BLOCKCHAIN EXPLAINER

ETHEREUM

#BLOCKCHAIN
#ETHEREUM
#BC #ETHER
#EVM #SOLIDITY

Ethereum is an open source public blockchain-based computing platform, featuring smart contract functionality.

Key Differentiations

- **The World Computer:** Each network participant uses a decentralized virtual machine, the Ethereum Virtual Machine (EVM), that are used to run distributed applications (Dapps).

- **Programming Languages:** Ethereum offers a blockchain protocol with a built-in programming language (bytecode) that allows any application to be written on top and enables developers to innovate with far less effort and far more speed.
  - Smart contracts for the EVM can be written in Solidity and LLL

- **Market Cap:** In September 2017 (about two years since Ethereum launch) the market capitalization of Ether peaked at US $36 billion, but is currently valued at over US $20 billion.

Firms using Ethereum
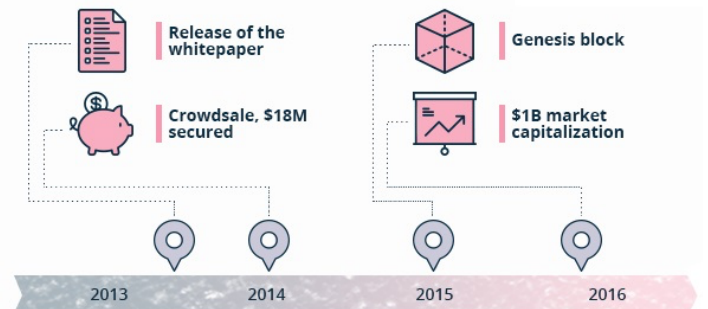### (not comprehensive)

Firms Building with Ethereum

J.P.Morgan

Deloitte.

A Alfa·Bank

KPMG

IBM Competitors Using Ethereum

Microsoft Azure

BlockApps

CONSENSYS

ripple

History

- **Origin:** Ethereum was initially described in a white paper by Vitalik Buterin, a programmer involved with Bitcoin, in late 2013 with a goal of building decentralized applications.

- **Establishment**: The Ethereum Foundation was set up as a Swiss non-profit in 2014. Development was funded by an online public crowdsale during July – August 2014, where participants bought the Ethereum value token (Ether) with bitcoin. Ethereum's live blockchain was launched in July 2015.

- **Hard Forks:** These are radical changes to the ethereum protocol that requires all users and nodes to upgrade to the latest version of the protocol software. As of January 2016, there have been four hard forks:

  1st hard fork: upgraded Proof of Work consensus algorithm

  2nd hard fork: first stable release of Ethereum protocol

  3rd hard fork: the DAO Hack, which forced the Ethereum community to reverse the hack and return the DAO funds

  4th hard fork: erased empty accounts that unknown attackers used to bloat the ethereum blockchain, which slowed down block and transaction processing