CARDANO – ADA

- PoS Blockchain platform aimed to allow "changemakers, innovators and visionaries" to bring about positive global change.
- At 30/11/2020:

Price:	$0,164119 USD
24h Vol:	$1.832.375.465 USD
Market Cap:	$5.085.480.428 USD
Market Rank:	#8

What is Cardano – ADA

- ADA: digital coin to store or exchange value
- Cardano: decentralized blockchain network based on scientific and mathematical principles, used also to build smart contracts and create DeAPPs and protocols.

Who created Cardano?

- Charles Hoskinson – Ethereum co-founder – he wanted a more standardized and scalable blockchain.
- Jeremy Wood – former co-worker at Ehereum – he was looking for a smart contracts platform

Thanks to their mathematics and scientific background, they decided to work together in the Cardano –ADA project in order to reach their goal

Project goals:

- Provably secure blockchain less prone to attacks
- Separation of accounting and computational layers
- Creation of a Secure voting mechanism for token holders
- Infinitely scalable consensus mechanism

Cardano blockchain architecture

Two core components:

- The Cardano Settlement Layer (CSL)
  - Account unit
  - Where token holders instantaneously exchange ADA with minimal transaction fee
- The Cardano Computational Layer (CCL)
  A set of protocol designed to
  - Run smart contracts
  - Ensure security and compliance
  - Allow blacklisting and identity recognition

Open source code written using Haskell

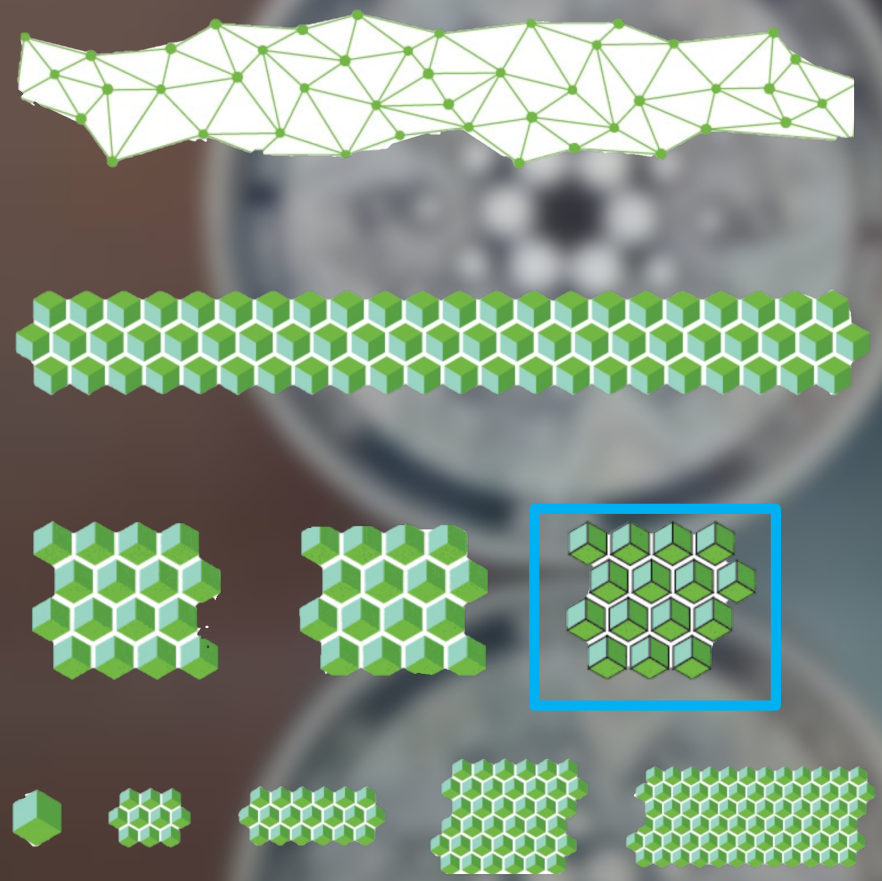
Ouroboros: Cardano’s PoS blockchain protocol

A consensus mechanism for:

- Secure and instantaneous ADA transactions
- Ensure the safety of smart contracts
- Reward token holders staking ADA to the network, enhancing network consensus

Ouroboros mechanism:

- Few nodes selected to mine new blocks, the Slot leaders
- The blockchain is splitted in slots, called epochs
- Slot leaders can either choose on which epoch to mine, or subpartitionate one
- An epoch can be partitioned several times → infinite scalability potential



Ouroboros peculiarity: Mathematical security

Other blockchains claim random selection of their block validators, with no evidence of such randomization.

- Provable random validator selection →
  - Fair chances to block mining for token holders who stake ADA to the Cardano network (and get a reward)
  - No necessity of high computational power (as for PoW) blockchain network
  - Objectively fair staking model

Dedalus: Cardano wallet for ADA cryptocurrency

- Blockchain node → control over user personal funds
  high transparency over the Cardano blockchain
- Chance to stake by token holders & get reward:
  - For ADA delegation
  - For running staking pool within the wallet

  → Stake holders cryptocurrency reward
  → Network supporting

Uses of ADA Cardano:

- Transfer value as for ETH or BTC
- Keep the system safe and secure: stake holders help in transaction validation process and get rewarded for that
- Right to vote: changes and developments are proposed to the Cardano blockchain, stake holders can vote on those
- In the FUTURE: run smart contracts and application on a decentralised blockchain

Is Cardano really better than Ethereum?

Similar goal: be world's primary decentralized blockchain platform for build new tools and protocols

	Cardano	Ethereum
Start date	September, 2017	January, 2014
Figurehead/Leader	Charles Hoskinson	Vitalik Buterin
Consensus mechanism	PoS	PoW (moving to PoS)
Programming Language	Haskell	Solidity
Architecture	2-layers	1-layer

Cardano’s Roadmap

5 different phases have been identified. Currently, Cardano is past the Shelley stage, working on the latter half of its phases

- Byron – Architecture foundation & functionality tests
- Shelley –Cardano mainnet launch & blockchain network decentralization
- Goguen –Smart contract platform implementation (decentralized applications building)
- Basho – Scaling: optimization & improved performance.
- Voltaire –Treasury and voting systems.

Supply

- Total supply: 45 Billions ADA
- Initial sale: roughly 26 Billions ADA
- Currently: 31,1 Billions ADA

For more advanced information, you might check the white paper of the project

Thanks for the attention!