

# Blockchain

# What is a blockchain?

- Database that follows a specific process for adding data.
  - New data is “linked” to all previous data by cryptography.
  - If someone wants to change previous data, s/he would have to change all the cryptographically secured data that is linked to it.
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- If data is centralized (or controlled by one entity), then re-writing data becomes trivial => Blockchains shouldn't be centralized
    - More distributed networks are more secure...
    - ... but security comes at a cost: efficiency and incentives
    - Permissioned and permission-less networks
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- It's possible to use a public blockchain (bitcoin, Ethereum, etc.) for private solutions
  - It's possible to use a public blockchain protocol (Hyperledger, Corda, etc) to implement a private blockchain



## How can we use the technology?

- Registry
  - Identity
  - Ownership
  - Education
  - Events (birth, marriage, death, ...)
  - Votes
  - ...
- Payment and Settlement
  - Transfer of registries
- Tracking
  - Time series of registries

- Zero Knowledge Proofs

- Smart contracts

- Internet of Things (IoT)

- ML / AI

- VR / AR

- ... ?



# Examples of current Fintech applications

**Payments**

**Fund raising**

Initial Coin Offerings (ICO)  
Token Generation Events (TGE)

**Asset Tokenization**

**Settlement**

(KYC-AML, risk, liquidity, time-locks, etc)

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## Why use a crypto-token?

- Serve as means of payment/membership in a network/platform.
- Incentivizes early adoption by users and investors
  - Users get access at lower cost
  - Investors capitalize in future value growth
  - Company gets pre-sale income (no equity dilution)
- As platform develop (new users adopt), token price increases... also does the value of the token.
  - Company can stage token sales to maximize value or repurchase during market volatility





# Blockchain “native” models

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Business models that could not function without  
a block-chain and a native token

## Tokenized Investment

- Black Moon Crypto
- Real Blocks

## Decentralized P2P file storage

- Sia
- Filecoin

## Decentralized prediction markets:

- Augur

## Digital Collectibles:

- Cryptokitties

Questions?