



**The first human-centric
blockchain**

Executive summary

- Major use cases: Governance, cryptoidentity sign-in, oracles, bot-protected marketing, serverless messenger, decentralized publishing platform
- Idena's Big Dream: 100 mln people running mining nodes by 2025
- Tech roadmap: Sharding, smart contracts, private transactions
- Traction*: 4860 validated identities, >20 000 community members, live since Aug'19

* as of 3 Jan 2021

Idena's Big Dream

100 million people running Idena nodes by 2025

Idena is aimed to become an internet of people designed to revive human rights to freely and privately communicate, vote, share information, and exchange value



“

Idena is the first human-centric blockchain based on Proof-of-Person consensus

**Blockchains today are not truly decentralized:
the ownership and power is concentrated in the
hands of a few privileged actors**

Proof-of-Work mining is an exclusive club

Very few miners

19

mining pools

...control the network

3

pools control 51% of the hashrate

...in one area

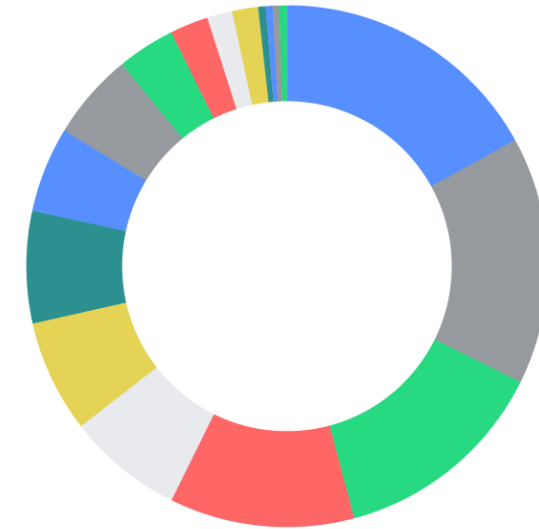
80%

of the hashrate is in China

High costs

\$0.05

breakeven cost per 1 KWh



16.9% ● BTC.com

5.4% ● SlushPool

15.3% ● F2Pool

3.7% ● BitFury

13.5% ● Poolin

2.3% ● BytePool

11.5% ● AntPool

1.6% ● NovaBlock

7.3% ● ViaBTC

1.6% ● AntPool

7% ● Huobi.pool

0.5% ● Bitcoin.com

6.9% ● unknown

0.4% ● BitClub

5.4% ● BTC.TOP

0.4% ● WAYI.CN

Proof-of-Stake doesn't change the game

Initial wealth

70%

ethers are
premined

...in a few hands

53%

owned by 400
wallets

Monopolized
mining

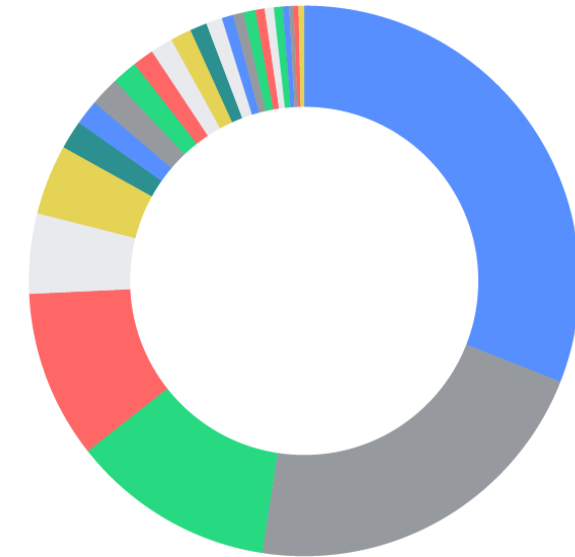
2

pools control 51%
of the hashrate

Miniscule
returns

\$0.3

daily earnings in
PoS with 32 ETH
min stake



30%	Spark Pool	1.6%	UUPool
20.9%	Ethermine	1.5%	xnpool
11.5%	F2Pool 2	1.5%	PandaMiner
9.6%	Nanopool	1.4%	13319d8ba1acf05e
4.8%	zhizhu.top	1.3%	BTC.com Pool
3.8%	MiningPoolHub	1.2%	Huobi Mining Pool

Federated blockchains are centralized

A small number

21

block producing nodes in EOS

...own the network

91%

Stellar XLM held by the founders

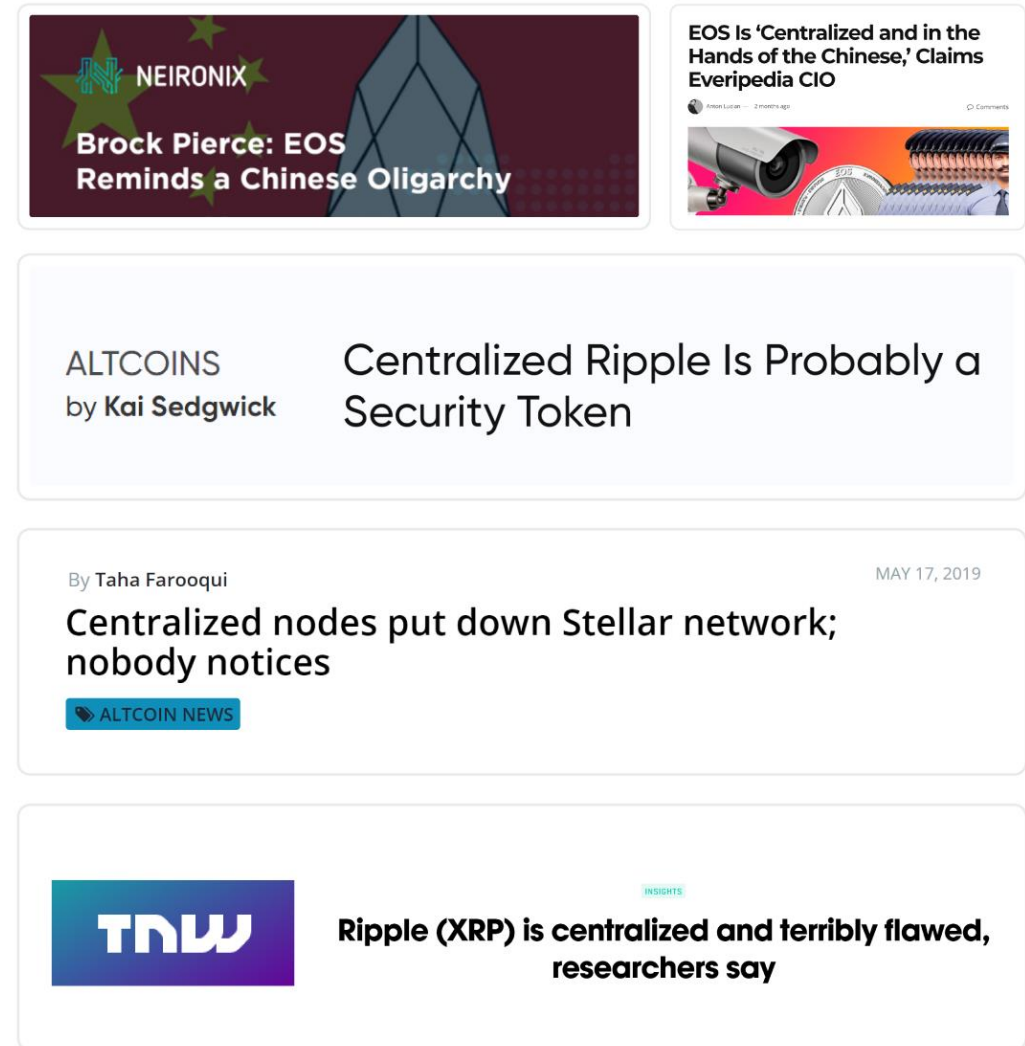
...of beneficiaries

33

validating nodes in Ripple

80%

Ripple XRP held by the founders



Why is mining concentrated?

- Proof-of-Work and Proof-of-Stake are based on capital
- Capital has heavy-tailed **Pareto distribution**
- Larger players enjoy **economy of scale** and adopt anti-competitive practices
- Smaller players vanish
- The rich **get richer**

“

Any system that formalizes ownership and property but does not formalize people, will inherently tend to serve capital and ownership rather than people.

Glen Weyl,
founder of Radical Markets

Human personhood is the most evenly distributed and scarce resource on Earth

We formalize human personhood on the blockchain in the form of **cryptoidentity** - a manifestation of a conscious human proven online without central authorities or revealing personal information

Cryptoidentity is your unique **avatar** in the digital world

“

ARTICLE 1

All human beings are born free and equal in dignity and rights. They are endowed with reason and conscience and should act towards one another in a spirit of brotherhood.

Universal Declaration
of Human Rights

Cryptoidentity is your avatar

- You **can not buy** it, but you can grow it
- It is **unique worldwide**: you can have only one at a time
- It has age and reputation, its **value grows** with the age
- It dies, if you abandon it
- You are free to destroy it and make a new one
- No one can take it from you, if your private key is safely stored



“

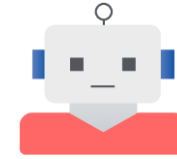
Cryptoidentity has unique fingerprint
but does not refer to its owner: it's
pseudonymous

How to get your cryptoidentity with Idena?

Prove your cryptoidentity with Idena online

1. **Humanness proof:** Candidates must solve a Turing test

2. **Uniqueness proof:** Candidates must appear online at the same time worldwide to complete the test



13:30 UTC

universal validation time

San Francisco, USA	5:30
New York, USA	8:30
London, UK	13:30
Berlin, Germany	14:30
Moscow, Russia	16:30
Beijing, China	21:30
Tokyo, Japan	22:30
Sydney, Australia	0:30

Solving a Turing test

A **flip** is an AI-resistant CAPTCHA created by a person

Common sense is required to identify a **meaningful story** from two alternative sequences of images

Meaningful
story



"The vase was knocked over by the cat, so the puddle had to be cleaned with a sponge."

Meaningless
story



This sequence conveys no discernible storyline.

Do flips work?

People are
good

12

seconds to solve

...at solving
flips

95%

average accuracy

AI can't
replicate

79%

highest AI score in
WinoGrande test

...common
sense

67%

highest AI score in
Visual Common
Sense test

The biggest problem in AI?
Machines have no common sense.



Idea Flip Challenge: **\$55,000** prize
cascade for AI teams to reach **71-80%**
accuracy

Why is cryptoidentity important?

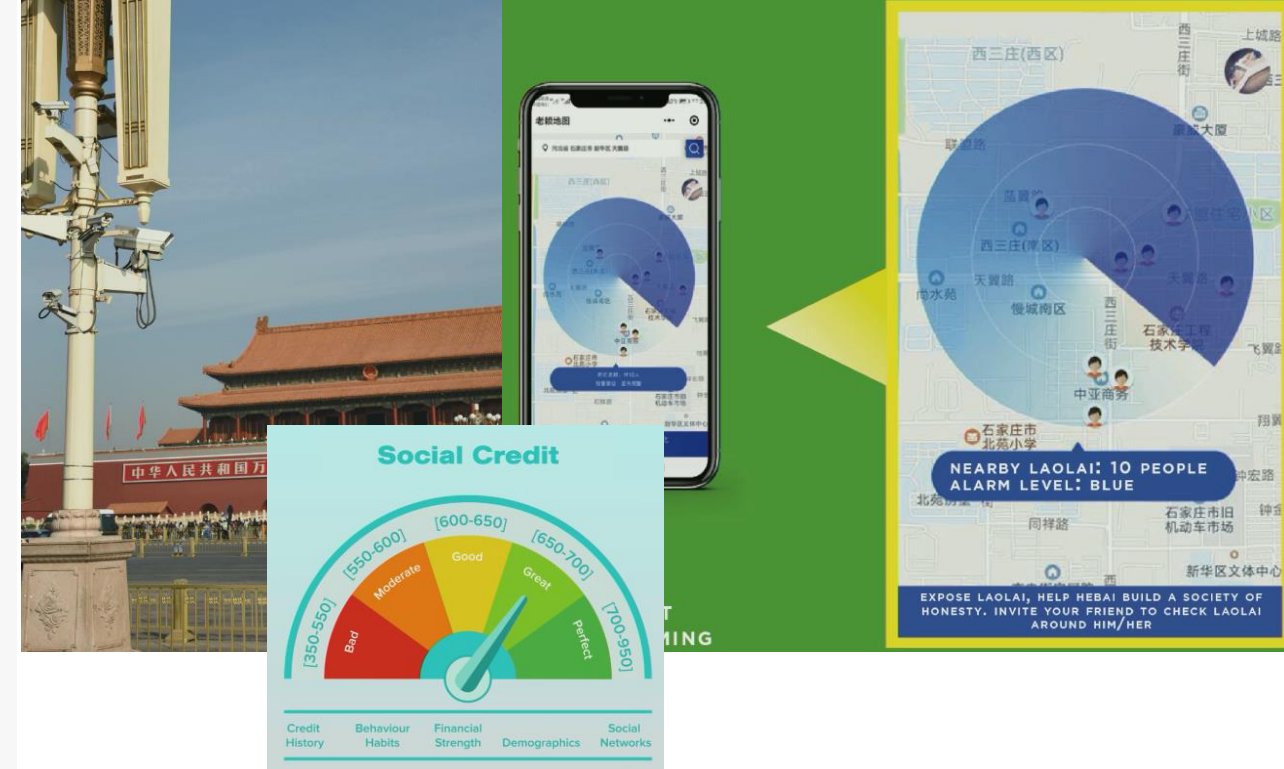
WeChat

Used every day by 1 bln people.

Shopping, messaging friends,
planning all in one app.

Fast and convenient.

When you trade your privacy and
freedom for your convenience
you feed your data to the growing
Big Brother



“

WeChat warns you that there are people with
a low social score around you so you may
lose your own social credit if you interact
with them

WeChat-isation is the way to the George Orwell's world

Trends and technology:

- Social engineering technology
- Facial recognition
- Street level surveillance gear
- Big data processing
- Privacy becomes illegal
- Cash transactions limited
- Targeted propaganda



“

Countries in red are using or purchasing Chinese surveillance technology

People are fragmented and disjointed across the globe

Internet was born in 1983 but since then it did not unite people around a single subject.

Various languages, countries, mindsets and religions, borders and governments make us disconnected despite the richness of communication channels.



“

Divide et impera (divide and conquer)
Philip II of Macedon

Gaining and maintaining power by breaking up larger concentrations of power into pieces that individually have less power than the one implementing the strategy

The '3.5% rule': small minority can change the world

No government can withstand a challenge of 3.5% of its population without either accommodating the movement or (in extreme cases) disintegrating.

Think of what 3.5% of the world population can change



“

Nonviolent protests are twice as likely to succeed as armed conflicts – and those engaging a threshold of 3.5% of the population have never failed to bring about change

Missing elements to unite people

There is no platform in the internet where every voice could be heard (counted)

1. Open: anyone can join
2. Decentralized and private: no trusted parties in the middle
3. Sybil-protected: the system cannot be spoofed/gamed
4. Funded: people are empowered to create the common good



“

We are all citizens of Google and Apple
We are happier, fitter, more productive, but...
dependent, monetized, surveilled

What does cryptoidentity allow for?

Pseudonymity: No KYC!



Cryptoidentity is associated with a person who owns the address

No reference to personally identifiable information



Cryptoidentity is owned directly with a private key

No trusted third party is needed for safekeeping



Cryptoidentity is globally validated by human intelligence

No government ID is required to authenticate

Global consensus: **No censorship!**



Cryptoidentity validation
is supported by global
network consensus

All nodes agree about
the same registry of
valid persons: the single
source of truth



There is no central
issuer of
cryptoidentity

It cannot be banned,
restricted or censored.
It's unstoppable!



Anyone has a right
for a cryptoidentity

It does not matter
which country they
live in or what
citizenship they have

Democratic mining: **No elite!**



No power concentration

The Idena network is truly decentralized, since every node is owned by a single person



Easy access to mining

No expensive mining hardware or money to stake are needed, but rather an average laptop with an Internet connection



Equal voting rights

Every validated participant has an equal voting power in the network to produce blocks and validate transactions

Use cases

- Voting and governance
- Public good funding
- Serverless messenger
- Decentralized publishing platform
- Bot-protected marketing
- Decentralized oracles
- Cryptoidentity sign-in
- Decentralized applications
- Global UBI

**Sample use case:
Bot-protected marketing**

Fake Internet

Bots account for 56% of overall website traffic

Facebook took down 2.2 billion fake accounts in Q1 2019



“

How much of the Internet is fake?
According to some researchers, a
healthy majority of it is bots

Ad fraud

Ad fraud takes \$1 for every \$3 spent on digital ads

Advertiser losses to reach \$42 billion of ad spend in 2019 to fraudulent activities committed via online, mobile and in-app advertising

Total advertiser loss to fraud will rise to \$100 billion by 2023



“

Fake people with fake cookies and fake social-media accounts, fake-moving their fake cursors, fake-clicking on fake websites

Fake news

3,841 Twitter bot accounts originating in Russia targeted the 2016 U.S. presidential election

It costs only \$150 to promote hashtag on Twitter by bots

'Russian trolls' promoted California independence



By BBC Trending
In-depth stories on social media

🕒 4 November 2017

[f](#) [💬](#) [🐦](#) [✉](#) [Share](#)



Social media accounts with ties to Russia pushed a huge Twitter trend in favour of an independent California on US election night 2016, BBC Trending has learned. The campaign was one of at least two popular online independence drives with links to the Kremlin.

**Cryptoidentity is a solution to
online fakes**

Strong bot protection: **No fake accounts!**



One person cannot have multiple accounts, because the validation session starts at the same time globally



Account cannot be bought due to cryptoeconomic incentives introduced by the protocol



100% protection from automated generation of fake accounts by bots

What makes value of the Idena coin (iDNA)?

iDNA value: Network effect

Advertising is the major source of revenue for Internet giants like Google, Facebook, Twitter

Fake impressions and clicks is the key risk for advertisers causing the loss of budgets

Globally verified unique users is what makes Idena network valuable

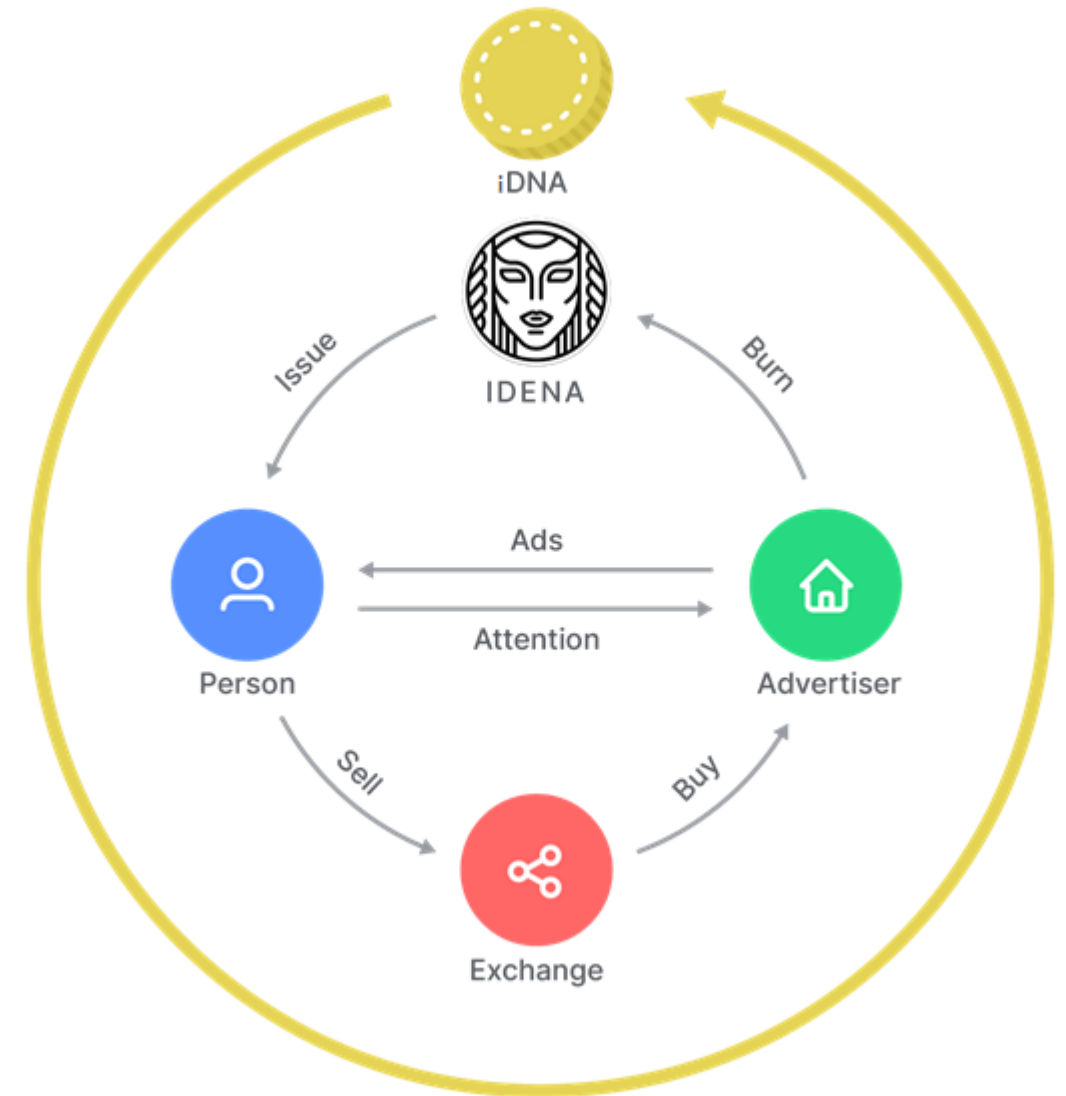


Advertising revenue sharing

Advertisers have to **burn coins** to reach users' attention in an onchain real time auction

Newly minted iDNA coins are equally **distributed over the network** incentivizing people to keep their cryptoidentity

Advertisers face shortage of coins and have to buy them on the exchange



Closed tokenomics fuels demand for the Idena coin

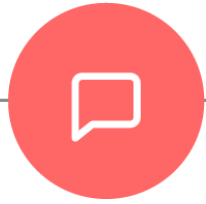
Roadmap and vision

Roadmap



Mobile app

Direct access to the Idena node on a mobile phone



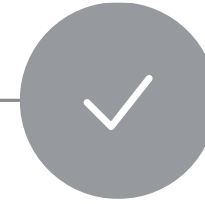
Messenger

Serverless messenger with end-to-end encryption



Marketing

Onchain auction for advertisers to compete for ad spaces



Sharding

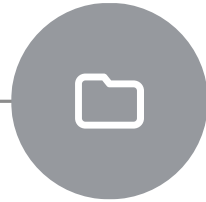
Running multiple shards in parallel to securely scale throughput

Roadmap (continued)



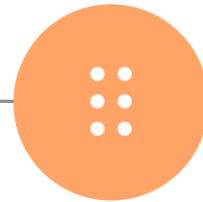
Publishing platform

Decentralized publishing platform with consensus-based editorial



Light smart contracts

Stateless smart contracts with dynamic state loading



Personal privacy

Non-traceable transactions based on micro-mixers



DEX with non-custodial gateways

Onchain decentralized exchange supported by micro gateways



Serverless messenger

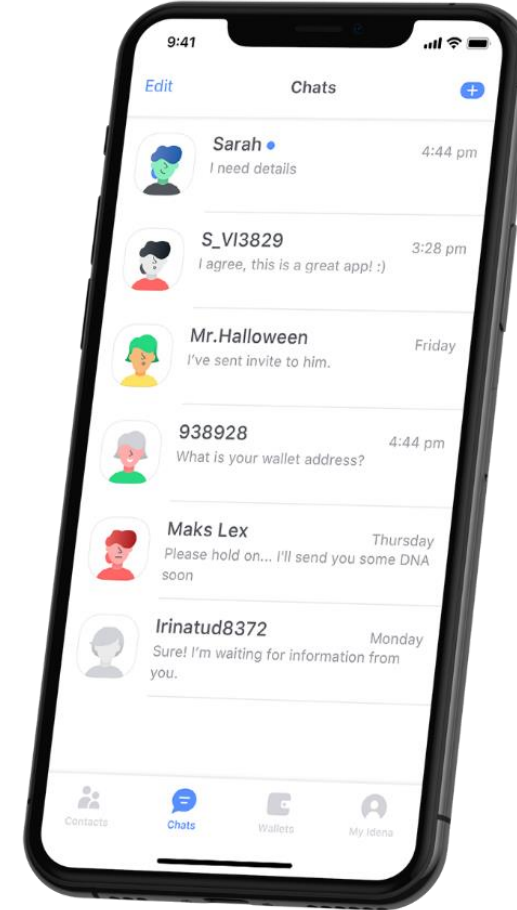
Idena as a delivery network for
end-to-end encrypted messages:
no server in the middle

Untraceable communications

Guaranteed delivery

Group public chats

Users can pay fees with mined
coins



Idena mobile messenger



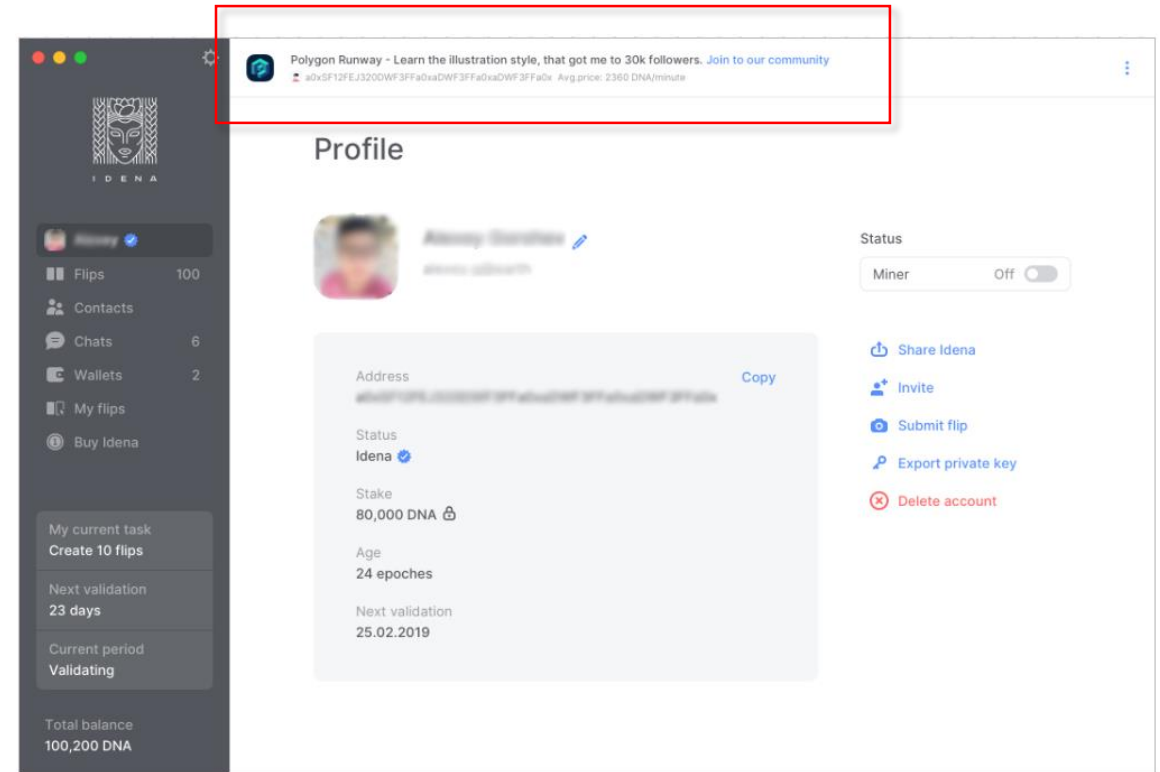
Onchain marketing

Advertisers:

1. Specify a target audience among verified Idena users
2. Burn coins to get attention
3. Compete with others in onchain real time auction

Users:

1. Read relevant ads with the highest burn rate (self targeting)
2. No personal data is shared



Ads displayed inside the Idena app

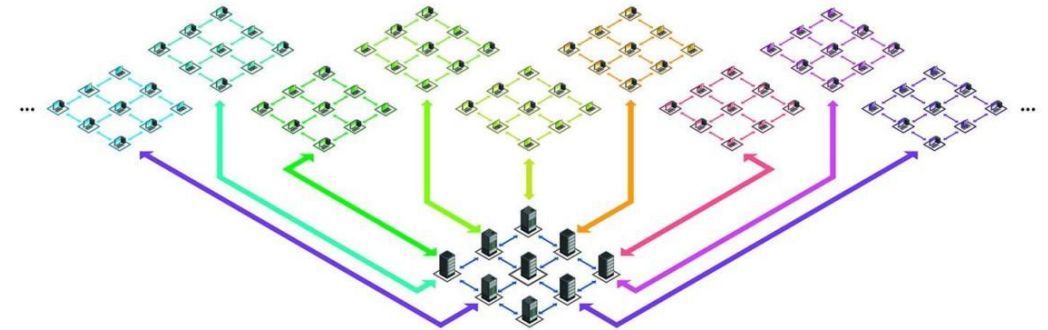


Sharding

Fragmenting the network into shards allows the network to function **as the sum of its parts**

Security: One person cannot validate multiple shards

Scalability: Each shard is running its own shard-chain in parallel



“

The more people are validated
the more shards are allocated
the higher the total throughput

Vision 2025

- 100 million persons validated by 2025
- Validation session every month
- Each session is a global event to celebrate basic human rights, equality, and freedom
- People all over the world are paid a universal basic income in iDNA coins

Traction

Idena now

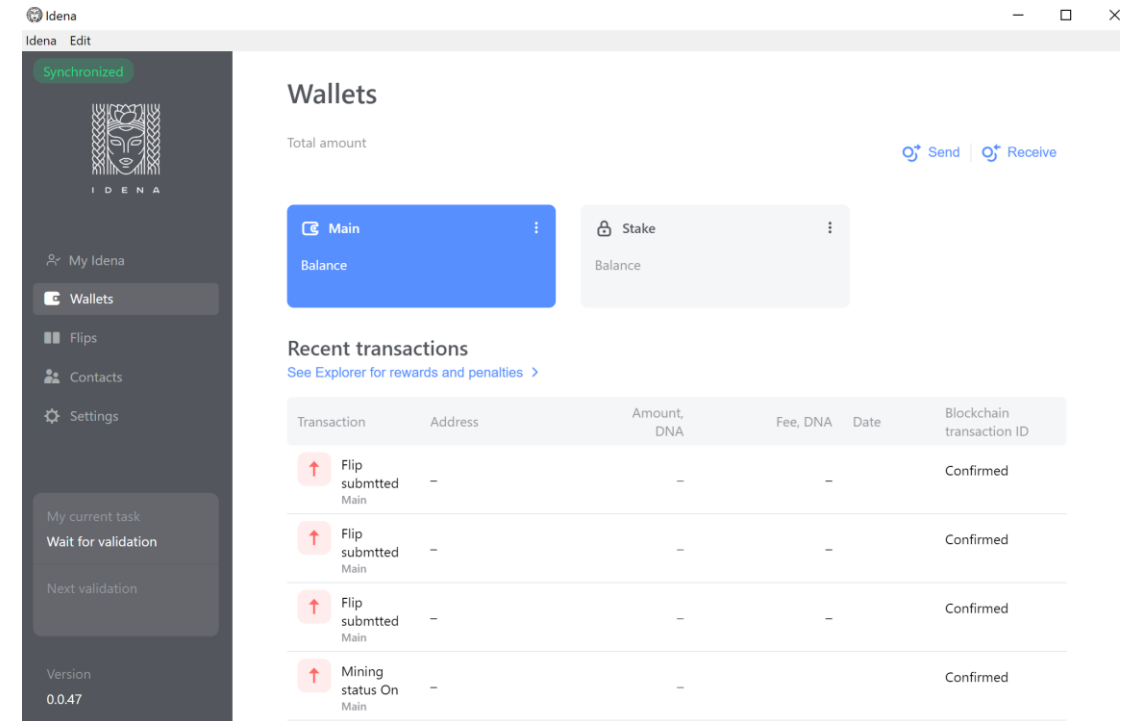
Idena node available for:

- macOS
- Windows
- Linux

Idena app available for:

- macOS
- Windows
- Linux

Idena web client



Idena app

<https://iden.io/?view=download>

Idena now

(as of 3 Jan 2021)

Validated identities	4 860
Flips created and solved	>240 000
Average human accuracy	95%
Community members	>20 000

DNA supply

(as of 3 Jan 2021)

Coins minted	63 million
Coins staked	1.972 million
Coins burnt	2.2 million
Zero wallet fund	255K

Idena team

Idena is built by a diverse group of highly professional engineers and computer scientists with extensive experience in launching large-scale [blockchain infrastructure](#) projects

The project is fully open source: You can check the quality of the code and activity of the team members on the github page:

<https://github.com/idenanetwork>

The Idena economy

iDNA coin minting

iDNA is a native coin of the Idena blockchain

51,840 iDNA

Minting cap per day

25,920 iDNA

Mining reward per day

25,920 iDNA

Validation reward per day



- 50% ● Block rewards
- 16% ● Invitation rewards
- 16% ● Flip rewards
- 12% ● Validation rewards
- 5% ● Foundation wallet
- 1% ● Zero wallet

Mining reward

- Mining reward cap per day: 25,920 iDNA
- Minimum block time: 20 sec
- Maximum number of blocks per minute: 3
- Maximum number of blocks per day: 4,320
- Block proposer reward (per block): 1 iDNA
- Block committee reward (per block): 5 iDNA

Validation reward

- Validation reward cap per day: 25,920 iDNA
- Validation rewards: 24%
- Flip rewards: 32%
- Valid invitation rewards: 32%
- Idena foundation payouts: 10%
- Zero wallet fund: 2%

Supply utilization

- Minted coins frozen in stakes: 20%
- Minted coins frozen in a zero wallet: 1%
- Transaction fees burnt: 90%
- Stake of non-validated identities burnt: 100%
- Mining penalties burnt: 100%
- Ad payments burnt: 100%

Premint structure

- Total premint size: 36,000,000 iDNA
- Core team allocation: 17,250,000 iDNA
- Early investors allocation: 7,065,000 iDNA
- Ambassadors fund: 365,000 iDNA
- 2020 runway funding: 3,000,000 iDNA
- 2021–2022 runway funding: 8,320,000 iDNA

Vesting

Core team fund:

- 1/3 vested for 3 years: 5,750,000 iDNA
- 1/3 vested for 5 years: 5,750,000 iDNA

Early investors:

- 1/3 vested for 1 year: 2,355,000 iDNA
- 1/3 vested for 2 years: 2,355,000 iDNA

More details

Website	https://idena.io
Explorer	https://scan.idena.io
Twitter	https://twitter.com/idenanetwork
Blog	https://medium.com/idenanetwork



**Invest in the first
human-centric blockchain**

info@idena.io