

# Blockchain Ecosystem

LEARN TO UNDERSTAND EVERYTHING THAT MOVES AROUND THIS  
TECHNOLOGY.

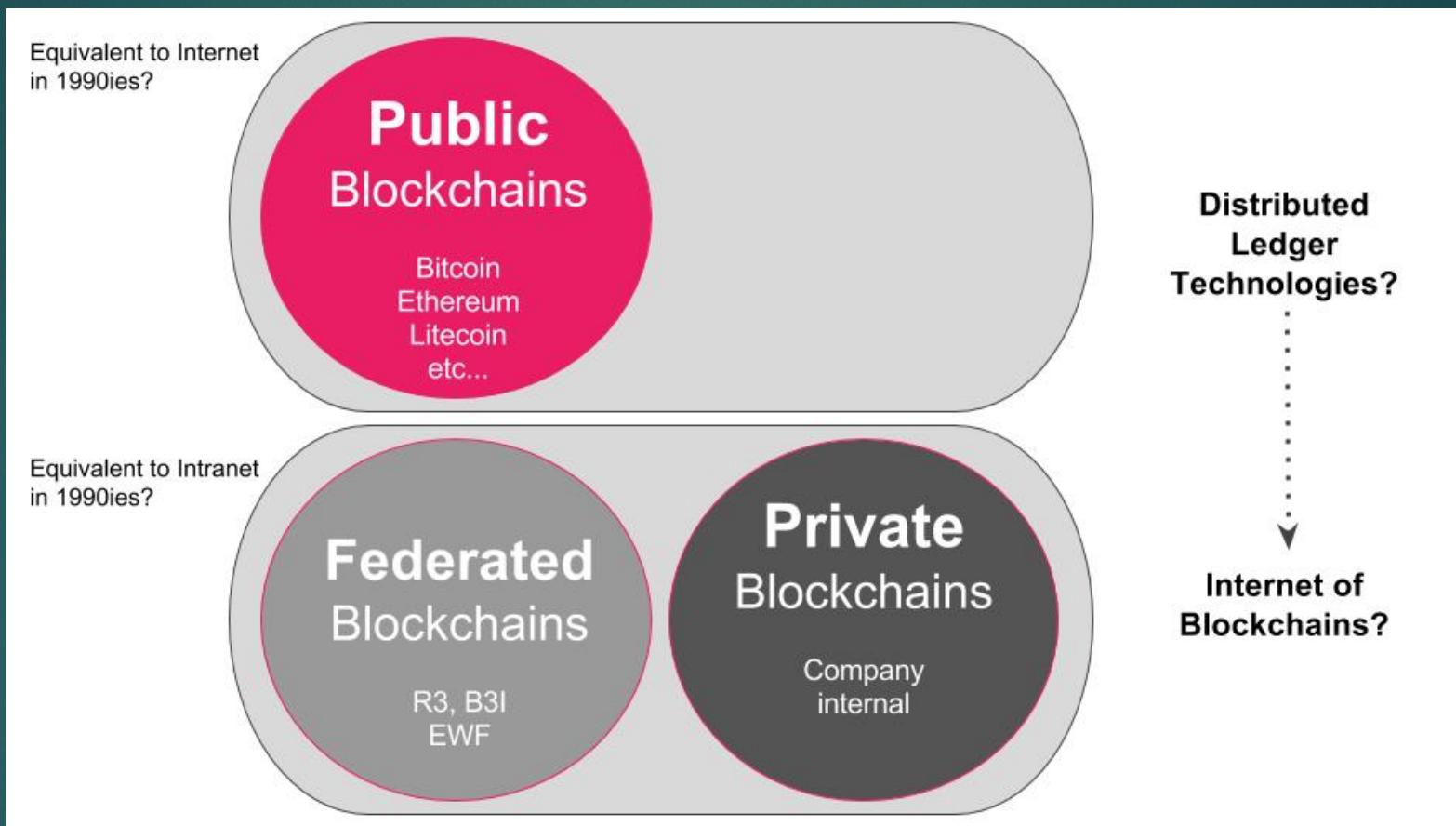


# TECHNOLOGY

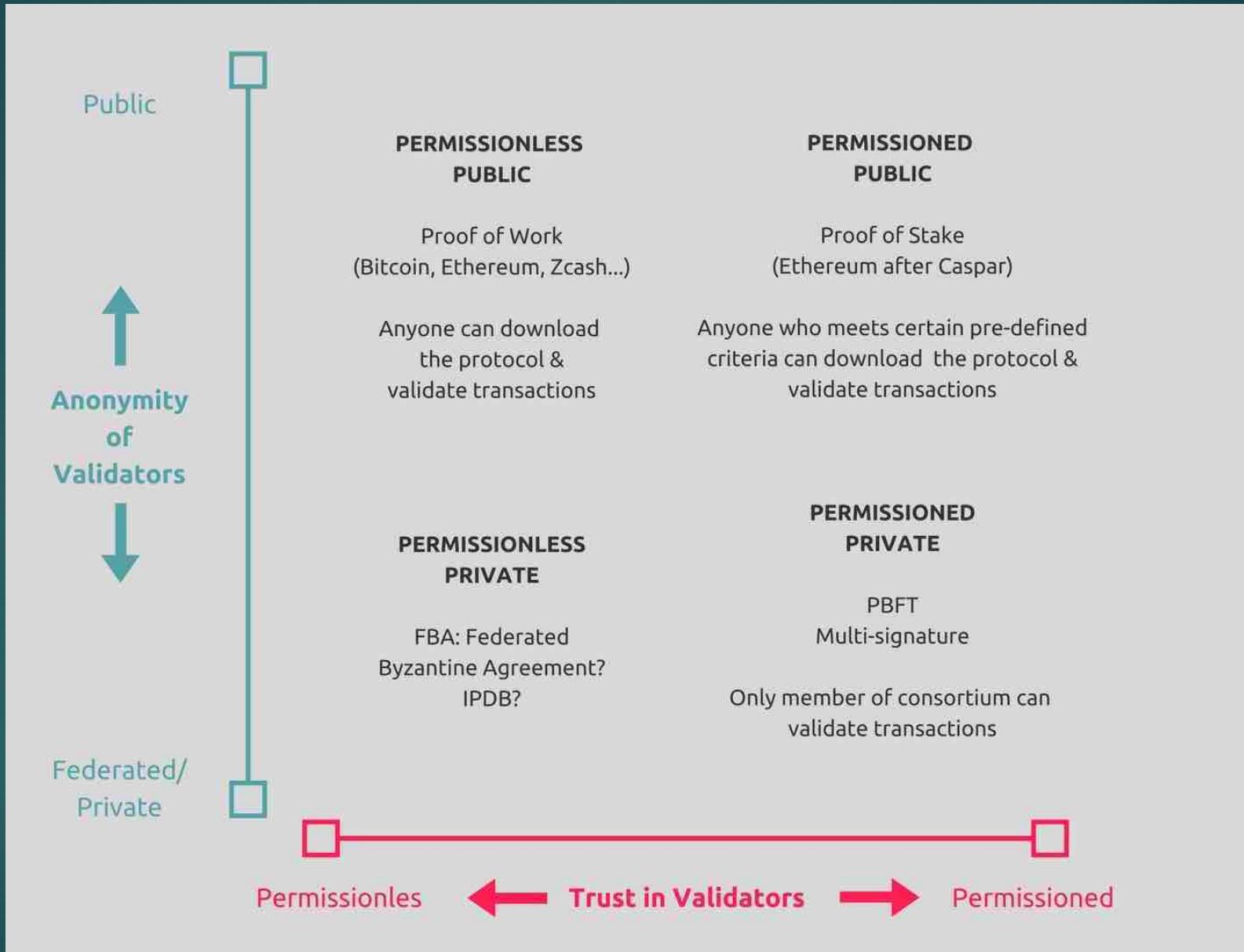
- ▶ DLT (DISTRIBUTED LEDGER TECHNOLOGY)
  - ▶ PRIVATE OR FEDERATED
- ▶ BLOCKCHAIN
  - ▶ OPEN SOURCE
  - ▶ PUBLIC
- ▶ SIDECHAIN

# BLOCKCHAIN

- ▶ CONSENSUS
- ▶ PROVENANCE
- ▶ INMUTABILITY
- ▶ CRYPTOGRAPHY
- ▶ PEER TO PEER
- ▶ DESCENTRALIZED!



|                 | <b>Public</b>  | <b>Private/Federated</b>  |
|-----------------|--|---|
| <b>Access</b>   | <ul style="list-style-type: none"><li>•Open read/write</li></ul>   | <ul style="list-style-type: none"><li>•Permissioned read and/or write</li></ul> |
| <b>Speed</b>    | <ul style="list-style-type: none"><li>•Slower</li></ul>  | <ul style="list-style-type: none"><li>•Faster</li></ul>                         |
| <b>Security</b> | <ul style="list-style-type: none"><li>•Proof of Work</li><li>•Proof of Stake</li><li>•Other consensus Mechanisms</li></ul> | <ul style="list-style-type: none"><li>•Pre-approved participants</li></ul>      |
| <b>Identity</b> | <ul style="list-style-type: none"><li>•Anonymous</li><li>•Pseudonymous</li></ul>   | <ul style="list-style-type: none"><li>•Know identities</li></ul>                |
| <b>Asset</b>    | <ul style="list-style-type: none"><li>•Native Asset</li></ul>  | <ul style="list-style-type: none"><li>•Any Asset</li></ul>                      |



| APPROACH                | HOW IT IS DONE                                     | EXAMPLES                                 |
|-------------------------|--|--|
| IT Services             | Build on request                                   | ConsenSys                                |
| Blockchain First        | Develop using the tools provided by the blockchain | Ethereum, Bitcoin                        |
| Development Platforms   | Tools for IT Professionals                         | ERIS, Tendermint, Hyperledger            |
| Vertical Solutions      | Industry specific                                  | Axoni, Chain, R3, itBit, Clearmatics     |
| Special APIs & Overlays | DIY building blocks                                | Blockstack, Factom, Open Assets, Tierion |

# BLOCKCHAINS

- ▶ [Bitcoin](#)
- ▶ [Ethereum](#)
- ▶ [Monero](#)
- ▶ [Dash](#)
- ▶ [Litecoin](#)
- ▶ [EOS](#)
- ▶ [Waves](#)
- ▶ [Neo](#)
- ▶ [Lisk](#)

[All](#)

# SIDECHAINS

- ▶ [Rootstock](#) (Bitcoin)
- ▶ [Factom](#) (Bitcoin)
- ▶ [Blockstream](#) (Bitcoin)
- ▶ [Loom](#) (Ethereum)

# DLT (Federated or Private)

- ▶ Hyperledger
- ▶ Nem
- ▶ Ripple
- ▶ Iota
- ▶ R3 - Corda
- ▶ B3i
- ▶ EWF

# CRYPTOASSETS

- ▶ Gold, Silver, paper and derivative instruments = Bitcoin, Ether, smart contracts and tokens
- ▶ STORES OF VALUE
- ▶ SECURITY TOKENS
- ▶ UTILITY TOKENS (WORK AND PAYMENT) ??
- ▶ GAS
  - ▶ COMPUTATIONAL EFFORT
  - ▶ COMISSION TO NODES
  - ▶ LIKE A TOKEN BUT NOT
  - ▶ WHY NOT ETH?

# STORES OF VALUE

- ▶ Top 10 cryptocurrencies
- ▶ Bitcoin (\$125B)  
Features: being the first, largest market cap (\$125B), easiest to get, widest acceptance, most liquid, most proven as store value, largest dev ecosystem
- ▶ Ether (\$28.3B)  
Features: platform for smart contracts, first alternative to Bitcoin, Vitalik Buterin
- ▶ Ripple (\$7.7B)  
Features: strong focus on banking market, real-time settlement
- ▶ Litecoin (\$2.9B)  
Features: most similar to Bitcoin, but could be mined effectively on PCs with GPU
- ▶ DASH (\$2.1B)  
Features: focused on both privacy and speed of transactions, used to be called Darkcoin, uses new chained hashing algorithm, supports fully encrypted and anonymous transactions
- ▶ NEO (\$1.7B)  
Features: "Ethereum of China", smart contracts platform, delegated Byzantine Fault Tolerant (dBFT) instead of PoW/PoS, promises quantum computer resistance (not clear if true though)
- ▶ NEM (\$1.49B)  
Features: wide distribution model, new proof-of-importance (POI) algorithm, integrated P2P secure and encrypted messaging system, multisignature accounts and an Eigentrust++ reputation system.
- ▶ Monero (\$1.3B)  
Features: Strong focus on privacy and anonymity, "secure, private, and untraceable", popular on darknet
- ▶ IOTA (\$982M)  
Features: Scalability for IoT, m2m communication, data integrity and other mass applications, blockless (uses directed acyclic graphs), quantum-resistant, no transaction fees
- ▶ Zcash (\$583M)  
Features: privacy-driven, all info besides timestamp is encrypted, high RAM requirements to bottleneck the generation of proofs and to make ASIC development unfeasible

# STORES OF VALUE

- ▶ Forked currencies:
- ▶ Bitcoin Cash (\$9.74B)  
Result of Segwit fork of Bitcoin, could be claimed by all original owners of Bitcoins. Same protocol and features as original Bitcoin, the difference is increased from 1MB to 8MB block size, and more frequent difficulty adjustment. Creators claim that Bitcoin Cash is aimed at transactional market (vs pure store of value for mainstream Bitcoin) and therefore potentially has much larger capitalization
- ▶ Bitcoin Gold (N/A)  
Result of Segwit2x fork – replaces SHA256 hashing algorithm with Equihash, which could be mined on GPU
- ▶ Ethereum Classic (\$1.33B)  
Ethereum Classic is an attempt at keeping the Ethereum blockchain unaltered by the part of the community that opposed the hard fork and the return of The DAO funds. It started trading on Poloniex and is getting more and more traction. In 2017, the Die Hard fork was implemented in ETC, removing the Ethereum difficulty bomb. Currently, there are no plans to move to Proof of Stake like Ethereum, although developers at the IOHK institute are developing a new PoS protocol for Ethereum Classic.

# SECURITY TOKENS

- ▶ [The Elephant](#)
- ▶ [Nasdaq](#)
- ▶ [Polymath](#)
- ▶ [Equitybase](#)

# UTILITY AND PAYMENT TOKENS

## Appcoins

- ▶ GOLEM (GNT)
- ▶ STATUS (SNT)
- ▶ ETHEREUM (ETH)
- ▶ EOS (EOS)
- ▶ BINANCE COIN (BNB)
- ▶ OMISEGO (OMG)
- ▶ BANCOR (BNT)

# WALLETS

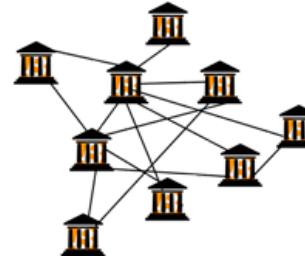
## ADRESS + PRIVATE KEY

- ▶ MAIL CLIENT EXAMPLE
- ▶ COLD WALLET
  - ▶ HARDWARE
  - ▶ PAPER
- ▶ HOT WALLET
  - ▶ MOBILE
  - ▶ DESKTOP
  - ▶ WEB
- ▶ MULTISIG WALLETS
- ▶ BRAIN WALLETS

# EXCHANGES



CENTRALIZED



DECENTRALIZED

EXCHANGE CONTROLS FUNDS

USER CONTROLS FUNDS

NOT ANONYMOUS

ANONYMOUS

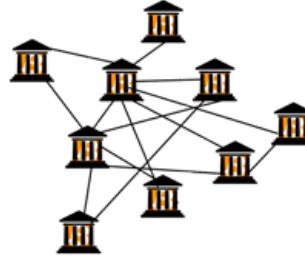
HACKS & SERVER DOWNTIME

NO HACKS & SERVER DOWNTIME

# EXCHANGES



CENTRALIZED



DECENTRALIZED

EASY TO USE

NOT EASY TO USE

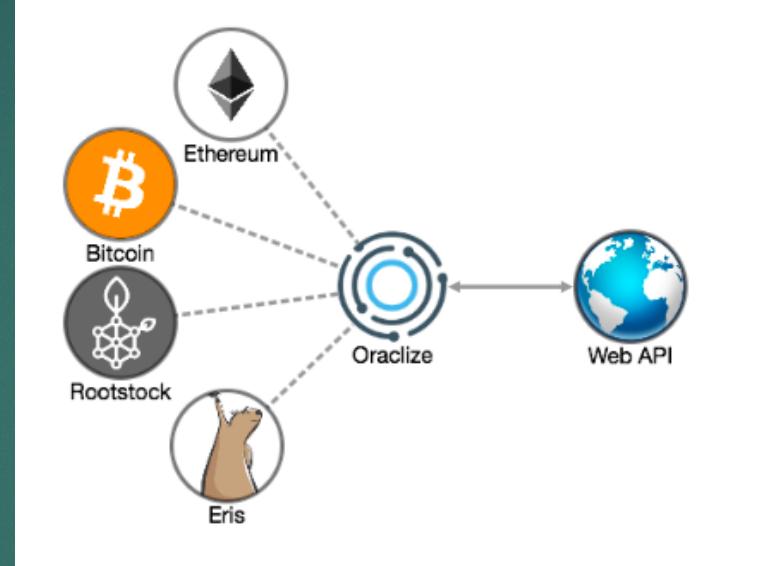
ADVANCED TOOLS

BASIC FEATURES

LIQUIDITY

LOW LIQUIDITY

# ORACLES



# ORACLES

- ▶ SOFTWARE ORACLES
- ▶ HARDWARE ORACLES
- ▶ INBOUND ORACLES
- ▶ OUTBOUND ORACLES
- ▶ CONSENSUS BASED ORACLES

# SMART CONTRACTS

A PROGRAM FOR A SPECIFIC TASK

- ▶ STORING COMPUTER CODE
- ▶ ACT ON DIGITAL ASSETS
- ▶ VERIFY CONTRACTUAL CONDITIONS
- ▶ AUTOMATIZED
  
- ▶ SOLIDITY ON ETHEREUM

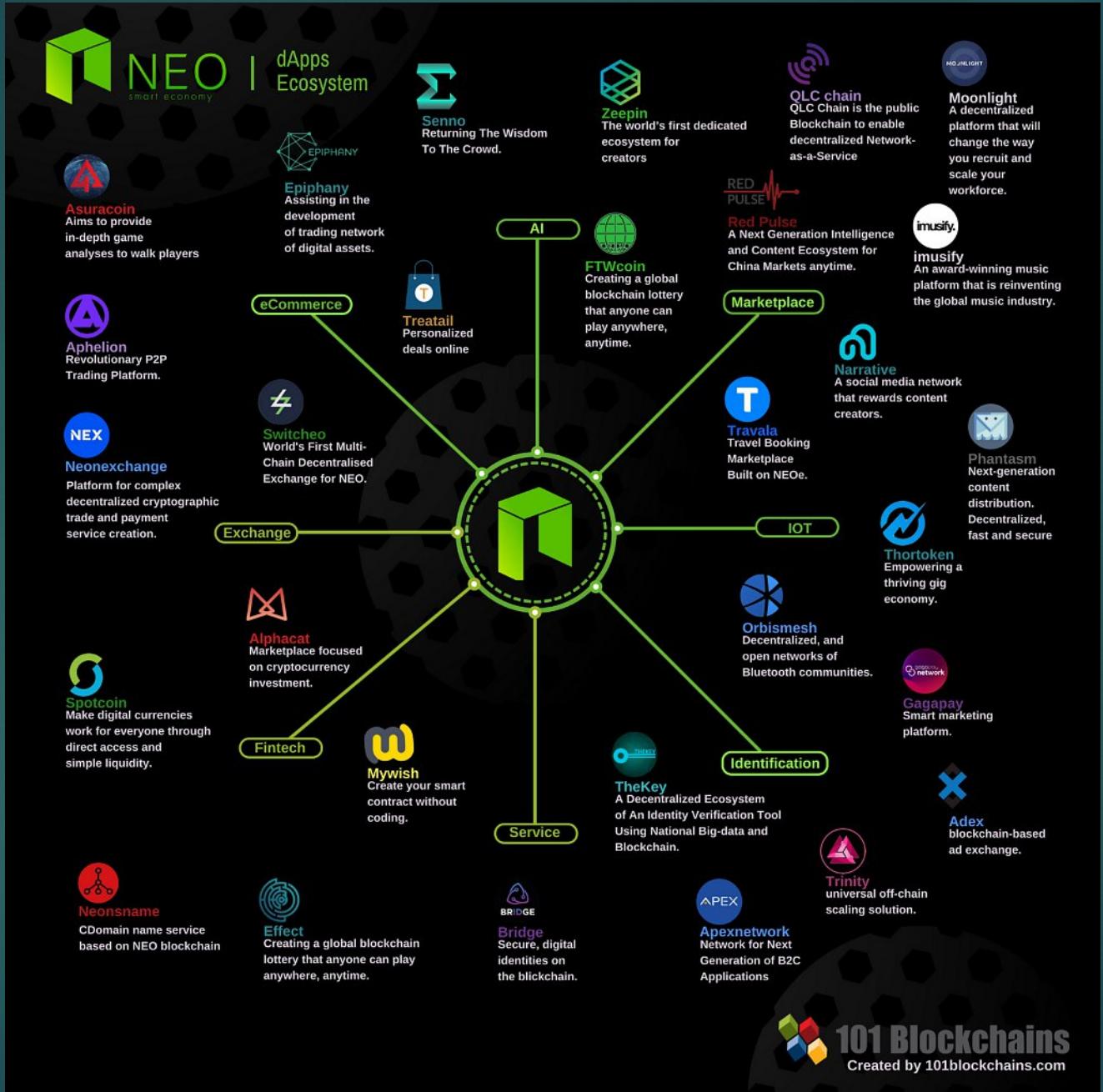
# DAPP AND DAO

- ▶ DESCENTRALIZED APPLICATION
- ▶ DESCENTRALIZED AUTONOMOUS ORGANIZATION
- ▶ EMBARK FOR STATUS

# DAPPS

- ▶ GAMES
- ▶ CASINOS
- ▶ MARKETPLACES
- ▶ SOCIAL NETWORKS
- ▶ UTILITIES







Open DApp



Open DApp



Open DApp

Enter URL

Exchanges



Airswap



Enter URL



Bancor



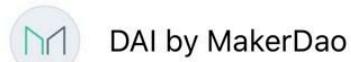
ERC dEX



Kyber



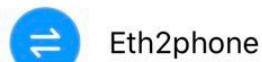
Oasis Direct



DAI by MakerDao



LocalEthereum



Eth2phone



Marketplaces

Enter URL

Marketplaces



CryptoCribs



Ethlance



OpenSea



Name Bazaar



The Bounties Network



CryptoKitties



CryptoFighters



CryptoPunks

Enter URL

Fun &amp; Games



Etherbots



Etheremon



CryptoStrikers



Cent



Peepeth



Purrbook



Hexel



# ICO (INITIAL COIN OFFERING)

- ▶ NEXT MEETUP!
- ▶ INDUSTRIES DISRUPTED BY BLOCKCHAIN

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