NON-FUNGIBLE TOKENS

History, data and use cases
Blockchain

Public ledger, validated through a P2P network

Ethereum smart contracts and token standards

Crypto

Secondary markets, trading, speculation

ICO, STO, IDO

Urban Osvald
ERC-20
- Fungible tokens
- Utility tokens
- Value ledger

ERC-721
- Non-fungible tokens
- Unique assets
- Asset ledger
**Centralized**

- Central server
- Trust in one entity
- Faster
- Single point of failure

**Decentralized**

- P2P network
- Trust spread throughout the network
- Slower
- No single point of failure
A brief history of NFTs
A brief history of NFTs

- **2009**: Bitcoin
- **2012**: Colored coins
- **2014**: Counterparty
- **2016**: Rare Pepe
- **2017**: Everdream
A brief history of NFTs

- **2014**: Ethereum
- **2015 / 2/17**: ERC-20
- **2017**: CryptoKitties
- **2017 / 2018**: ERC-721
- **2018**: Other chains
Numbers don’t lie
Tx in the past 24h

- Bitcoin: 0
- Ethereum: 150
- ERC-721: 450

Deployed contracts

- ERC-20: 171,120
- ERC-721: 1,174

Numbers don’t lie
Daily active users

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<table>
<thead>
<tr>
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<tbody>
<tr>
<td>6400</td>
<td>1M+</td>
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</tr>
<tr>
<td>468</td>
<td>400k+</td>
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<tr>
<td>377</td>
<td>2.3M+</td>
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Most popular use cases

Collectibles
- CryptoKitties
- Simple
- Licensing

Gaming
- Simple games
- Moving towards more complex gaming
  - NeonDistrict, Ember Sword, …
### Possible use cases

<table>
<thead>
<tr>
<th>Art</th>
<th>Fantasy gaming</th>
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<tbody>
<tr>
<td>Loyalty program</td>
<td>Identity</td>
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<tr>
<td>Agreements</td>
<td>Elections</td>
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<td>Certification</td>
<td>Paywalls</td>
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<td>Academic credentials</td>
<td>Endangered species</td>
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<td>Supply chain</td>
<td>Luxury goods</td>
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<tr>
<td>Licensing</td>
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Why blockchain?

- Lack of trust in a centralized authority
- Friction within larger system
- Fraud

Why NFTs?

- Unique digital representation
- Mimicking real life usage
- Digital scarcity
Going forward

Scalability
UX challenges
Hype and speculation
Two-step adoption