BLOCKCHAIN EVOLUTION

EVOLUTION OF MOBILE COMMUNICATION TECHNOLOGIES VS EVOLUTION OF BLOCKCHAIN

1G	2G	3G	4G
Foundation of Mobile	**Mobile for the Masses**	**Mobile Broadband**	**Faster and Better Mobile Broadband**
Seamless Mobility	More Voice Capacity	Data Optimized	More Data Capacity
2.4 kbps	64 kbps	2,000 kbps	100,000 kbps
Blockchain 1.0 Bitcoin & POW	**Blockchain 2.0 Ethereum & Smart Contract**	**Blockchain 3.0 Alt Coin**	**Blockchain 4.0**
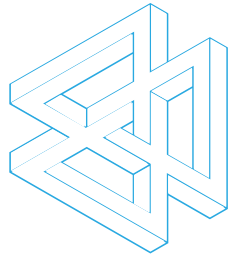
BLOCKCHAIN: THE SKELETON OF ORGANIZING DATA OF THE DECENTRALIZED NETWORK
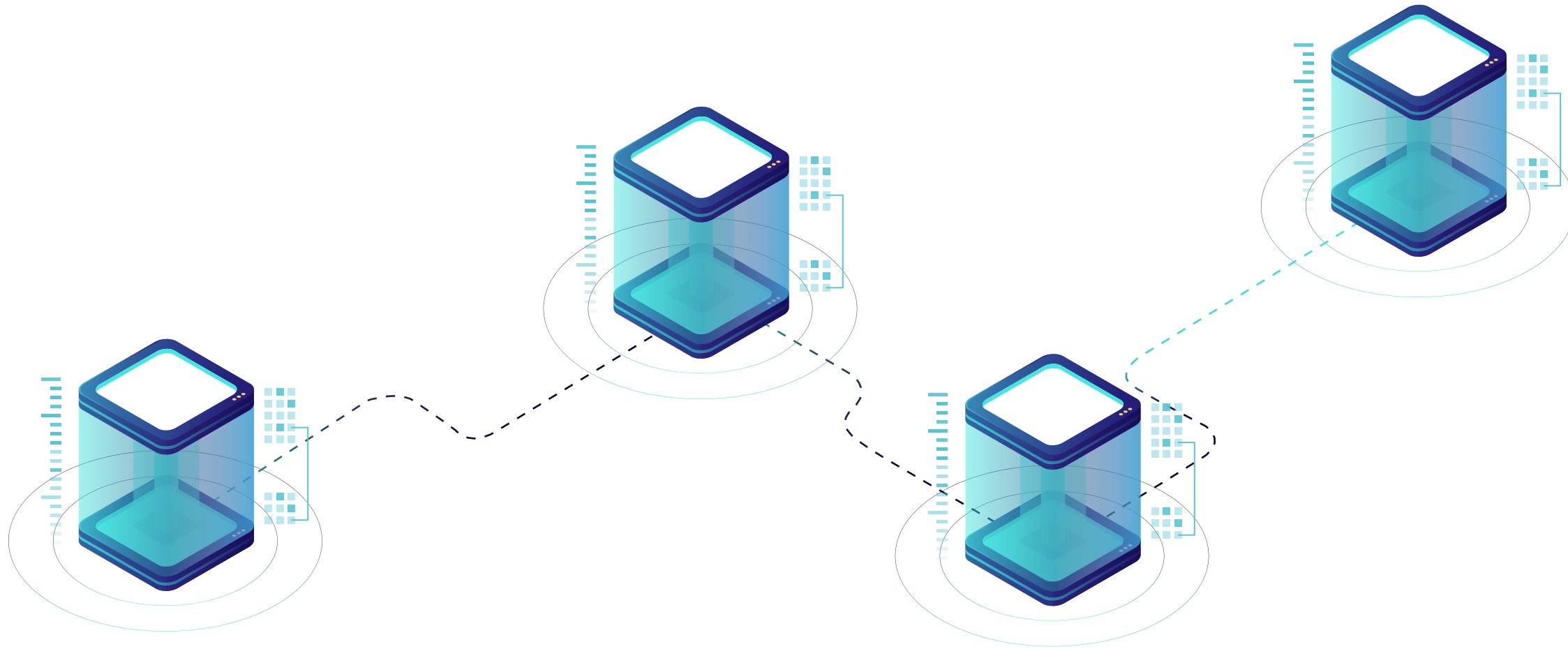
The blockchain technology

-It's a new way to organize the database.

-Can store everything that changes according to the network.
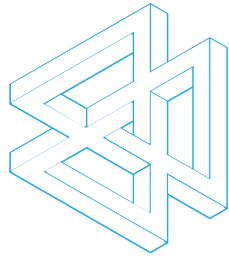
-All the data get arranged in a block like matter.

BLOCKCHAIN: THE SKELETON OF ORGANIZING DATA OF THE DECENTRALIZED NETWORK
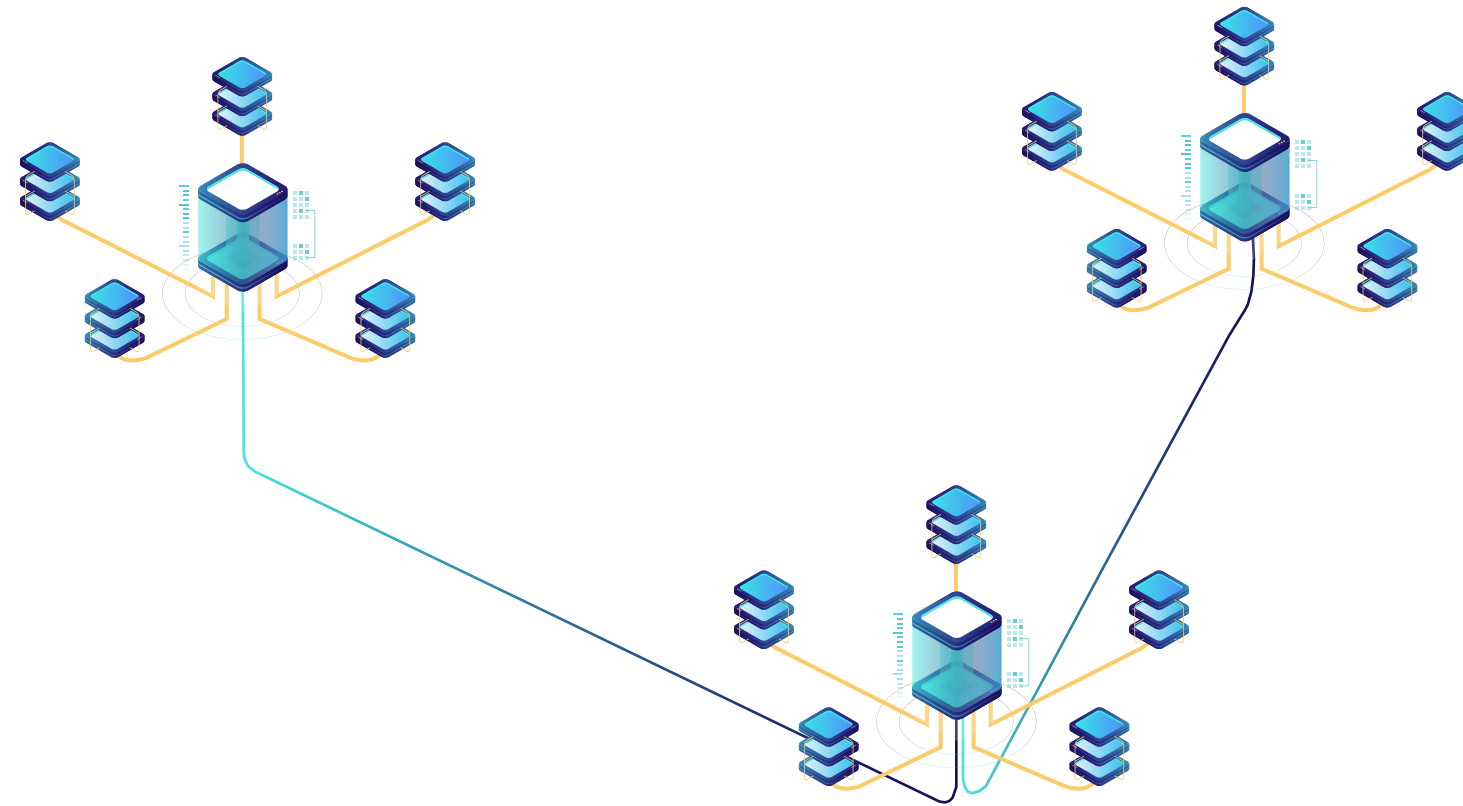
Won't see any decentralization in the blockchain itself.
Blockchain doesn't provide the decentralizing environment.
That's why we need consensus algorithms to make sure the
system & the network is fully decentralized.
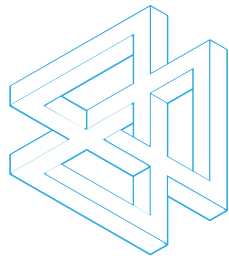
DIFFERENT TYPES OF BLOCKCHAIN CONSENSUS ALGPRITHMS
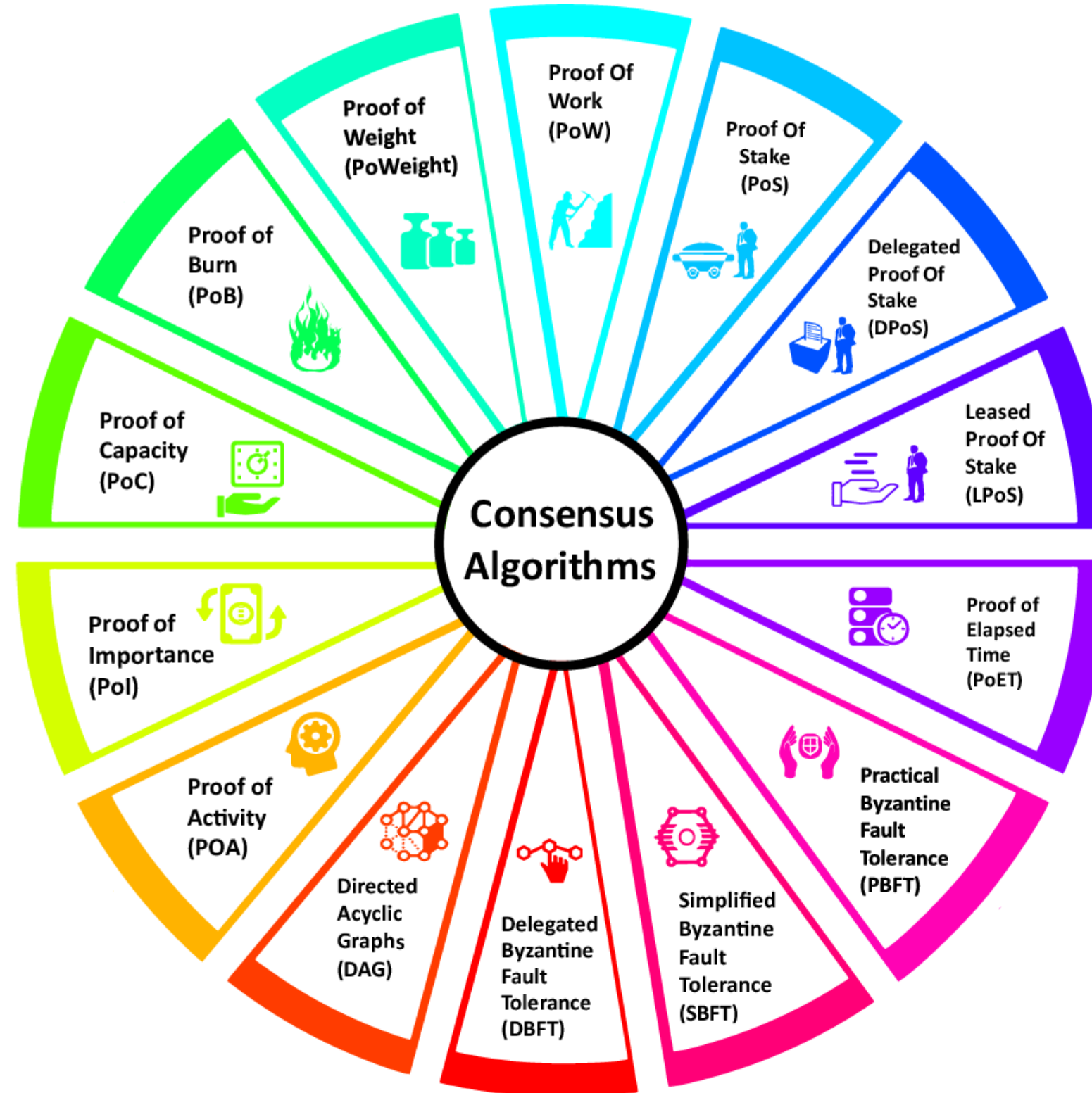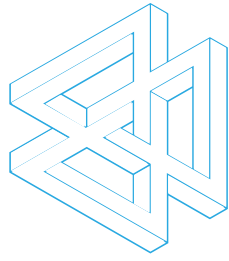
CONSENSUS MECHANISM 1.0 POW
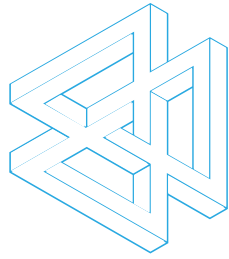
CONSENSUS MECHANISM 1.0 POW
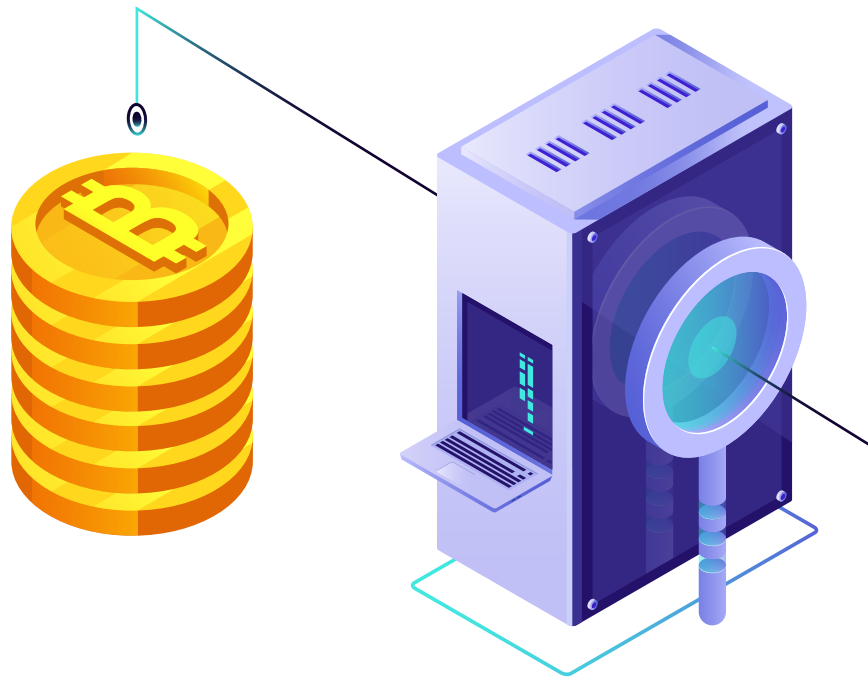
Pros
Security
Decentralization Spirit

Cons
Slow
Massive energy consumption
Mining pools trigger centralization
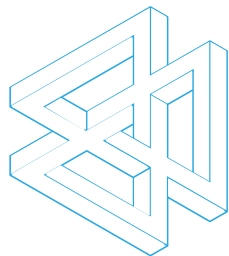
CONSENSUS MECHANISM 2.0 POS
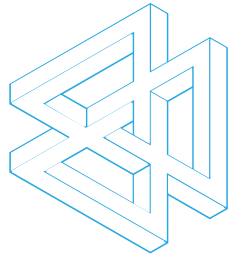
CONSENSUS MECHANISM 2.0 POS

Pros
- Speed: Provides faster transaction process coma-
pred to POW
- Efficiency: Consumes less energy
- Anyone has a chance to produce blocks

Cons
- The rich ones get richer: Only the richest
stakeholders are able to control the consensus
in the blockchain.
- Less hardware: Doesn't require "supercom-
puters". Being slow becaus of slowest nodes

CONSENSUS MECHANISM 3.0 DPOS

CONSENSUS MECHANISM 3.0 DPOS

PROS

Scalable

Increased security

Energy efficient

Democratization
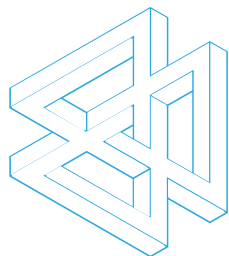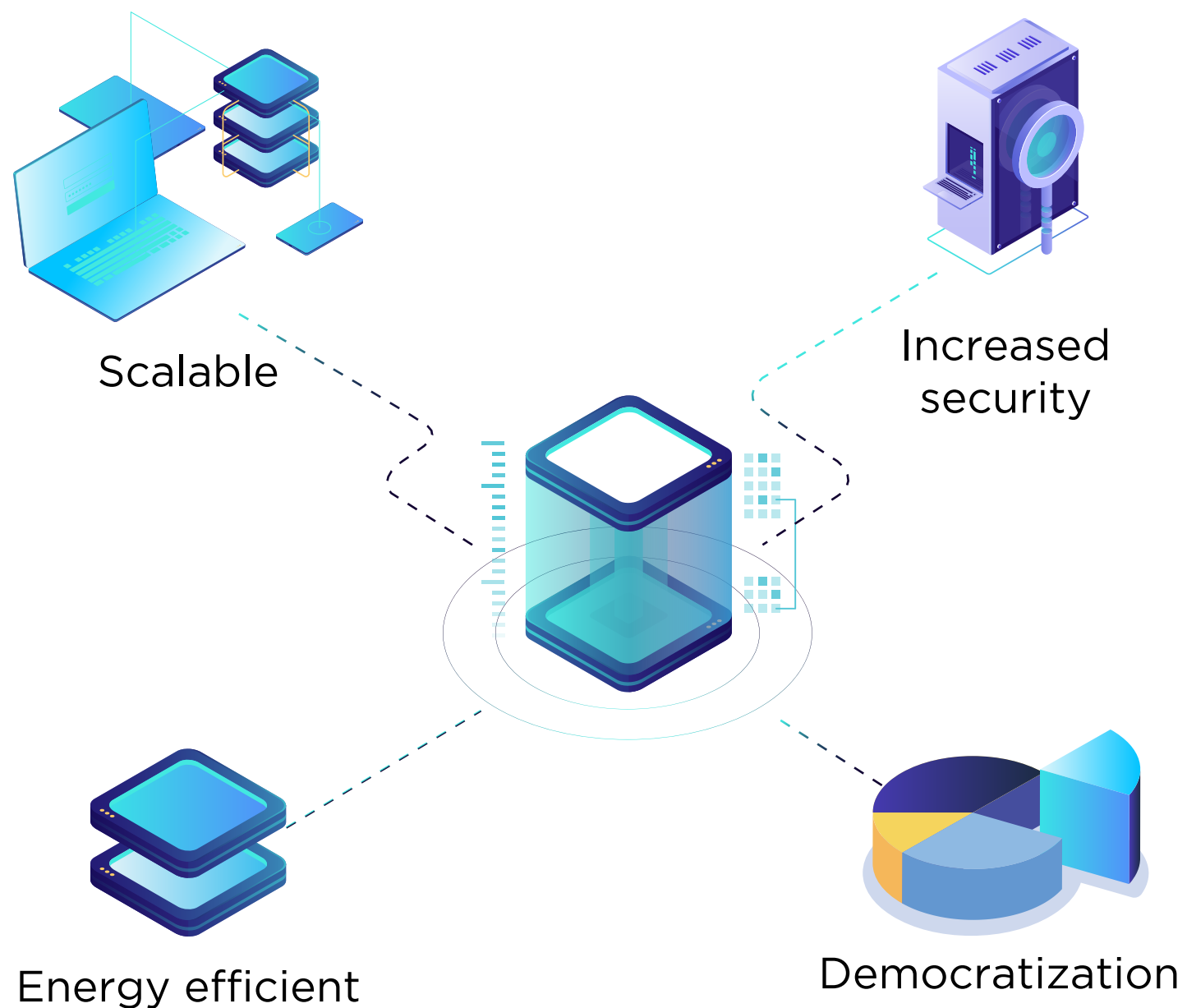
CONS
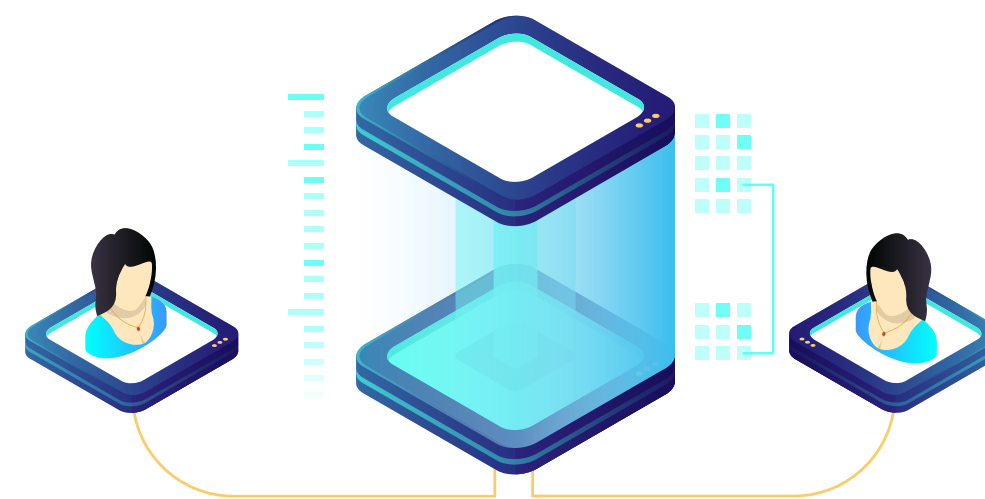
- Under threat of being attacked: Because fewer people are in charge of keeping the network alive, it's easier to organize a "51%" attack
- The rich may get richer.
- Apathy can kill: Without a large number of engaged users, the system will not function as intended.
- Cartels: The list of witnesses could be organized into cartels
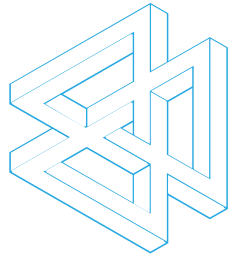
THE DCS TRIANGLE

"The DCS Triangle – Decentralized, Consistent, Scalable. Pick any two"

Planetary Scale

High throughput
High capacity
Low latency

**Fully
Decentralized**

Anyone can join as validator

Consistent

All nodes see same data
at same time
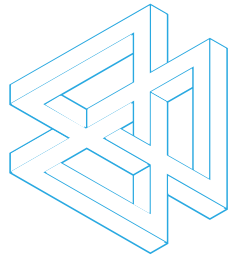
THERE ARE THREE DEGREES OF DECENTRALIZATION

Planetary Scale

Centralized
Single entity controls

Server-Free (Fully) Decentralized
No one entity controls
Anyone can write,
Anyone can read.
Anyone* can be validator.
(*need CPU power)

Server-Based Decentralized
No one entity controls
Anyone can write,
Anyone can read.
Anyone voted in by federation can be validator

Consistent
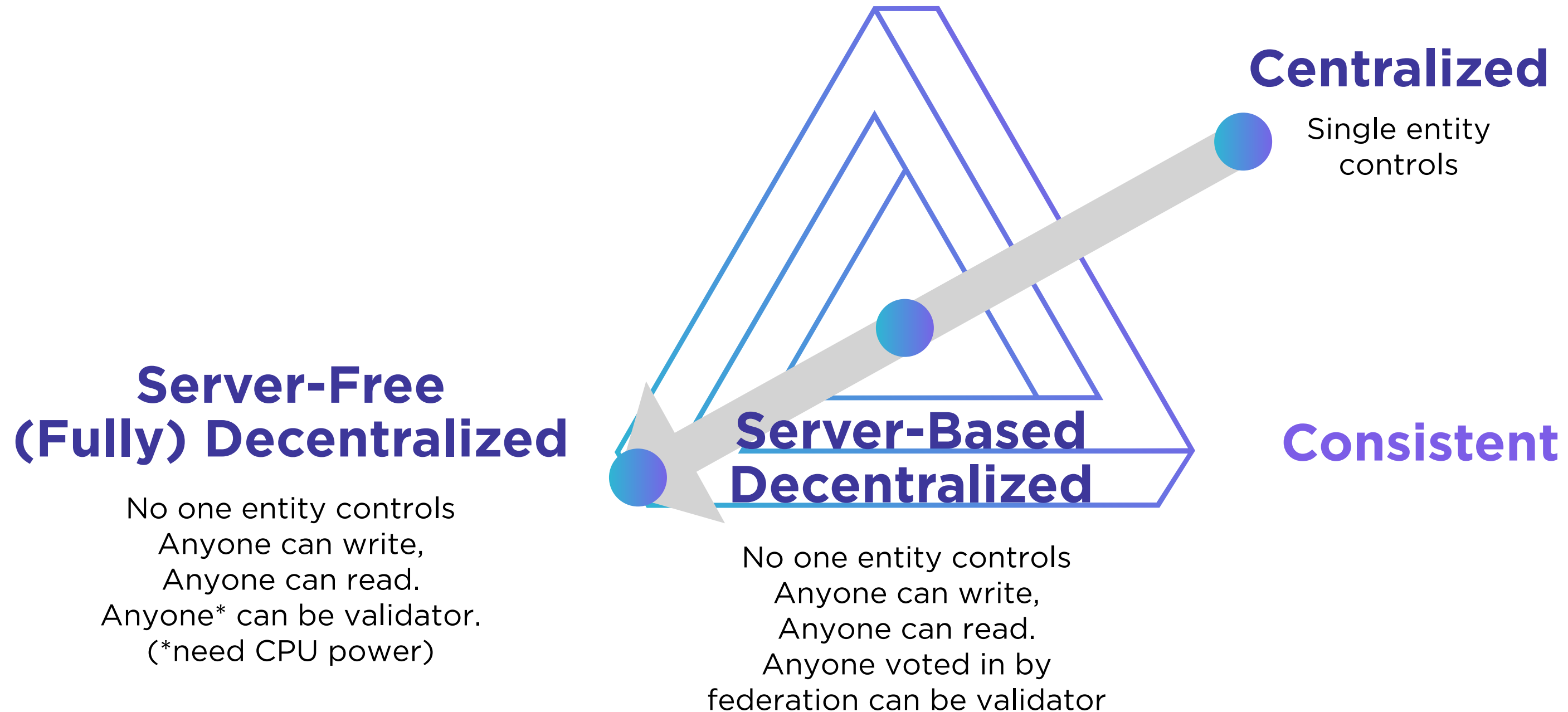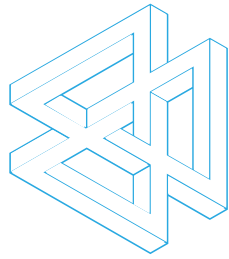
SO, WHAT DOES THIS MEAN FOR YOUR BUSINESS?

What's the scale of your project?

Is your blockchain public or permissioned?

What are your performance requirements?

Token or no token?
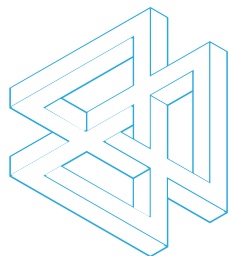
CAMERA ECONOMY

We believe camera device is an eye vision computing for human

Camera data is a new kind of digital asset

14 billion cameras by 2017, 44 billions by 2022

The revenue sharing in many industries is platform-dependent, manipulated by monopolies

UMBALA NETWORK BLOCKCHAIN

Support Millions of Users & Friendly User Experience

Free Usage

Low Latency

High Performance

Over-the-air Update
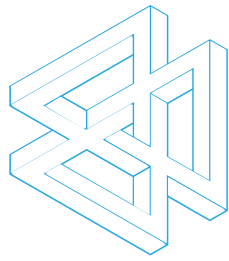
PROBLEM

Not Scalable
Limited computational capacity preventing widespread blockchain adoption

DPoS Problem
Stake voting based on an unfair incentive mechanism for standby Block Producers and is controlled by Sharks & Whales

Costly & Not User-friendly
Burdened by large fees and not friendly to use for DApp producers and mass consumers

Hard to upgrade
It takes a lot of time for existing blockchain platforms to be upgraded
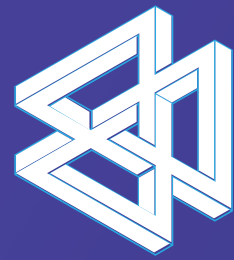
UMBALA NETWORK

Umbala Network aims to create a **performance-focus & highly-scalable blockchain** to connect **billions camera** devices all over the world and accelerate **decentralized eye vision computing appli-cations**

Augmented Reality

Realtime Betting

Drone Camera

Robotic Camera

Car Dash Camera

Security Camera

Camera Payment

Camera Game

Camera Ecommerce

Inreractive TV Production

DPOR 108

BLOCK **BLOCK** **BLOCK** **BLOCK** ...
1BP 3s - 3block

BLOCK **BLOCK** **BLOCK** **BLOCK** ...
1BP 3s - 3block

BLOCK **BLOCK** ...

ROUND 135s

ROUND 135s

BFT - DPOR

TOP 41 **+** **4 BP** ← **Randomization** **67 BP**

ABP - Active block produce

30 DAYS

REPUTATION SCORE SYSTEM
Tracking Account Activities On The Chain in 30 days (Transfer UMB Staked Token, Resource Usage)
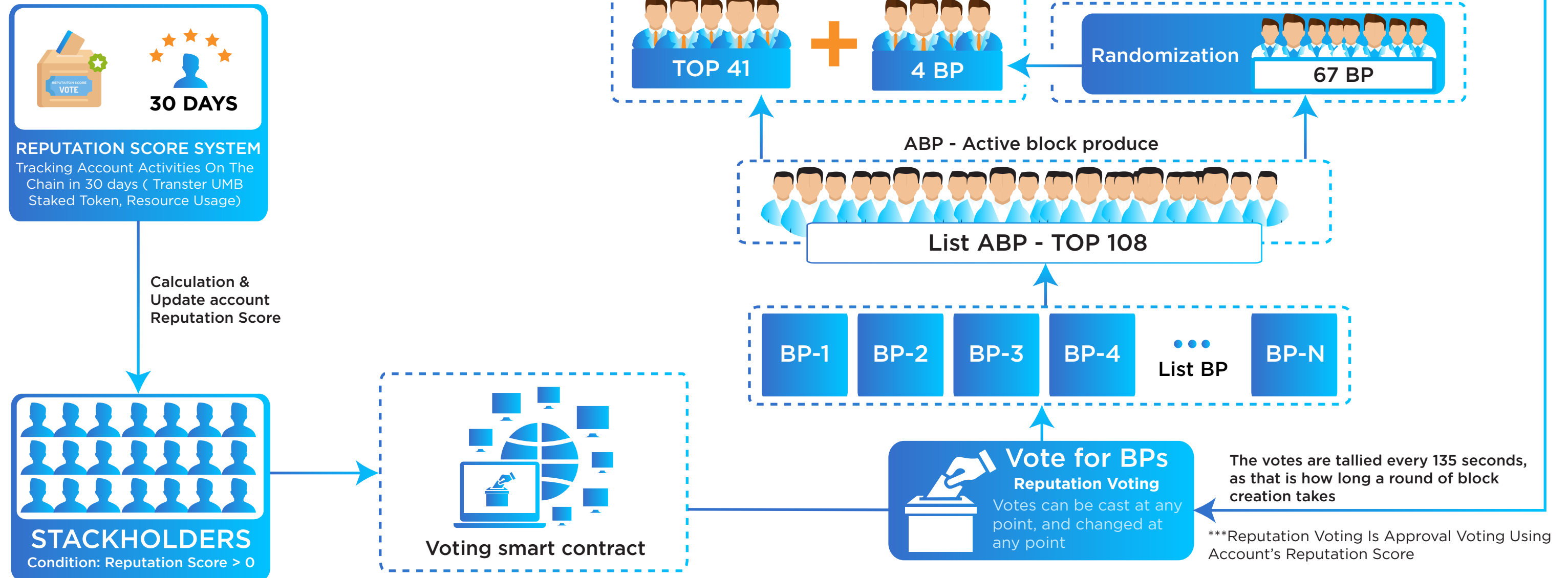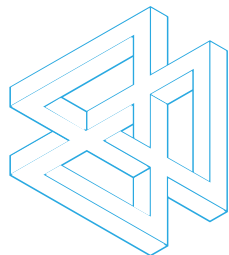
List ABP - TOP 108

Calculation & Update account Reputation Score

BP-1 **BP-2** **BP-3** **BP-4** ••• List BP **BP-N**

STACKHOLDERS
Condition: Reputation Score > 0

Voting smart contract

Vote for BPs
Reputation Voting
Votes can be cast at any point, and changed at any point

The votes are tallied every 135 seconds, as that is how long a round of block creation takes

***Reputation Voting Is Approval Voting Using Account's Reputation Score

DPOR 108: POWER SCORE

- A metric based on staked tokens

- Each day, only 10% of staked tokens that have not been converted to power score will be converted to power score.

- Only after about roughly 30 days, your staked tokens will be fully converted.

- If you un-stake your tokens, your converted tokens will be unstaked first.
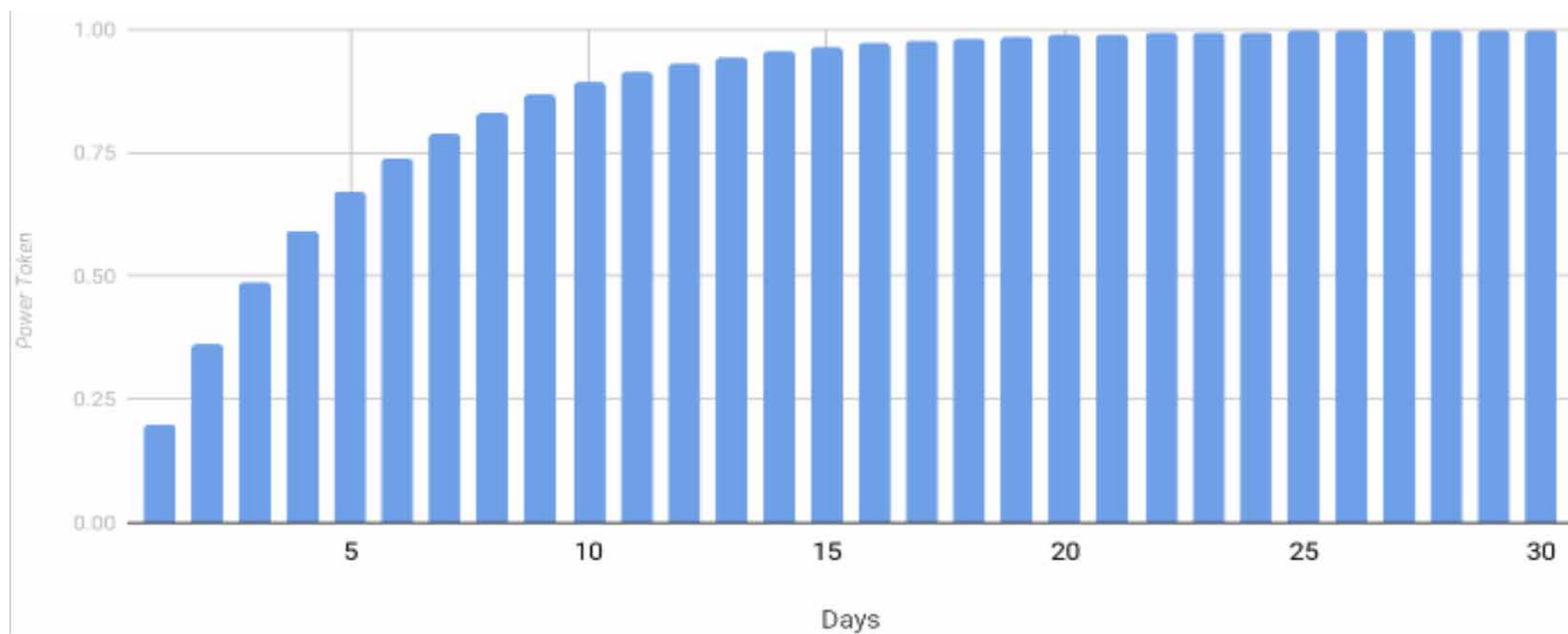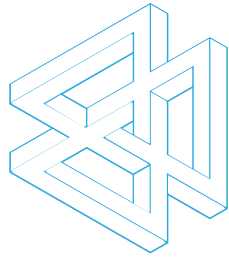
DPOR 108: RESOURCE SCORE

• Blockchain Resource As Digital Asset (CPU, RAM , Network Bandwidth)
-> DApp Developer Need Stake Token/Rent Resource To Execute Smart Contract

• If they own 10% of resources of the network, they can be able to execute at the maximum 10% of all transactions.

• We encourage them to utilize their allocated resources

• Accounts will have optimal resource usage score when they utilize 70-90% their allocated resources.

• When resource utilization of an account goes far from that range, its score will drop very fast.
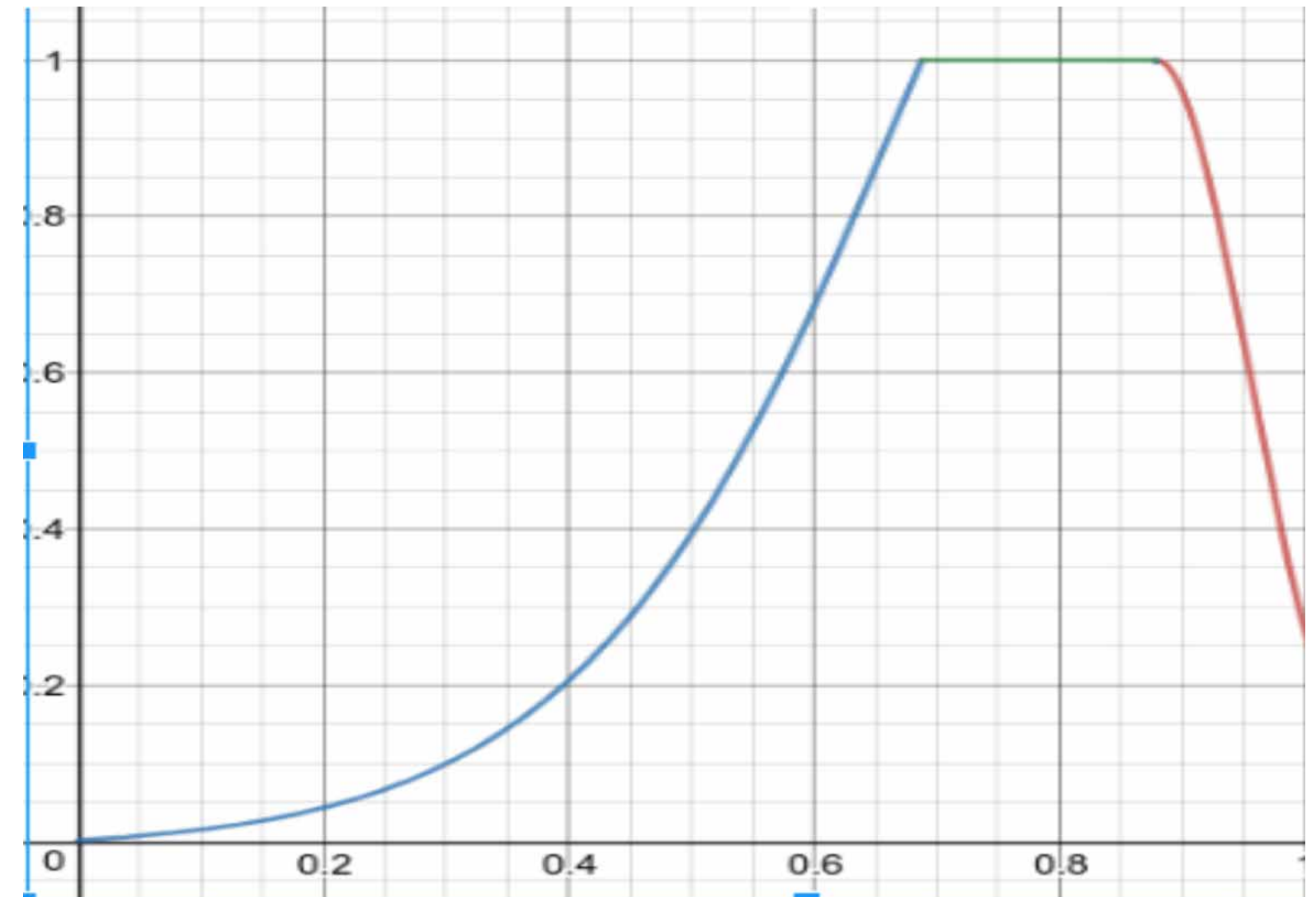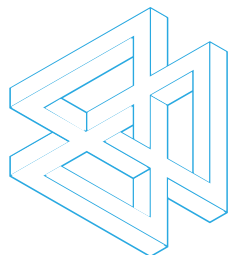
DPOR 108: TRANSACTION SCORE

• A metric inspired from Google famous PageRank algorithm.

• To creates a big graph of transactions between users.

• Based on transaction traffic flow, we evaluate which account have more interactions/impacts with/to other accounts.
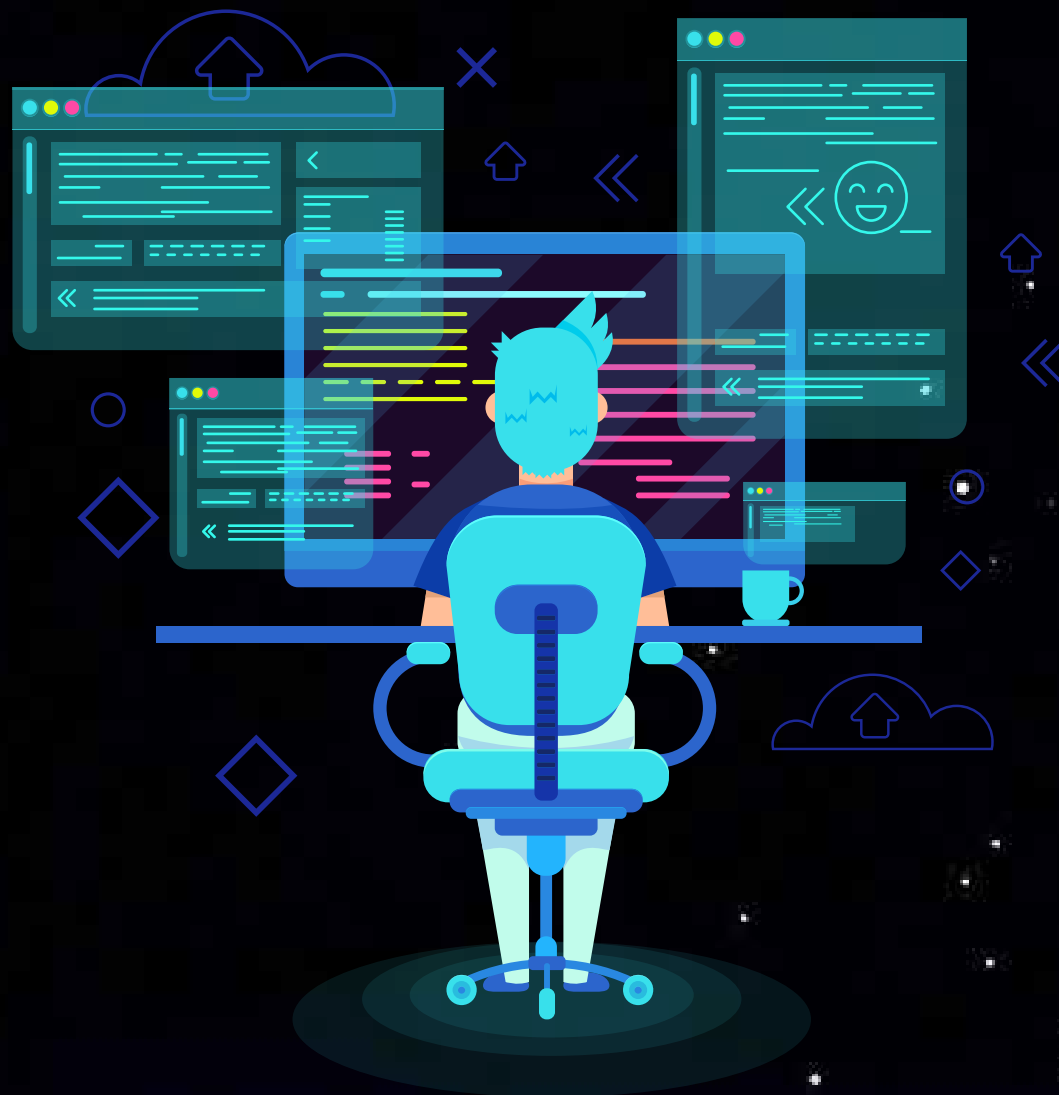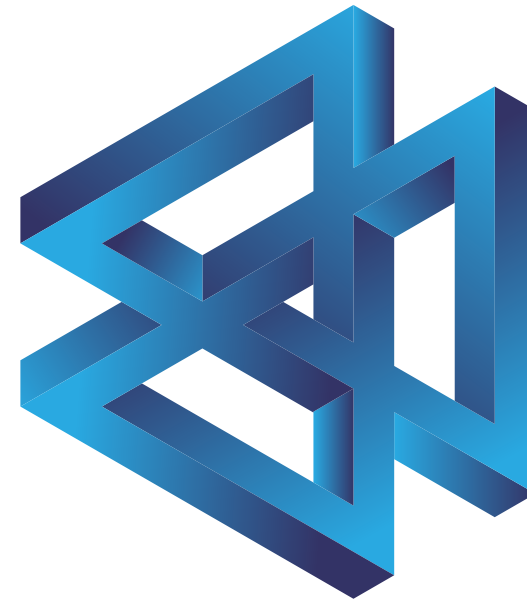
WE ARE HIRING

BLOCKCHAIN

AI
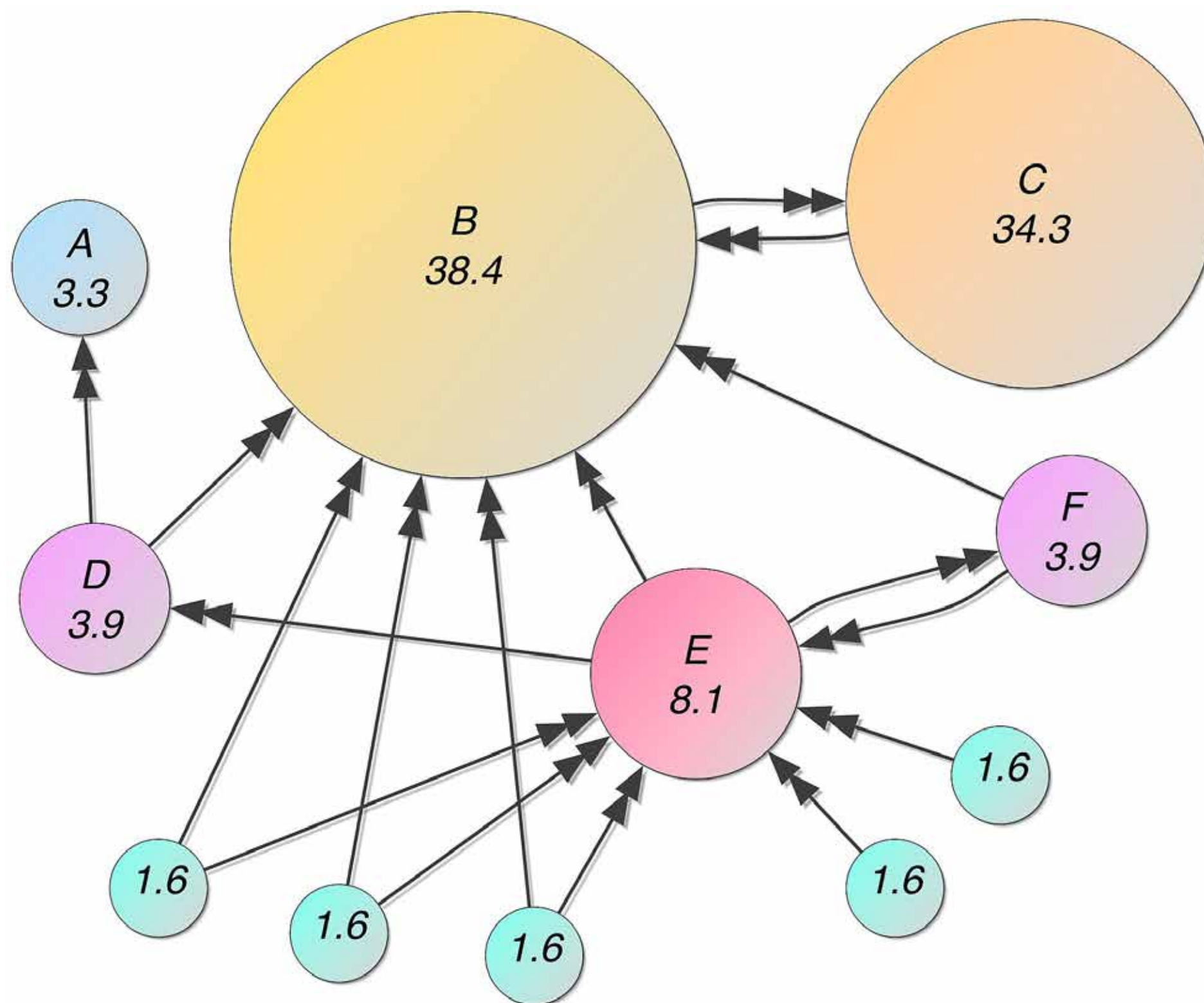
DEVELOPER

f fb/Umbala.tuyendung

✉ hello@umbala.network

Ko cần các bạn phải có kinh nghiệm, vì chúng tôi sẵn sàng *Training* các bạn trở thành *Expert*

Nhằm phát triển toàn bộ nền tảng và các protocol cho Umbala Network Blockchain, Umbala đang tuyển nhiều bạn tham gia team làm về *Blockchain* và *AI*

Thank You

hello@umbala.network

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