



# Build on the internet

Internet Computer



# DFINITY Foundation, Switzerland

- Emerged from early Ethereum community in 2015
- DFINITY Foundation established October 2016
- Swiss not-for-profit, no corporation is involved
- Research centers in Zurich and San Francisco
- World's largest team cryptographers
- 270+ people globally

1600+

research papers

100 000+

academic citations

250+

technical patents



Crypto People +

Google

IBM

facebook



# Internet Computer is the world's highest usage public blockchain



**2 011 578 950**

Blocks processed

36 parallel subnets

37.1 MB/s block throughput capacity

## Throughput

Capacity horizontally scales as subnet blockchains are seamlessly combined into one unified blockchain. Blocks and transactions per second are unbounded.

**259 954**

ETH equivalent TX/s

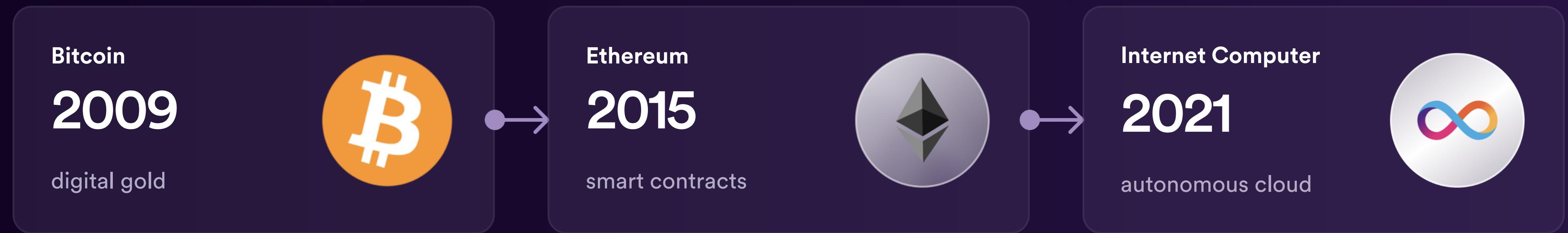
4 754 Transactions/s

## Comparing transactions

Transactions invoke "actor" canister smart contract computations, which subnet blockchains can run concurrently (yet deterministically).



# evolution of crypto



**Internet Computer** advances the internet from being a network that connects everyone and everything, to also being an autonomous public cloud that the world builds on...



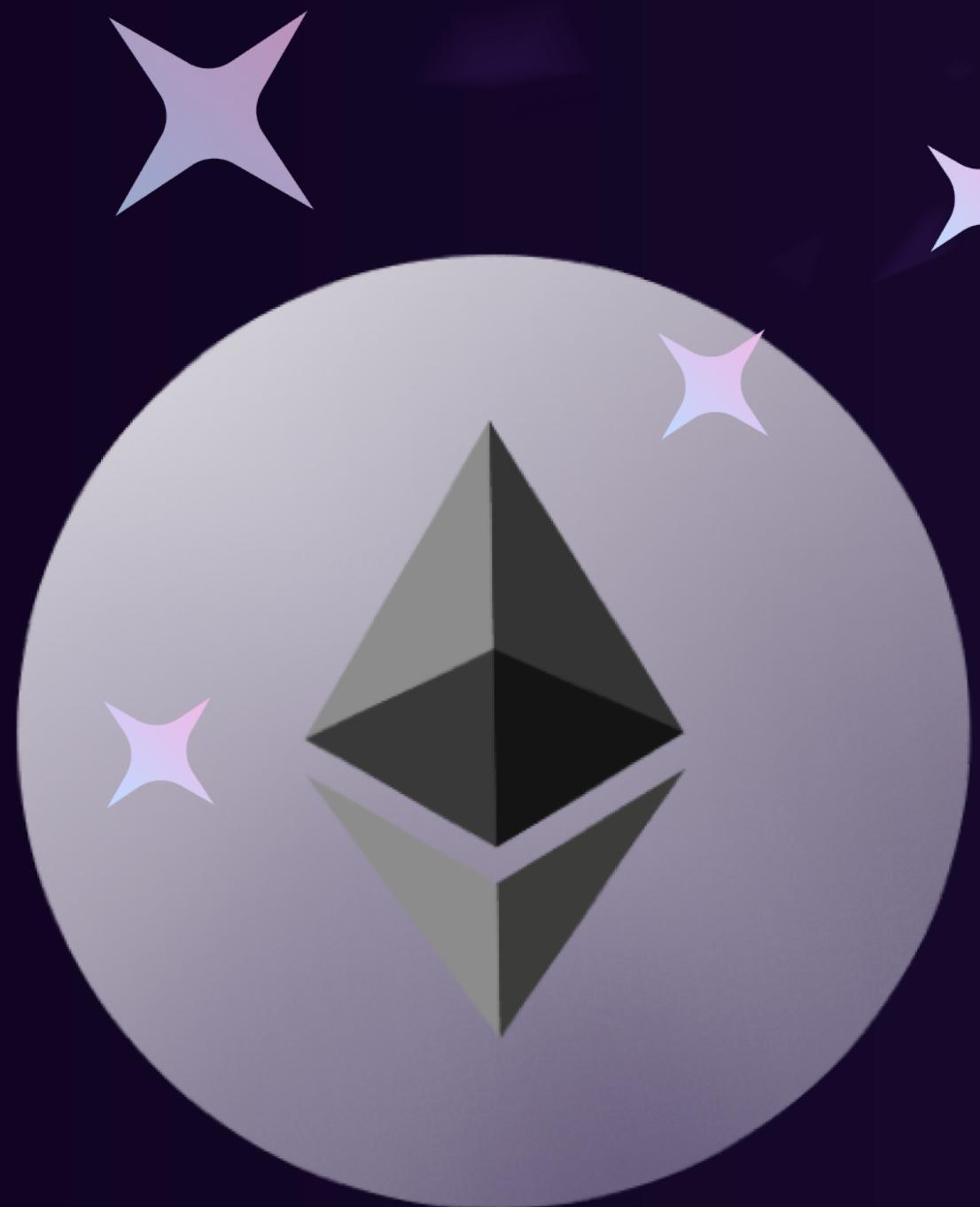
Internet Computer multi-chain technology enables the

# WORLD COMPUTER





# Ethereum introduced a “magic” new form of software



## 2015 smart contracts

### tamperproof

no firewall or security team necessary

### tokenization

hold, process & transmit value like data

### unstoppable

nuke proof, no servers or failing over

### composable

trustless dynamic collaborative building

### autonomous

can remove human control & backdoors

### borderless

code/services have no geography



# Internet Computer introduced a new form of smart contracts



2021 canister smart contracts  
*add powerful capabilities that enable crypto cloud...*

## multi-chain

code natively interacts with other chains

## low cost

compute costs approach trad. IT

## scalable

can service millions of users

## Speed

run at web speed not blockchain speed

## efficient

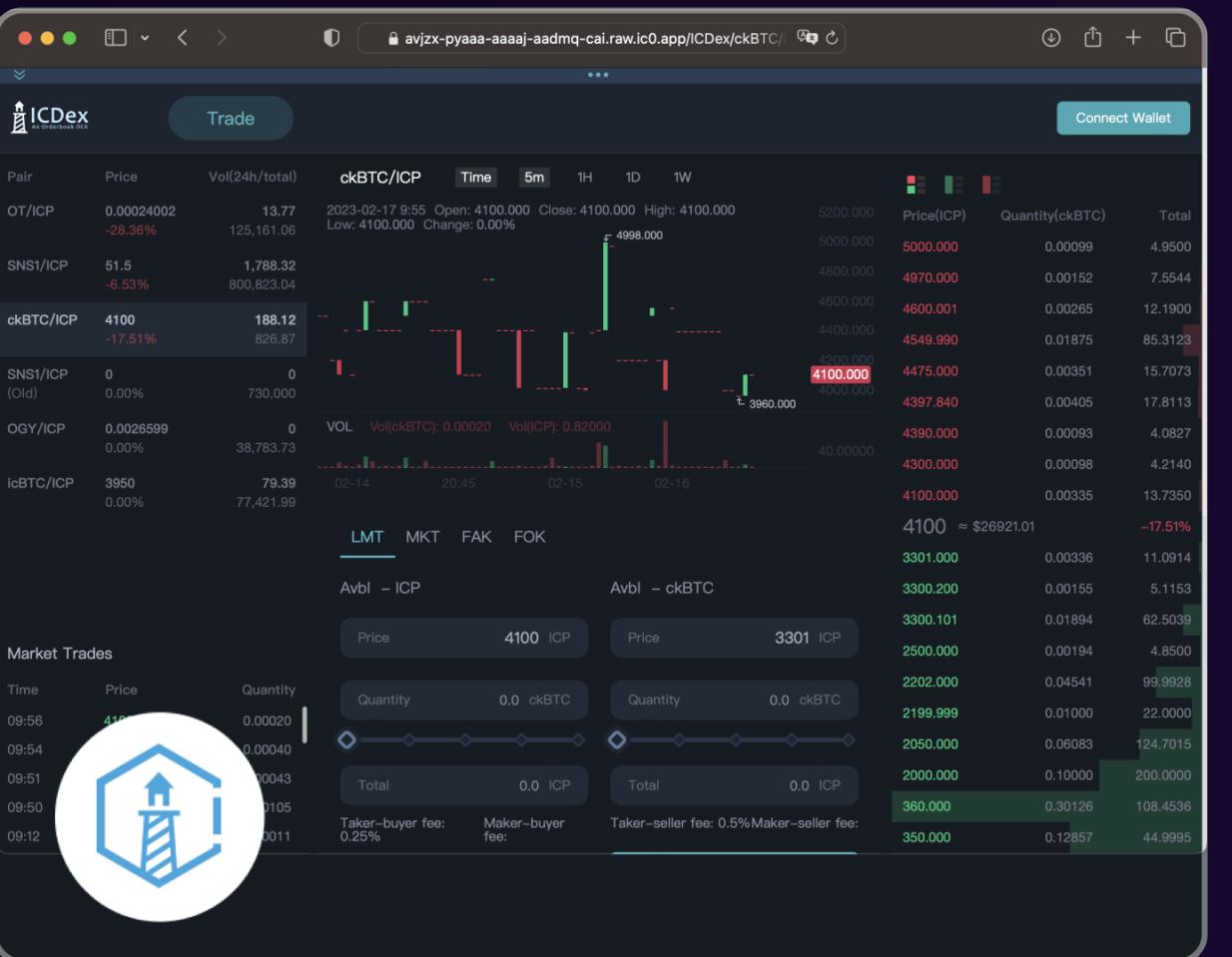
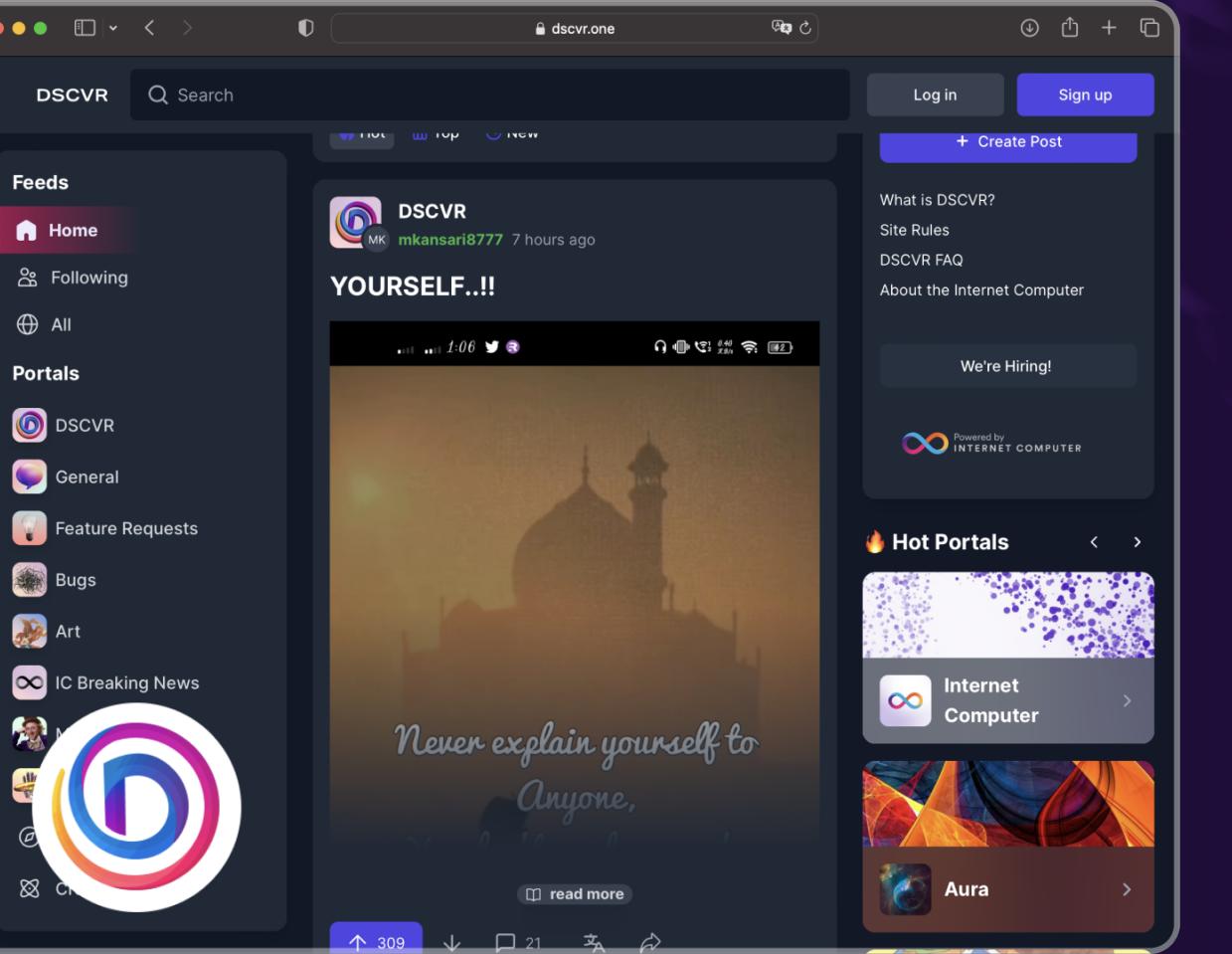
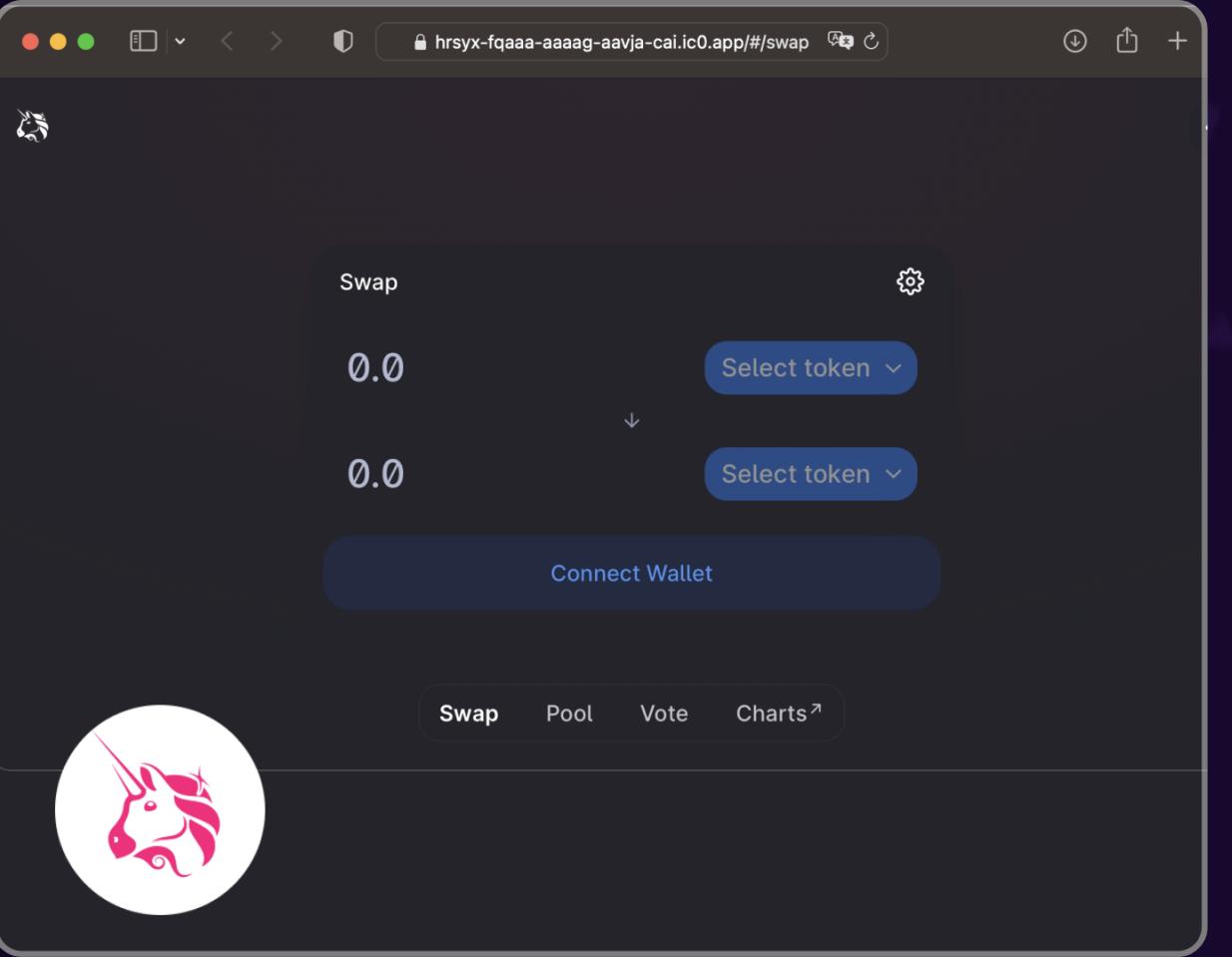
reduce IT carbon footprints

## Web

crypto speaks web (http) directly



# software autonomy enables true web3



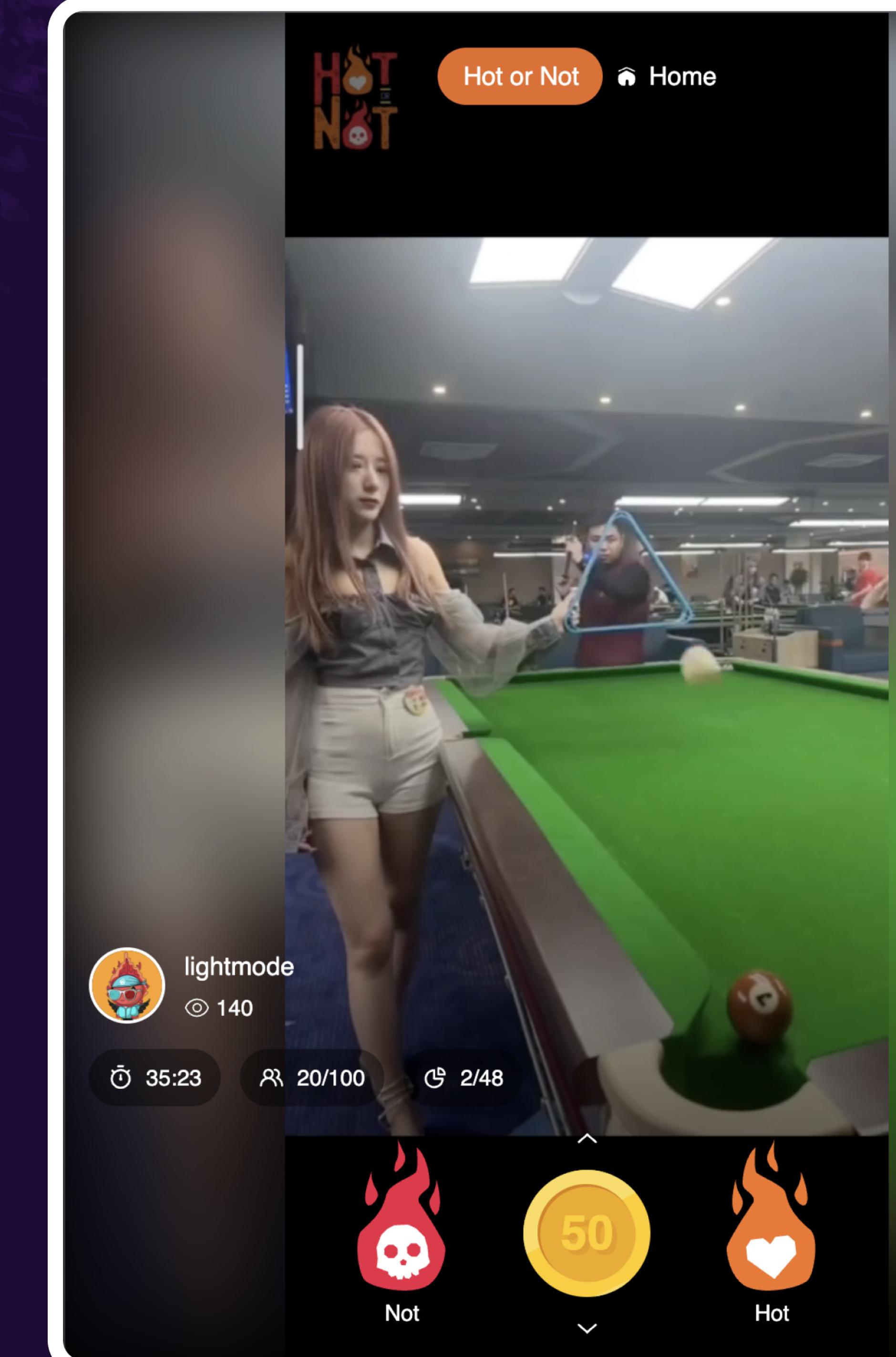


# HotOrNot.wtf

**tokenized web3 TikTok delivered  
direct into the browser**

- ✓ bet tokens on whether videos are hot or not
- ✓ earn tokens by helping with content selection
- ✓ tokenized content moderation by users
- ✓ creators of viral content earn rewards

**community is founderized  
community is industrious workforce  
community owns & governs**





# OC.app

**tokenized web3 chat service  
delivered direct into the browser**

- ✓ 100% on-chain messaging service
- ✓ accounts also wallets i.e. socialfi
- ✓ send satoshis in messages... no wallet
- ✓ chat messages are transactions...

**100% DAO-controlled  
100% autonomous**

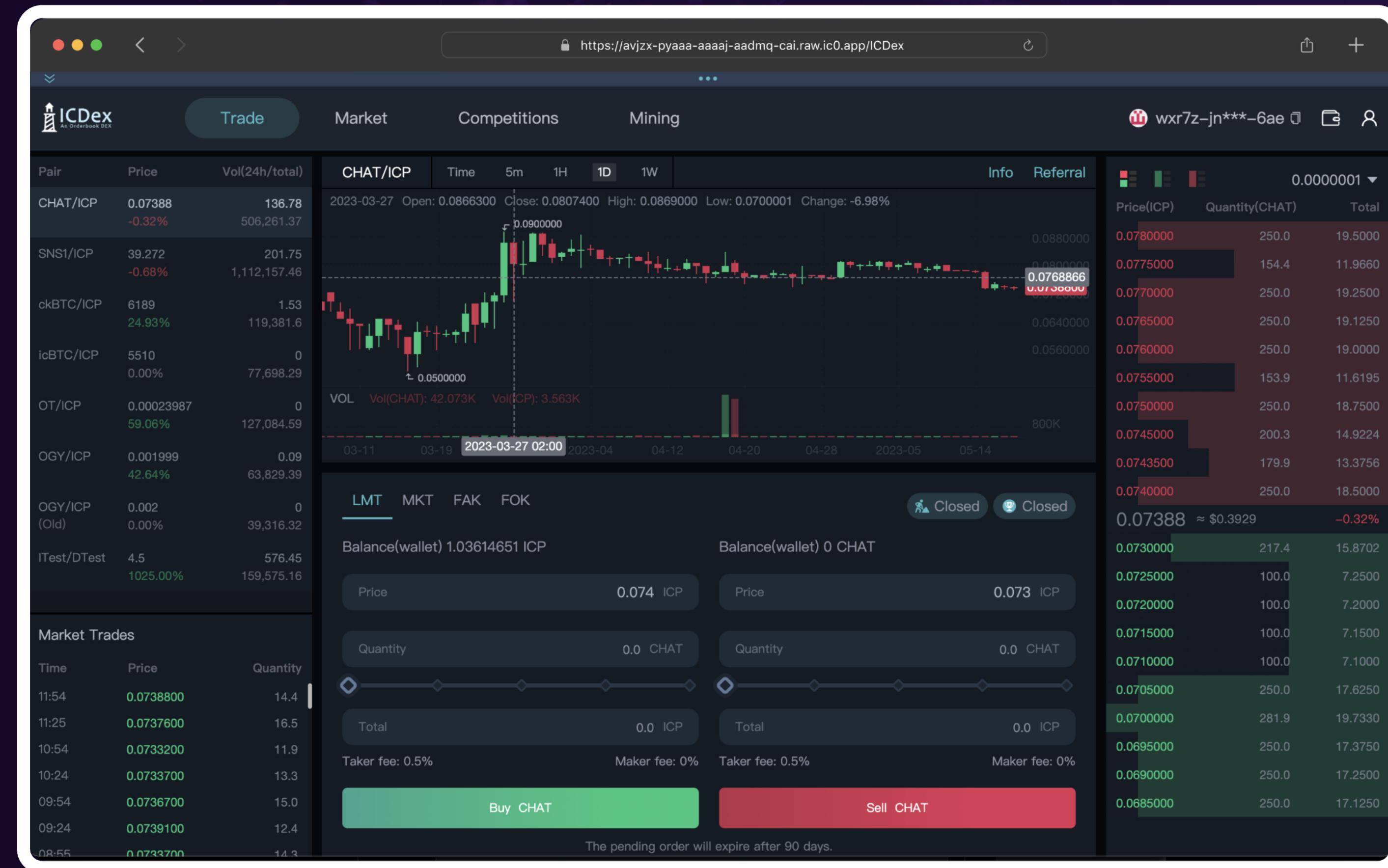


The screenshot shows the OC.app web3 chat interface. At the top, there's a header with a profile picture of 'Jan', a search bar, and a menu icon. To the right, it displays the 'OpenChat' group details: 'PUBLIC' and '15,575 Members'. The main area is a list of messages in a dark-themed interface. The messages are categorized into 'Chats' (10) and 'Threads' (1). The list includes:

- OpenChat: diens: Hi (13:58)
- Distrikt: paribeda: hii (13:44)
- /biz/: Archetypal: image - Yeah, that looks pretty good (13:43)
- NNS Proposals: ProposalsBot: Update subnet 2fq7c to replica ve... (13:37)
- Dfinity: Virtual: "With the looming launch of official BTC sup... (13:28)
- Dfinity Community: Nhatlong: Giphy message (13:24)
- ICP Maximalist Network: Quynhnga: Giphy message (13:05)
- 8年躺平套友群: Landolt: It's quite good! (12:45)
- ICP Metaverse: Ng17Kenny: How'r u? (07:21)
- g54GM: hgguys (10:36)
- JorgeShelton: https://oc.app/#/ho3ya-saaaa-aaaaf-asnlq-cai (10:44)
- Goaliate: 2 days to the most watch sport on TV. (10:46)
- Olisa2: World cup in two days (10:46)
- Hilsat: Hello fam (10:46)
- Goaliate: Life is good when happiness is involved. (10:46)

A 'What's on your mind?' input field is at the bottom right.

# ICDEX.io is an order book exchange that is a smart contract



a grass roots army is  
now building on the  
**Internet Computer**  
join the movement



W E B 2

Medium

reddit

GoDaddy

Spotify

YouTube

Dropbox

Telegram

twitter

KICKSTARTER

Gmail

W E B 3

nuance

DSCVR

ICNS ICNAMING

CANISTORE

DSocial

IC Drive

OpenChat

distrikt

Funded

DMAIL

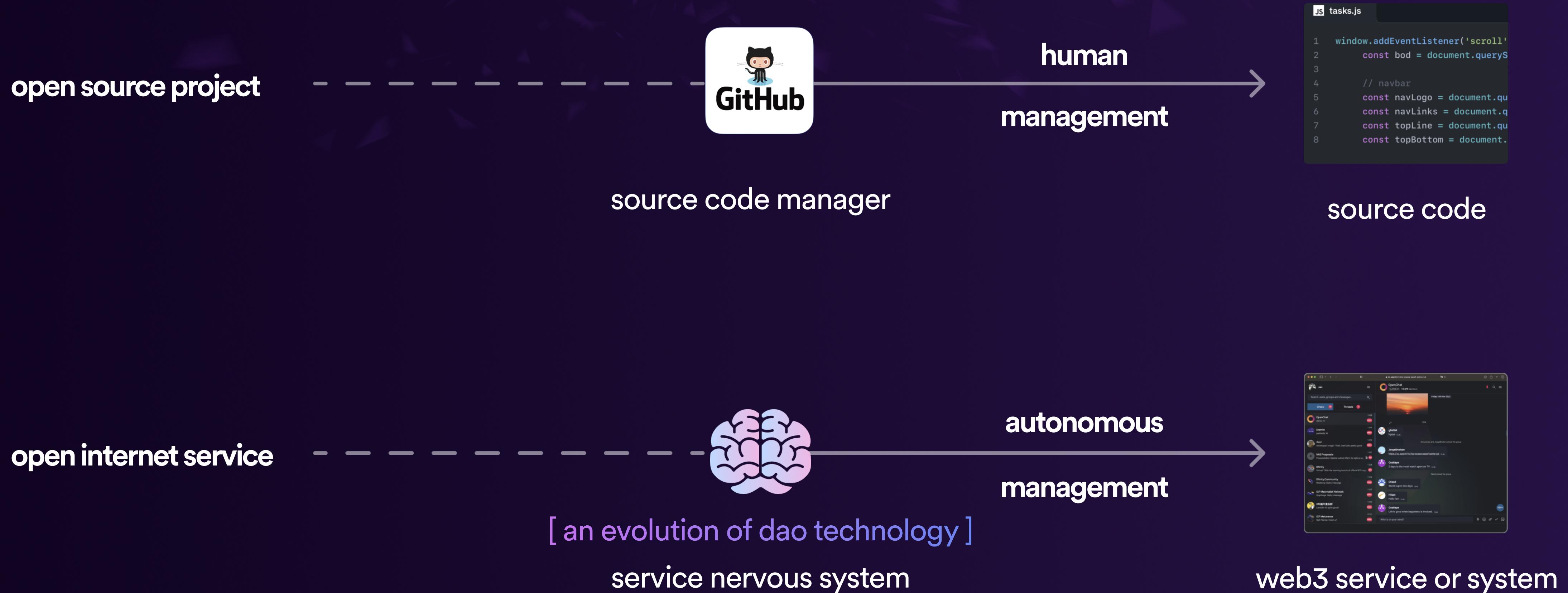


# tamperproof

the web3 services just shown store and process  
cryptocurrency and support large numbers of users  
without need for a firewall or security team.



# open source to open internet service (OIS)



# governance by SNS DAOs is an epoch-defining game changer

The ICRC-2 Fungible Token Standard

Add 3bohy as a Node Operator of Node Provider: nmdd6

Add 3akem as a Node Operator of Node Provider: xo7ih

Update subnet gmq5v to replica version b3b00ba5



Update subnet gmq5v to replica version b3b00ba5

Update subnet gmq5v to replica version b3b00ba5

Add 5xxxr as a Node Operator of Node Provider: ulyfm

Update subnet pzp6e to replica version b3b00ba5

Update subnet x33ed to replica version b3b00ba5

Update subnet mpubz to replica version b3b00ba5

services become autonomous “open internet services”

transparency

changes visible to all OIS community

security

every change applied by DAO (no backdoor)

autonomy

services become unstoppable protocols

ownership

communities can own + govern web3

tokenization

millions of web3 users can be founderized

fundraising

Web3 project DAOs can raise money

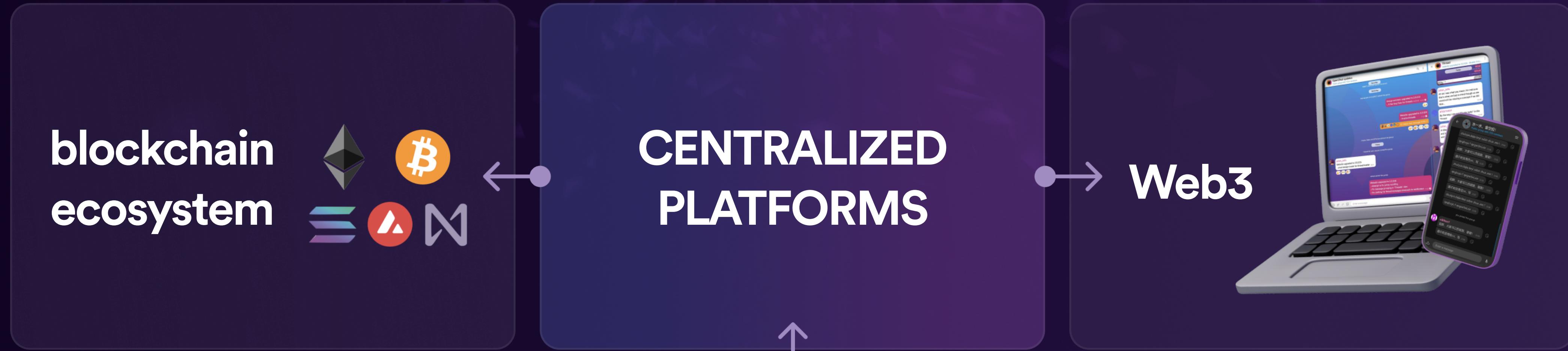
scalable

human support scales with needs

reach

borderless communities

# web3 often faces this key challenge today ...



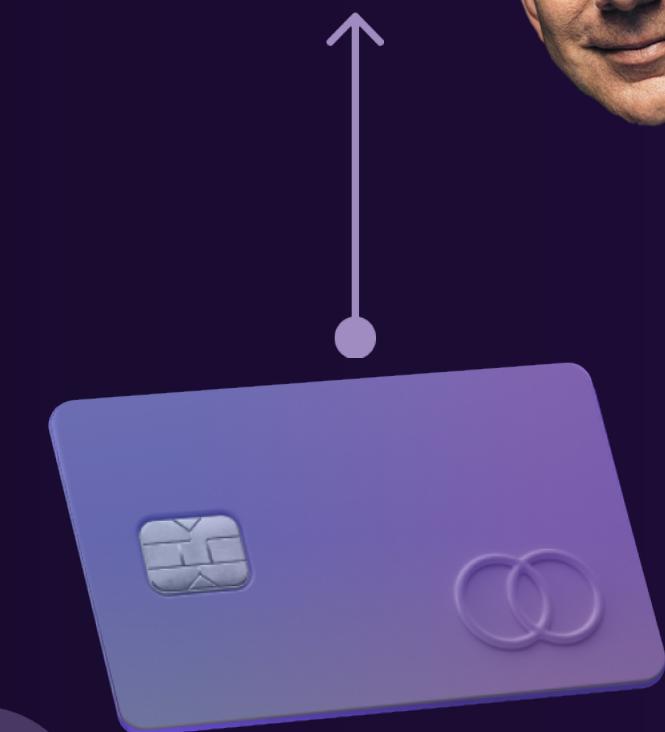
hackers  
censorship  
gatekeepers  
vested interests  
it's not borderless  
must trust developers



# ... trusted intermediaries limit decentralization ...



platform owners are intermediaries  
developers are intermediaries



please place a DAO in control as promised

this web3 service runs “on” blockchain ...

Wait! What?

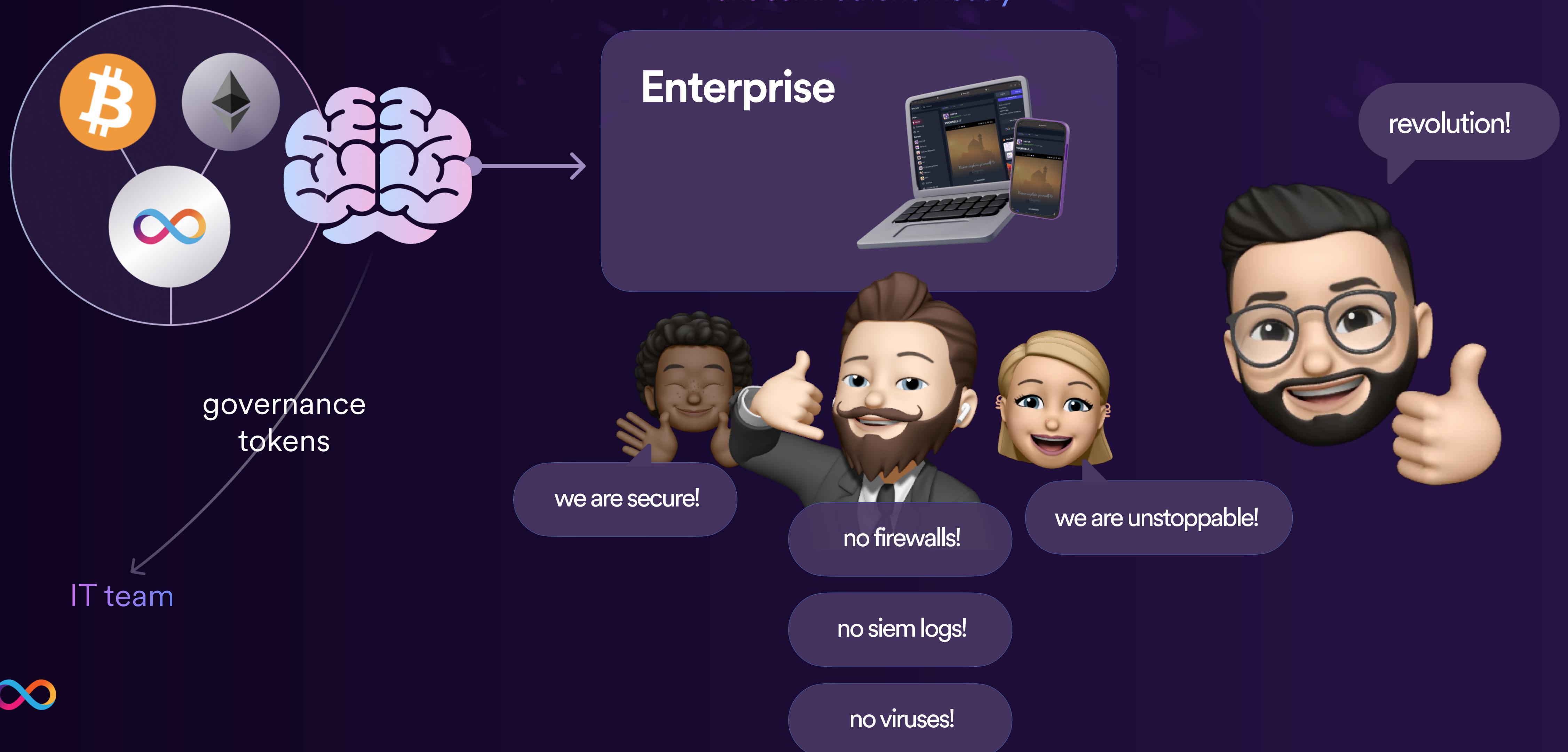
... but depends on my credit card !



# web3 without trusted intermediaries



# enterprise without trusted intermediaries



# mission

help enable a “blockchain singularity” in which most of humanity’s systems and services are rebuilt and reimaged end-to-end on a permissionless World Computer



# ai

by 2030 AI will

**in the future  
ai models  
will analyze  
nearly all our  
business  
data**

increase the productivity of  
knowledge workers

**4X**

boost global productivity  
creating extra value

**\$200**  
trillion

**in the future  
ai models  
will generate  
nearly all our  
metaverse  
content**

**in the future  
ai models  
will be inside  
systems e.g.  
compressing  
media data**



# ai

New ai compute units are coming to the Internet Computer  
to power genuine web3-native ai models

data security    model security    web3 integration

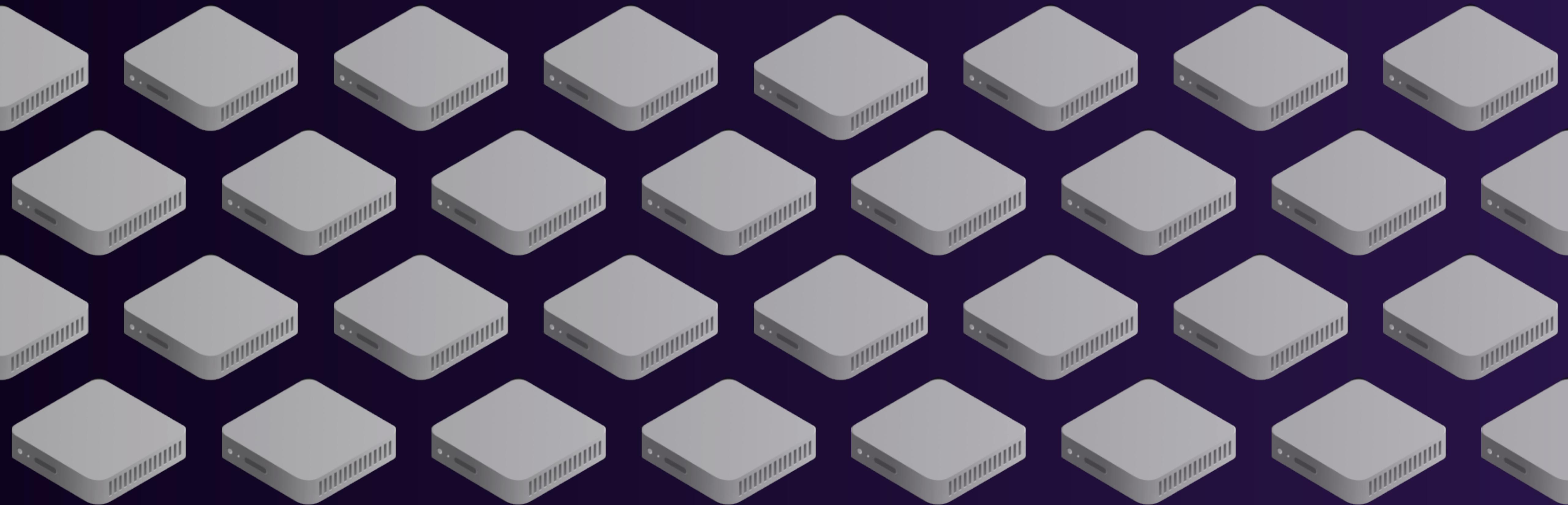


Internet Computer Protocol

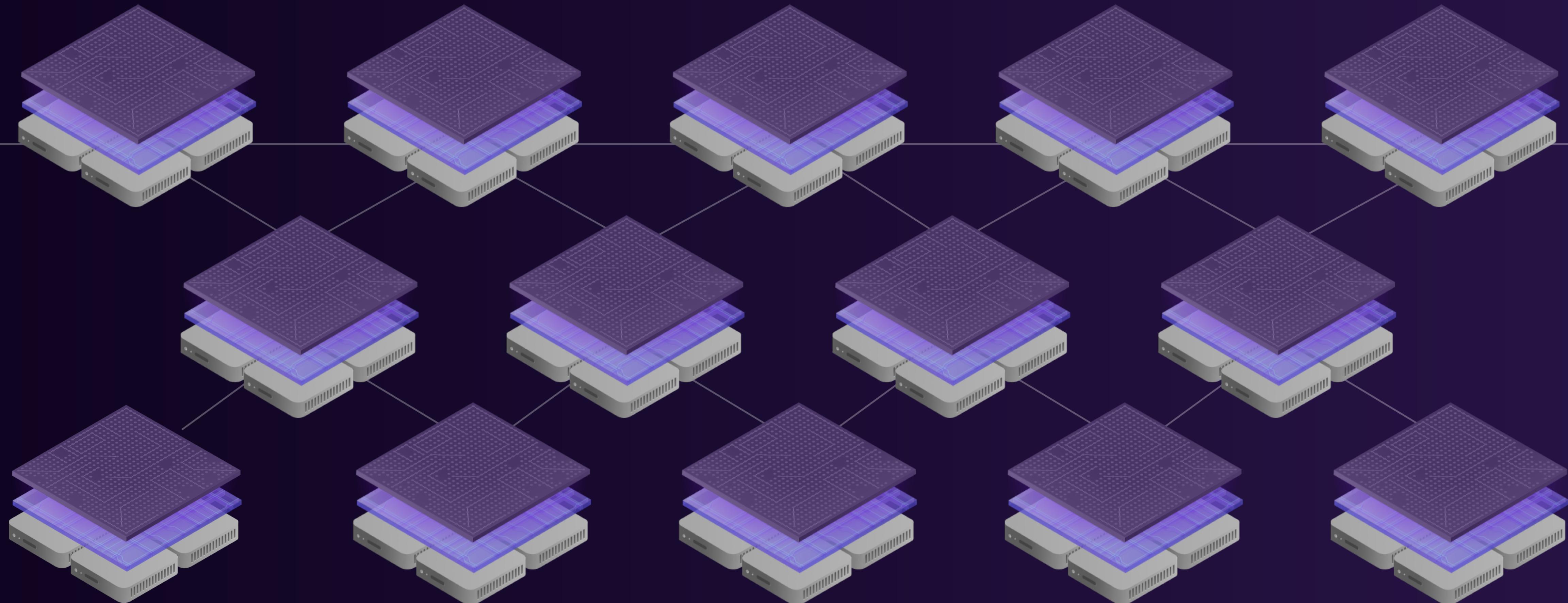
# crash course



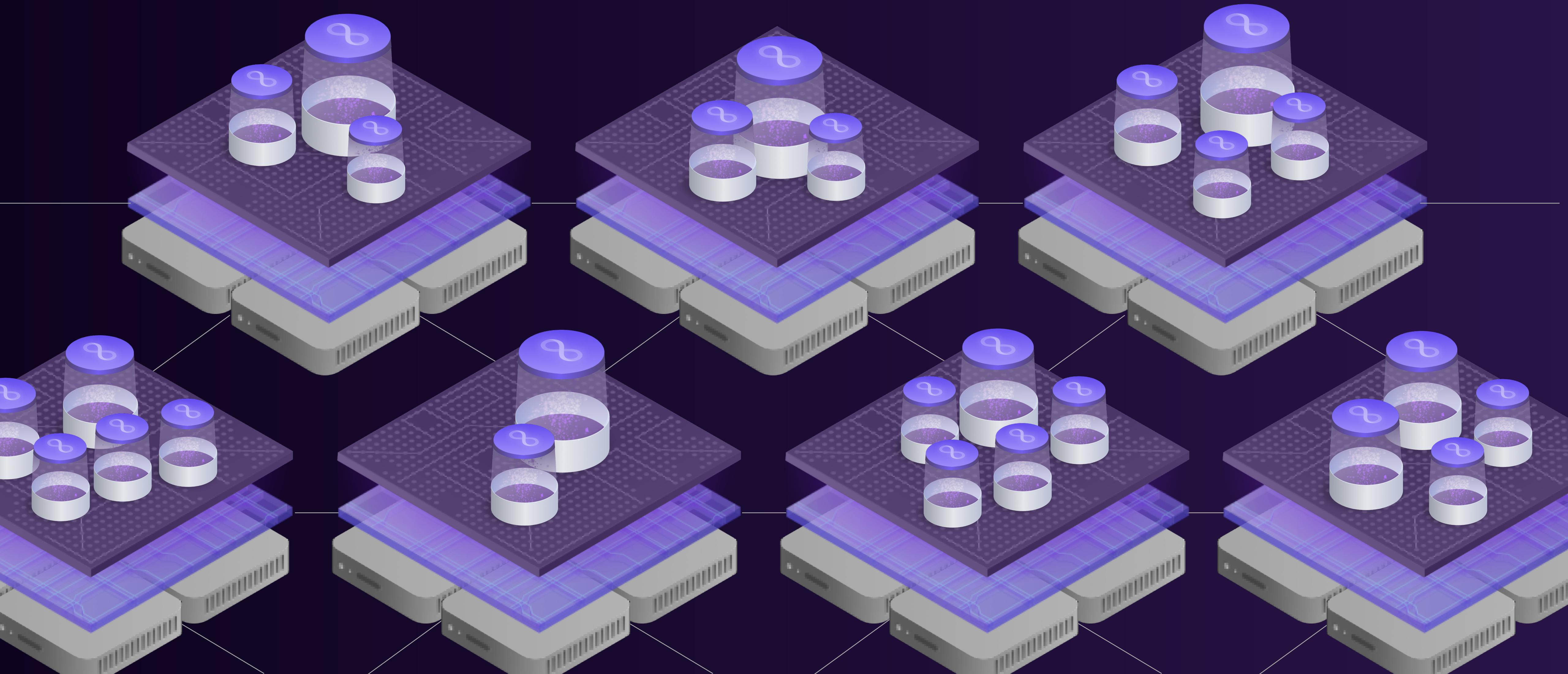
**Internet Computer Protocol** is a crypto protocol that combines  
*node machine devices run by independent node providers*



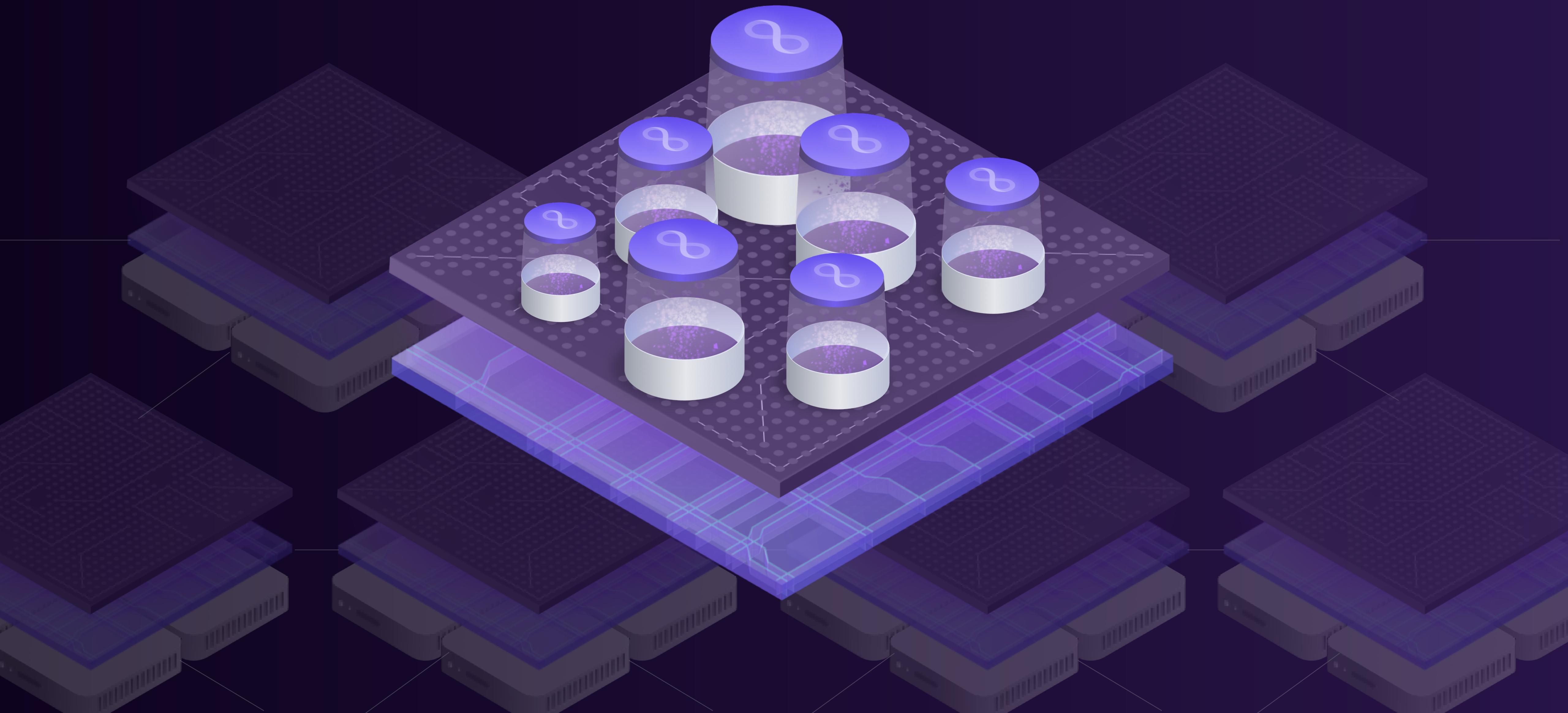
**nodes are combined to create *subnet blockchains* ...**



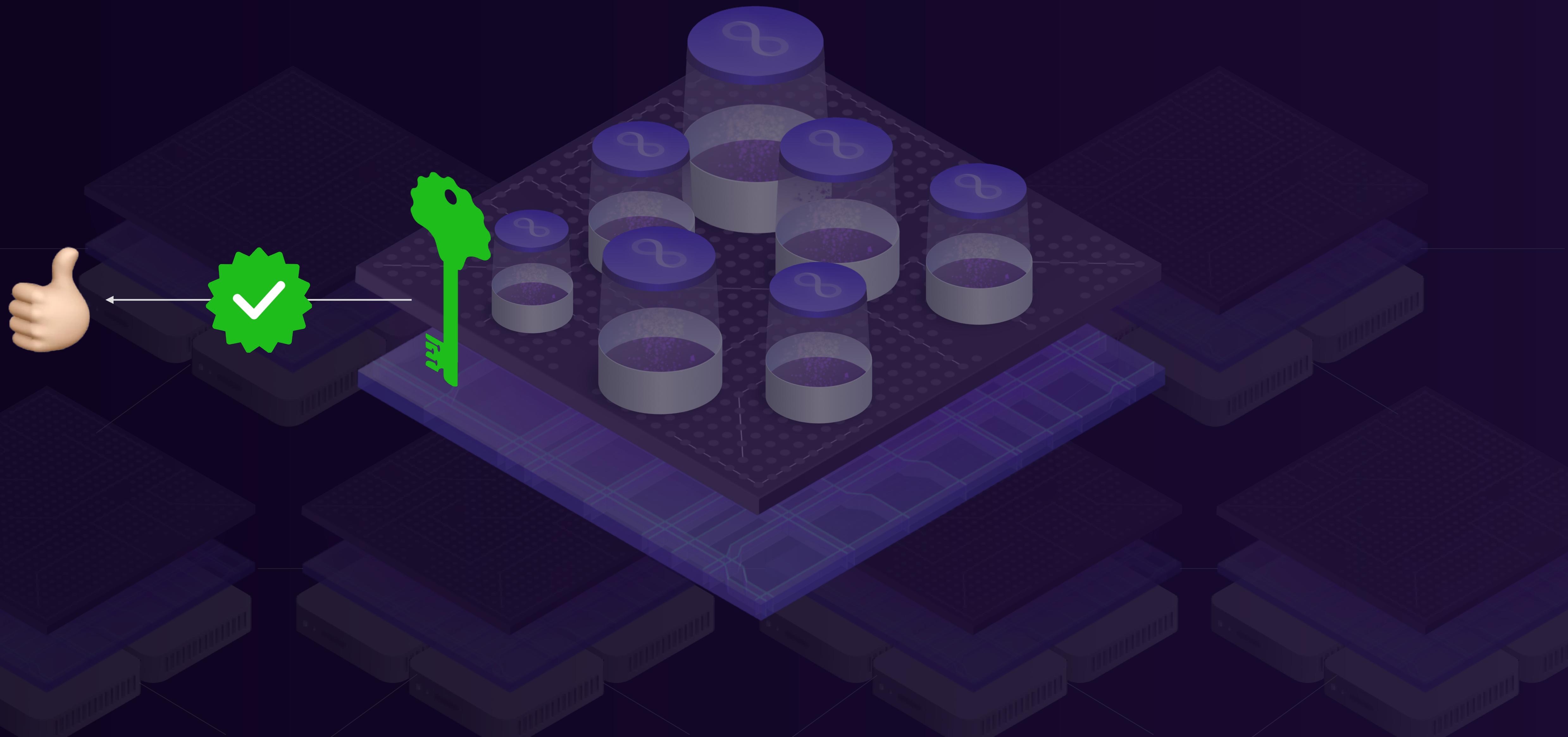
*... subnets replicate and run canister smart contracts ...*



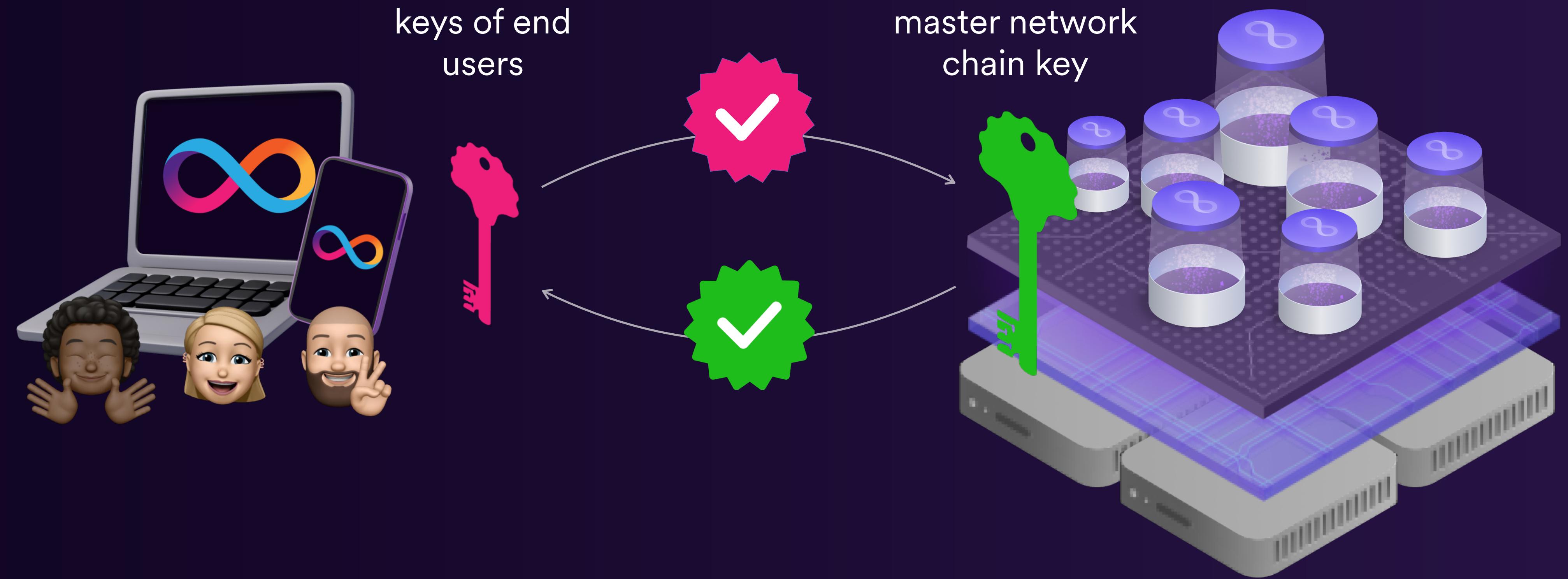
**... and together form a scalable and efficient *virtual computer* ...**



... clients can verify any TX result using ICP's master “chain key” ...



# ... cryptography in web browser runs transparently in background

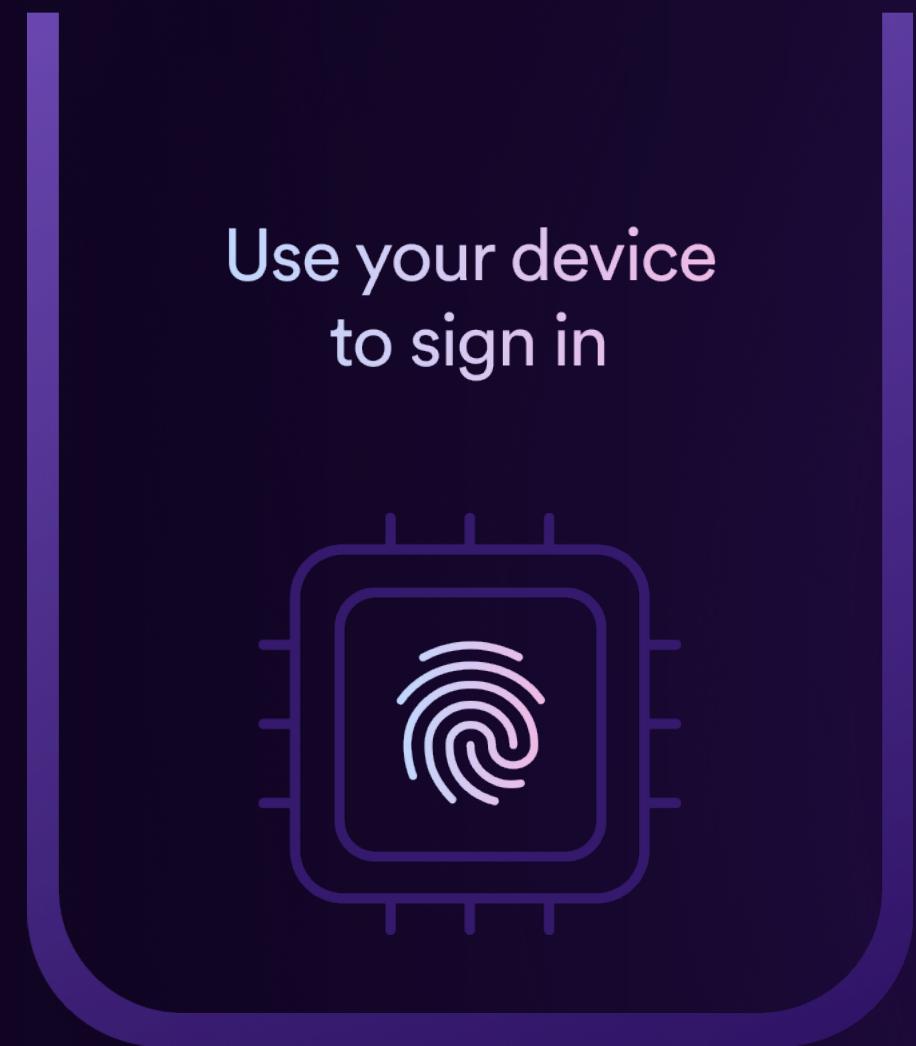


smart contracts pay for execution (“reverse gas”) – users don’t need tokens to interact



# Internet Identity





Use your device  
to sign in

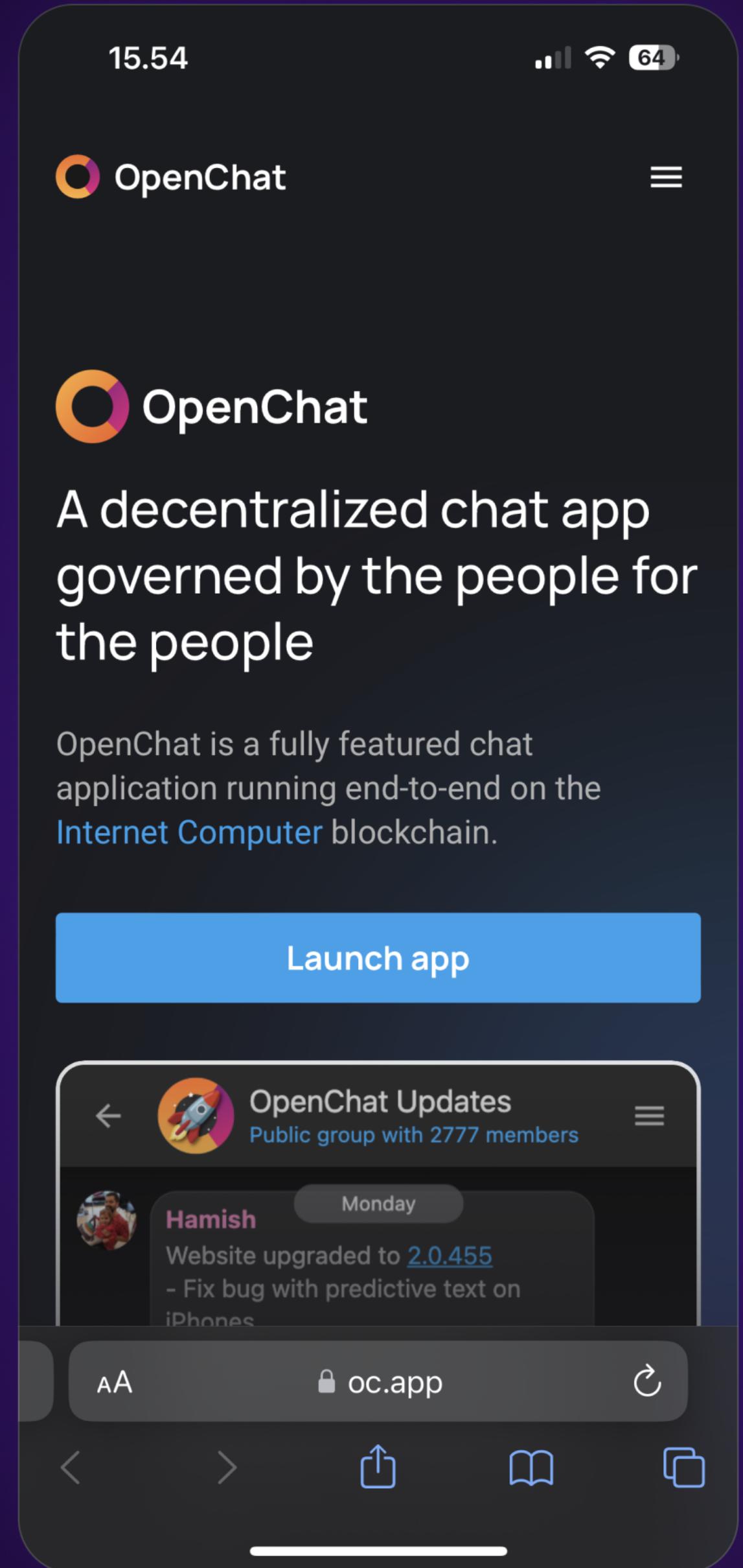


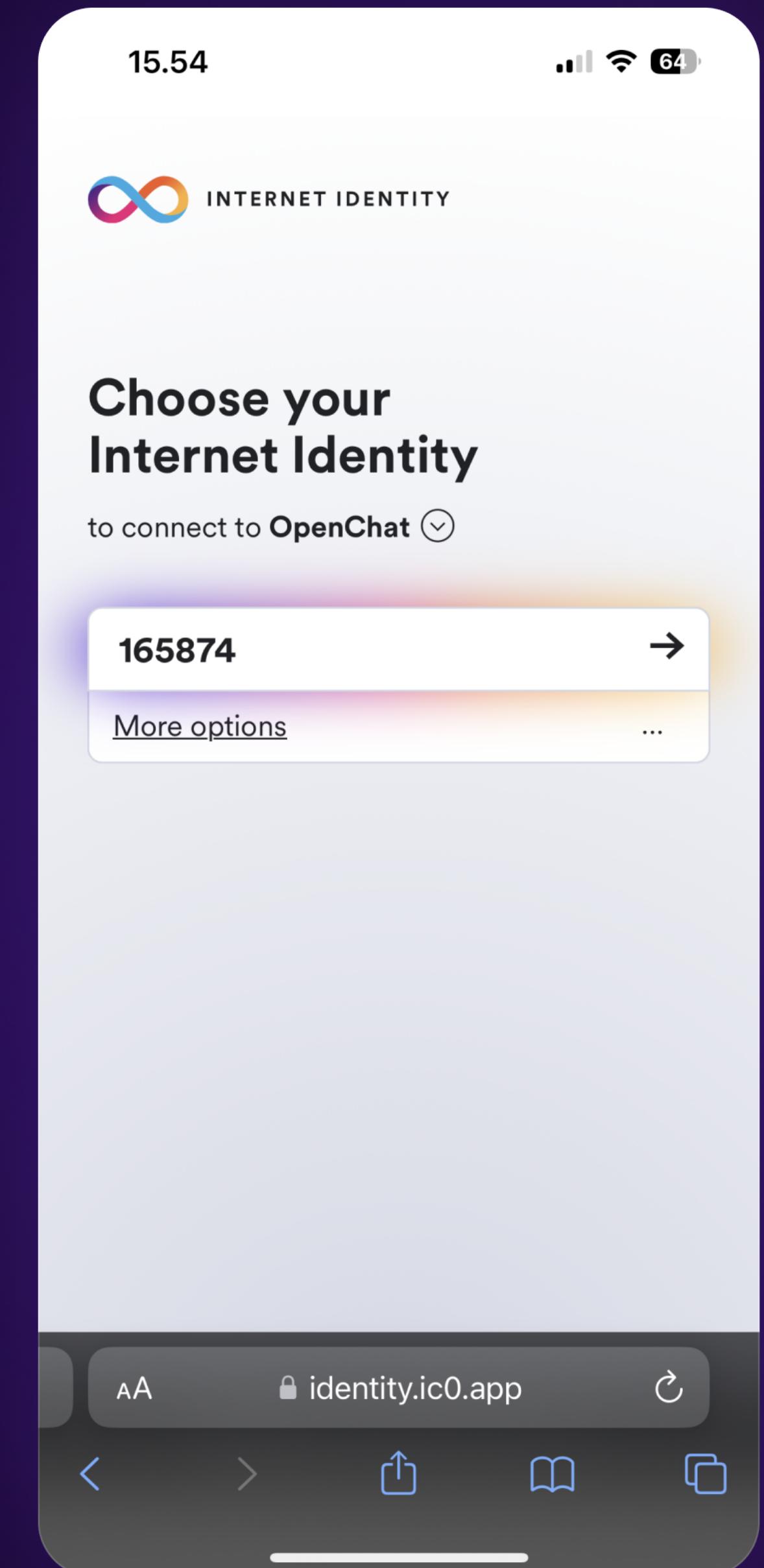
# WebAuthn (+ FIDO)

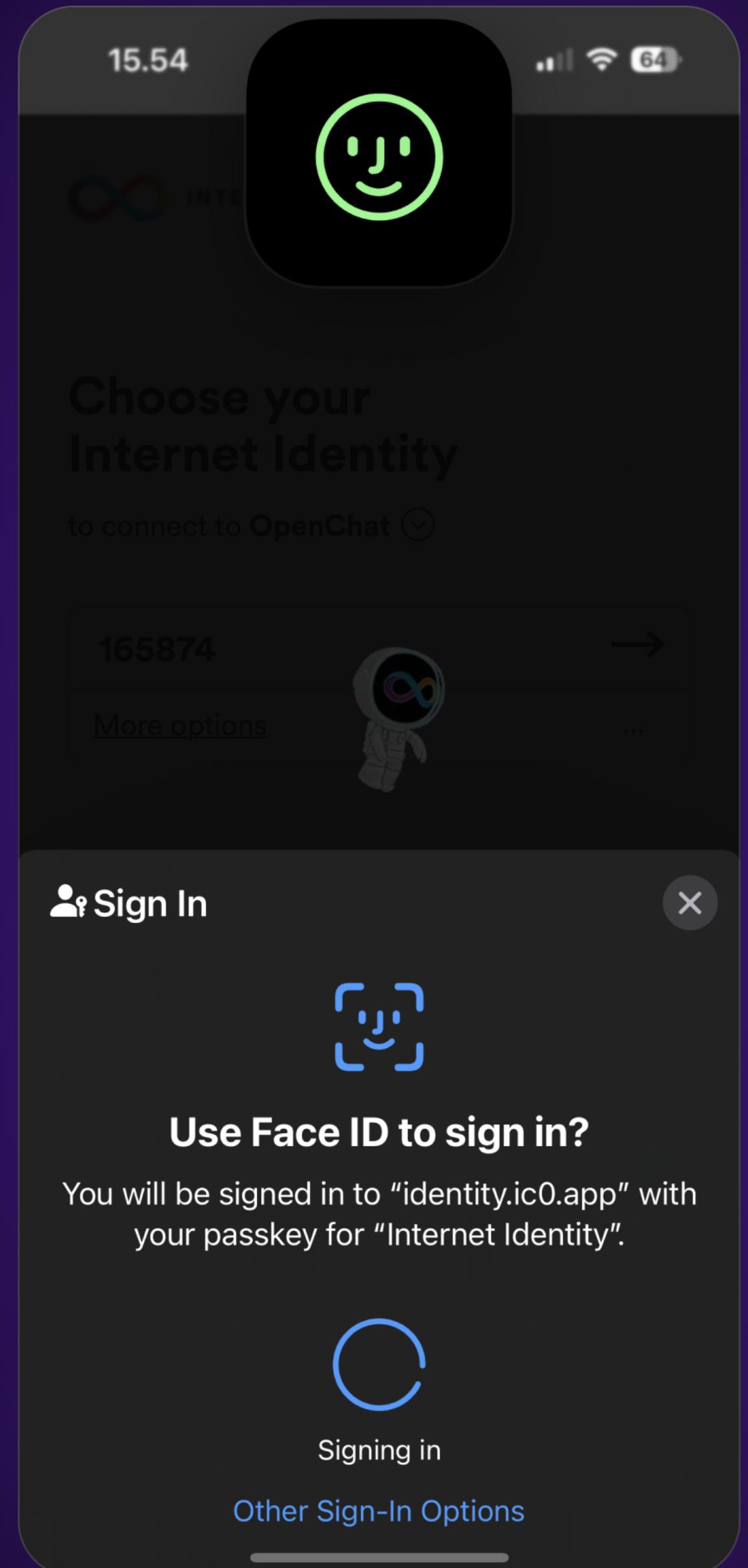


# Internet Computer









 OpenChat Airdrop

PUBLIC 22,060 Members

LigenTex 09:24

how to get airdrop? I have diamond. but  
should I claim it someway?  
Love to hear from you ❤️

7 7

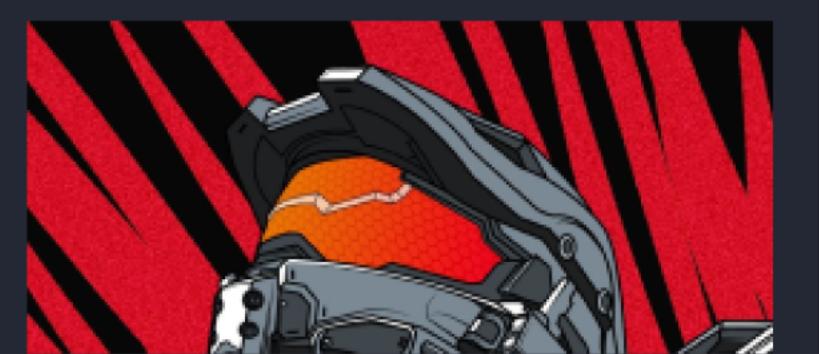
CaseySawyer and Kaywork344 joined the group

abeehafiaz 09:24

LigenTex  
how to get airdrop? I have diamond. but  
should I claim it someway?  
Love to hear from you ❤️

yeah,every diamond user will get some coins  
this time.  
So stay tuned!

BAO 09:24



What's on your mind?

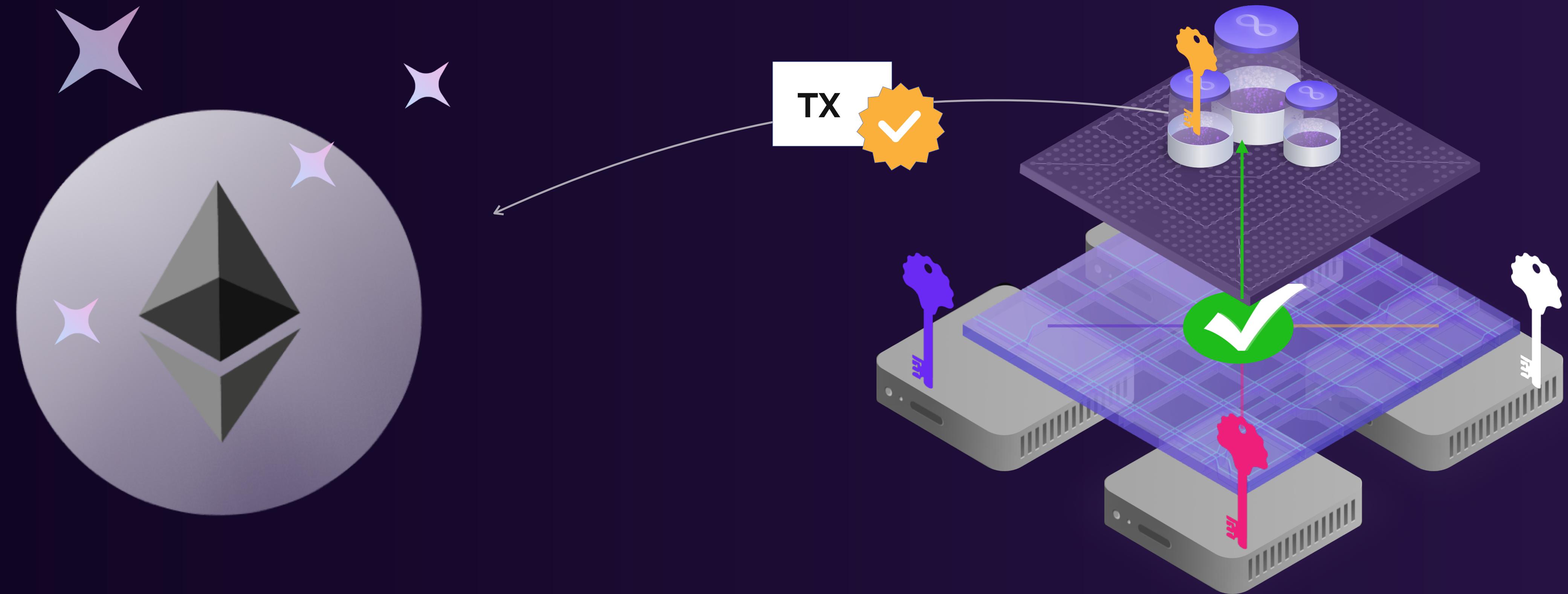




trustless multi-chain



# smart contracts create public keys, and magically sign for them ...



chain key crypto apis provided to smart contracts, which don't need private keys

... supporting a new trustless native multi-chain paradigm



# ckBTC is a bitcoin twin with 1s finality and negligible TX cost

example of recent application of  
chain key crypto capabilities



ckBTC provides an alternative to the Lightning network, supporting  
bitcoin usage in DeFi, social media, games, the metaverse...



internet autonomy



# Internet Computer fully governed by Network Nervous System ...

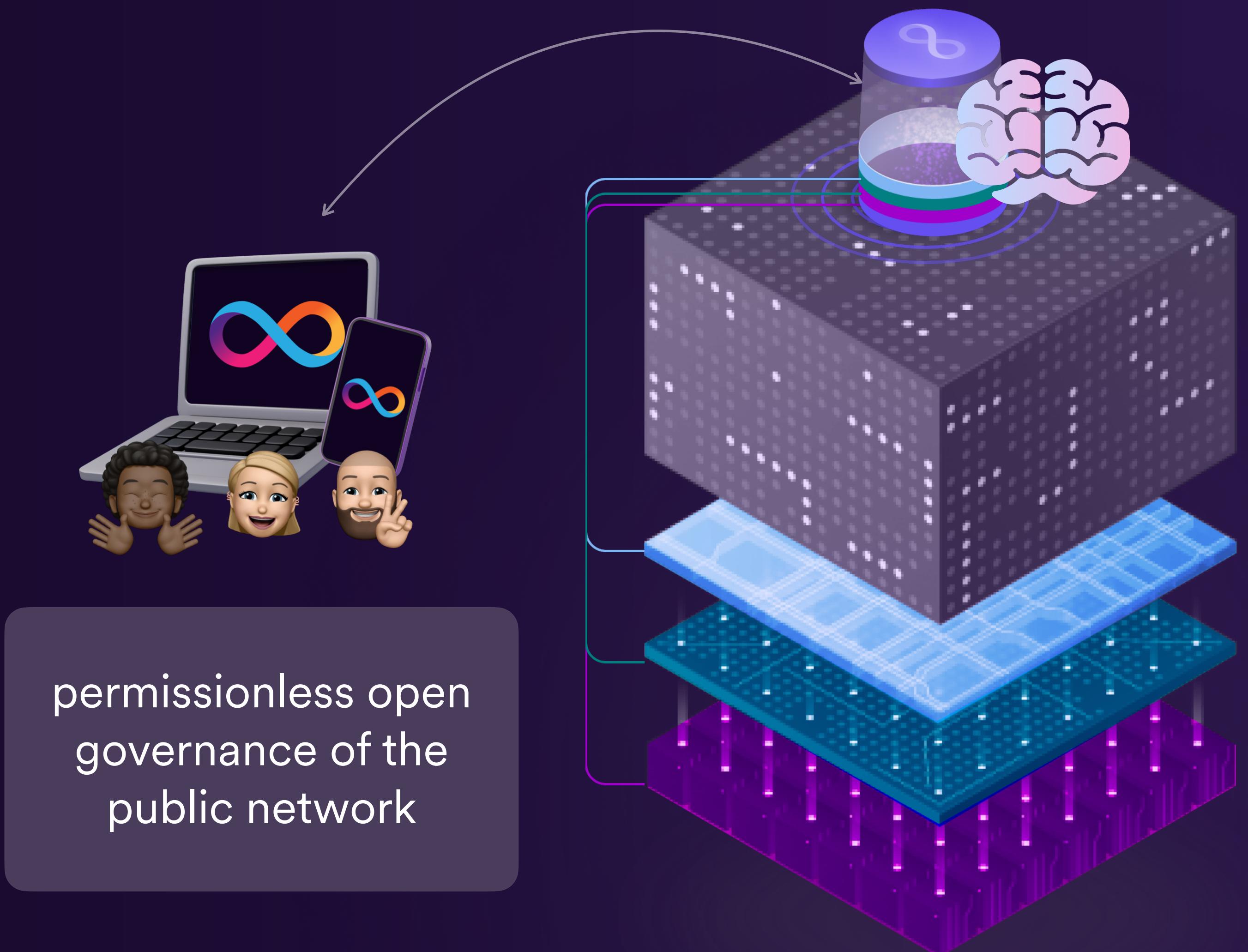
the Network Nervous System (NNS) is a DAO-evolution integrated into the network's protocols. ICP neurons vote on:

- adding new “node provider” profiles
- creating subnets by combining node machines
- upgrading the protocol (forks are unnecessary)
- much, much more...

when submitted proposals are adopted,  
the network executes them automatically.

the network adapts and evolves  
autonomously in real time...

[nns.internetcomputer.org](https://nns.internetcomputer.org)



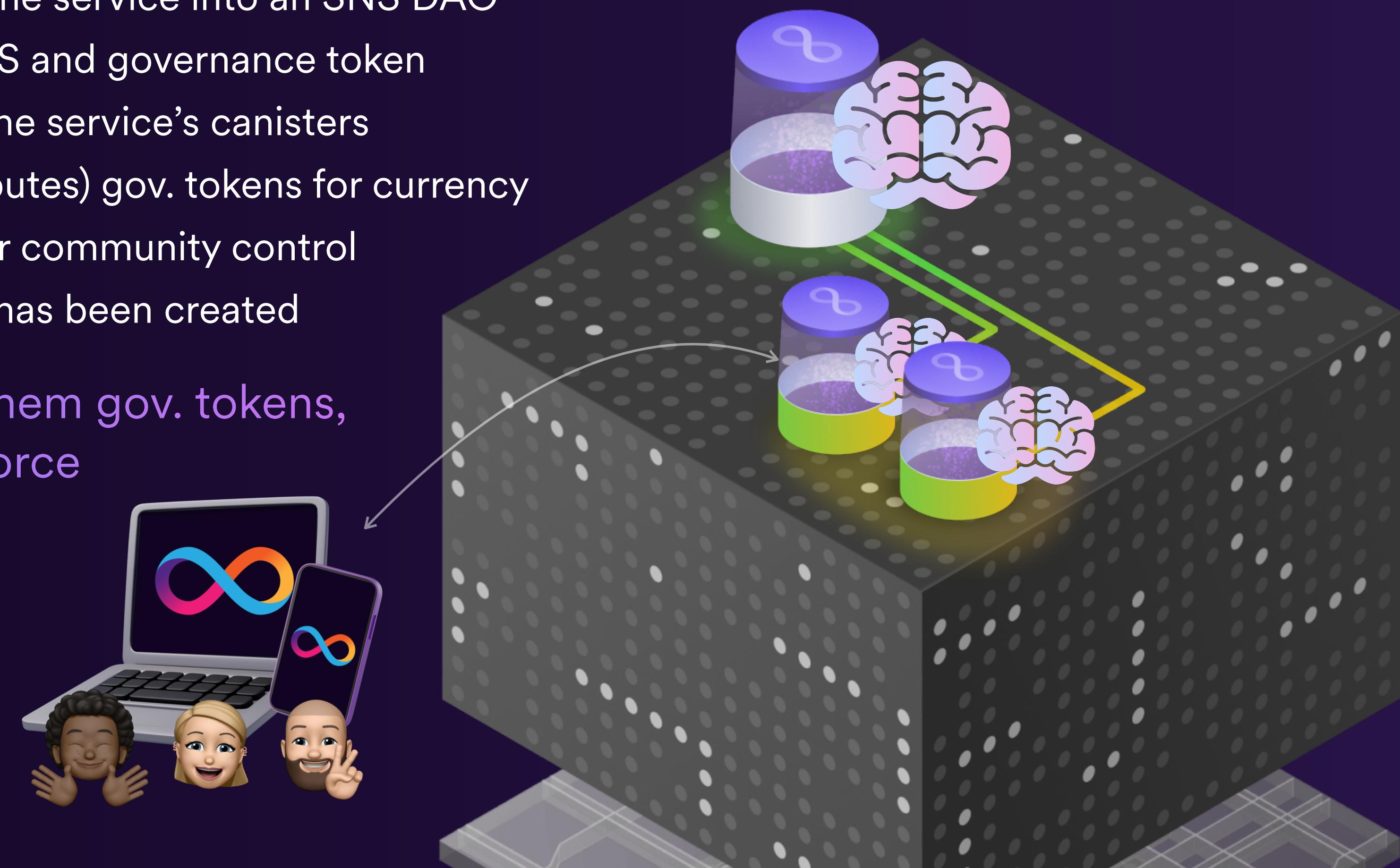
# ... which creates new Service Nervous System (SNS) DAOs

each SNS does for a dapp/service what the NNS does for the network:

1. developers of a service wish to decentralize control...
2. developers propose to the NNS to convert the service into an SNS DAO
3. if proposal adopted, NNS creates a new SNS and governance token
4. the SNS is assigned exclusive control over the service's canisters
5. a “decentralization swap” exchanges (distributes) gov. tokens for currency
6. the currency stays in the SNS treasury under community control
7. an autonomous open internet service (OIS) has been created

service can founderize users by giving them gov. tokens,  
creating a vast industrious virtual workforce

permissionless open governance  
of a running internet service



build on the internet using the  
Internet Computer



decentralize  
everything

<https://internetcomputer.org>

