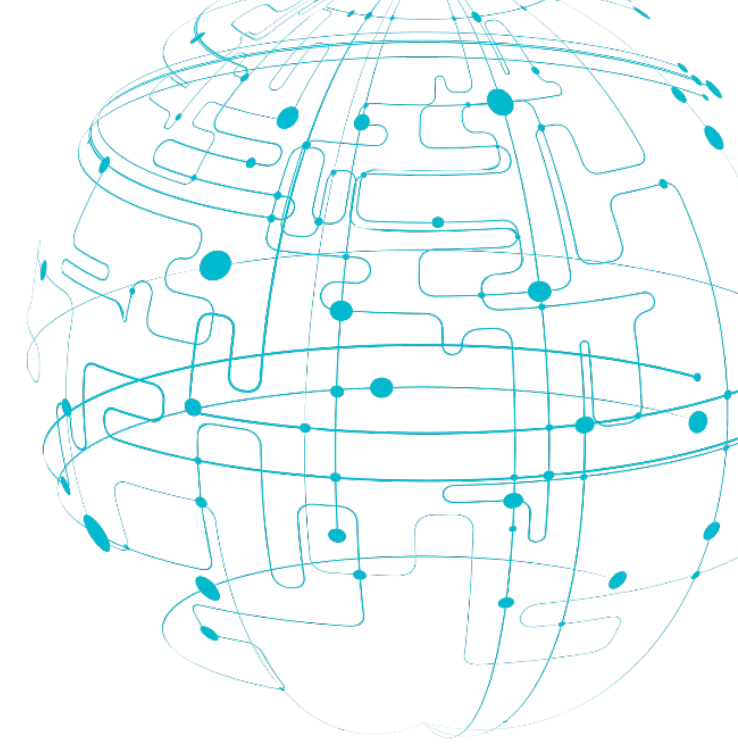
CONSORTIUM

PUBLIC

CHAIN



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SECURITY

HIGH

LOW

PRIVATE

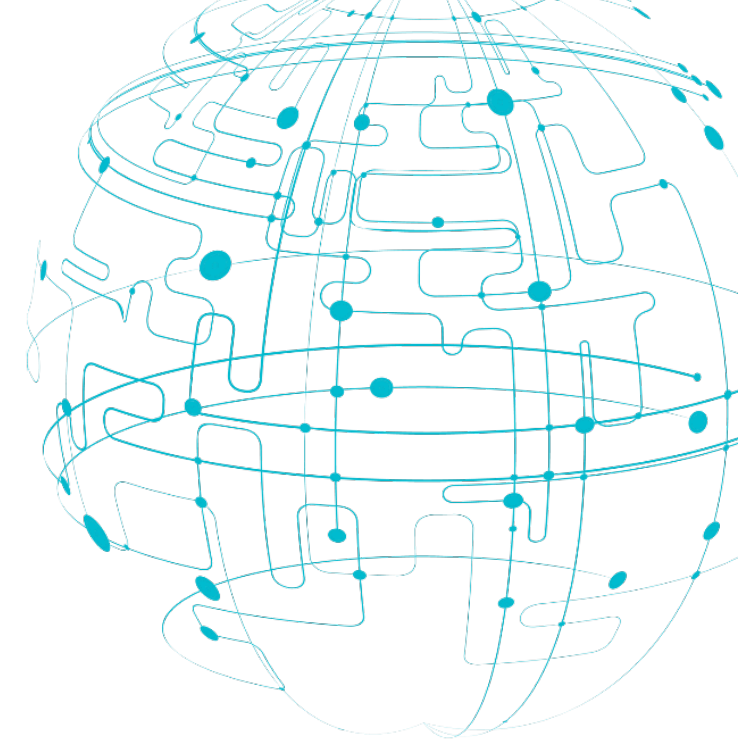
CONSORTIUM

PUBLIC

CHAIN

BITCOIN, \$4.2M

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SECURITY

HIGH

LOW

ANCHORING

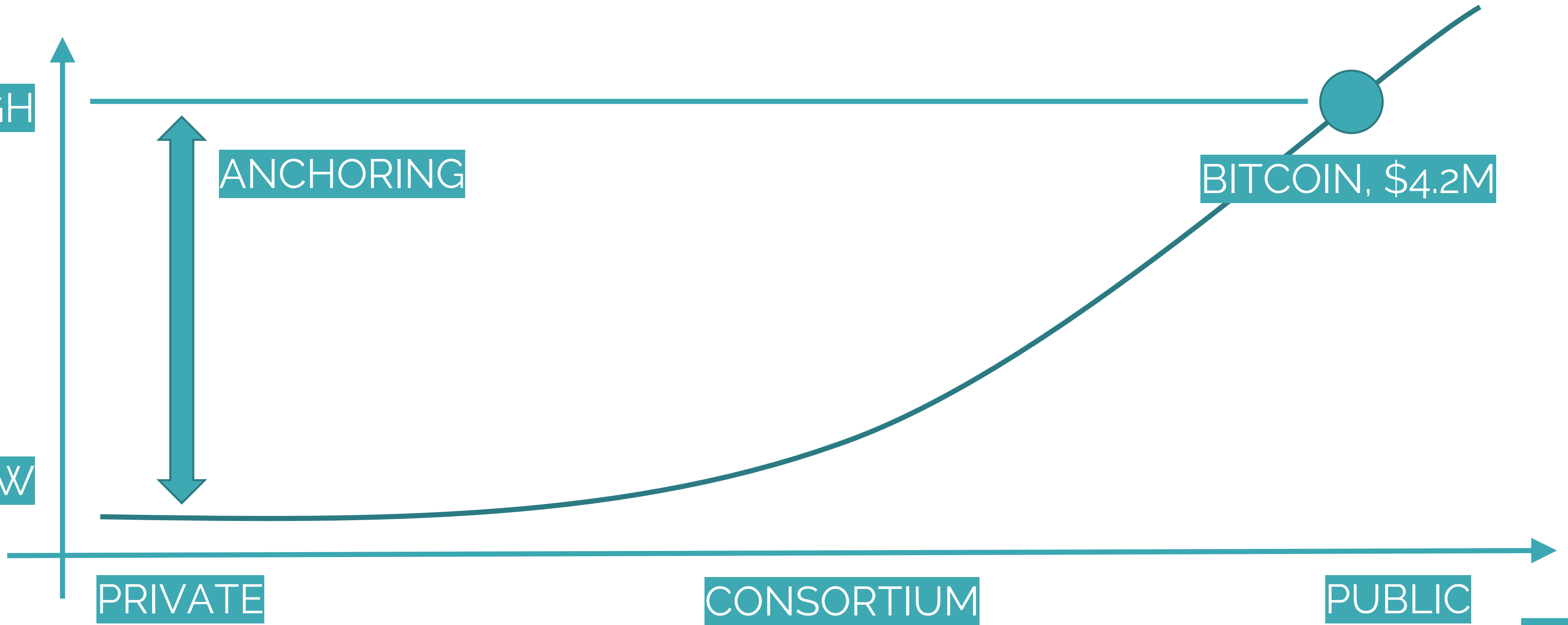
BITCOIN, \$4.2M

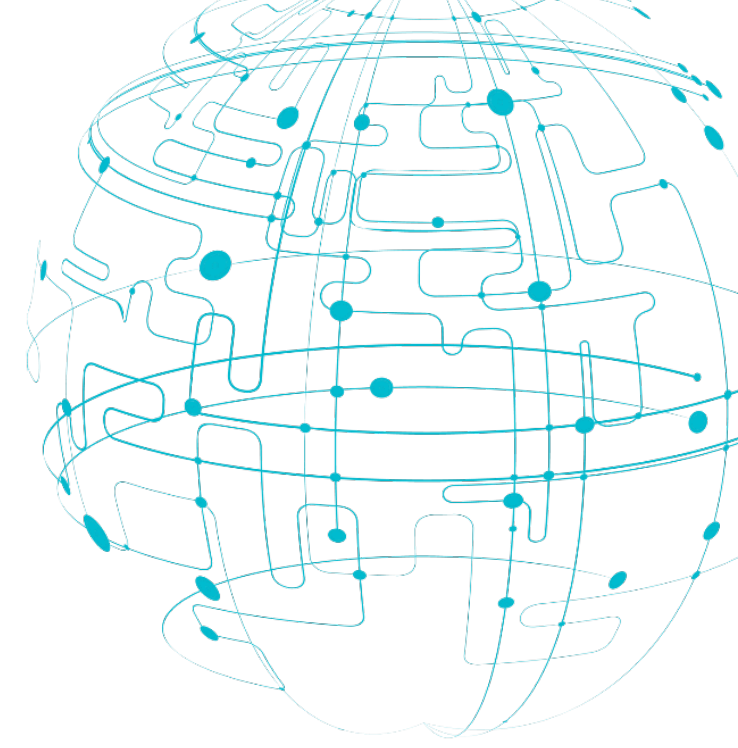
PRIVATE

CONSORTIUM

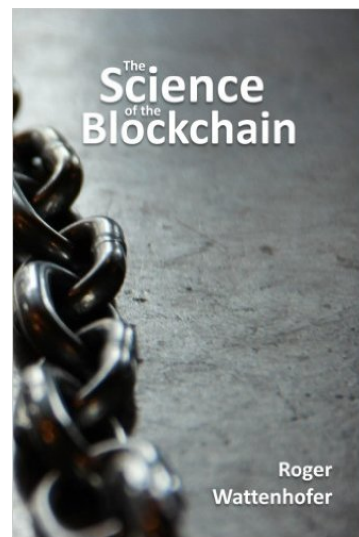
PUBLIC

CHAIN



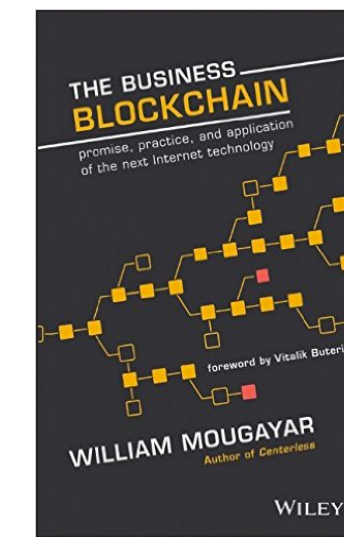


LITERATURE



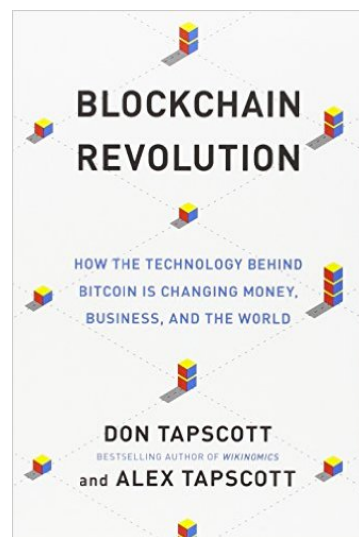
The Science of the Blockchain Roger Wattenhofer

ISBN-13: 978-1522751830



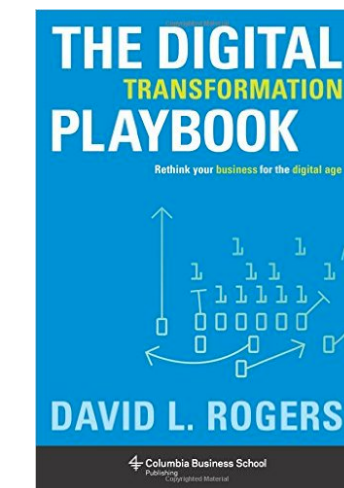
The Business Blockchain William Mougayar

ISBN-13: 978-1119300311



Blockchain Revolution Don Tapscott / Alex Tapscott

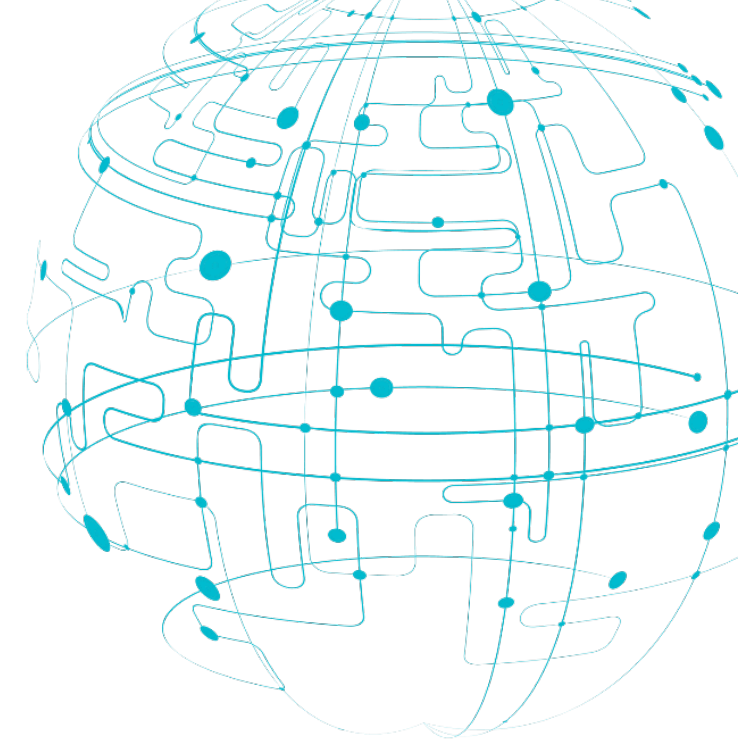
ISBN-13: 978-0399564062



Digital Transformation Playbook David L. Rogers

ISBN-13: 978-0231175449

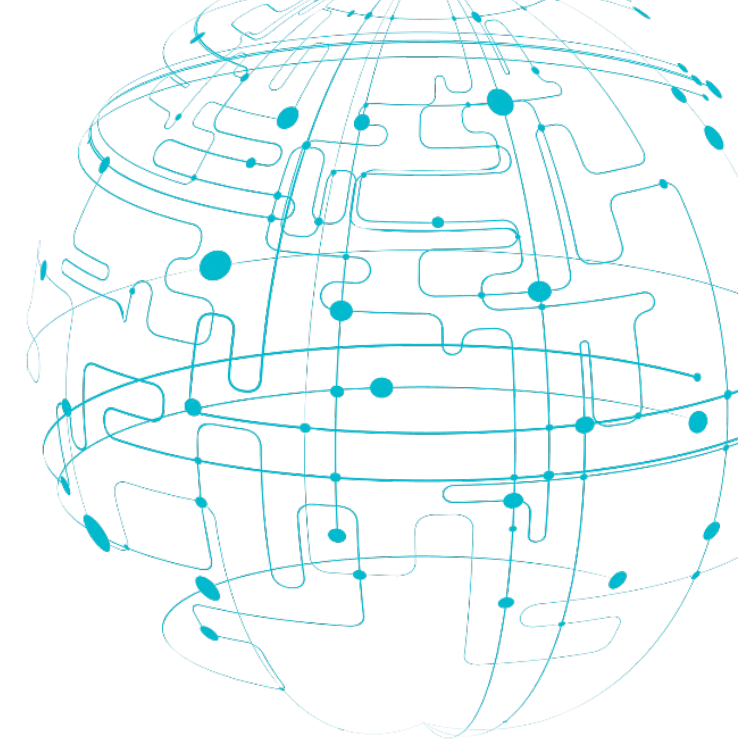
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„BLOCKCHAIN IS THE PAPER IN A
DIGITALIZED PROCESS“

(UNKOWN AUTOR)

faizod.



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