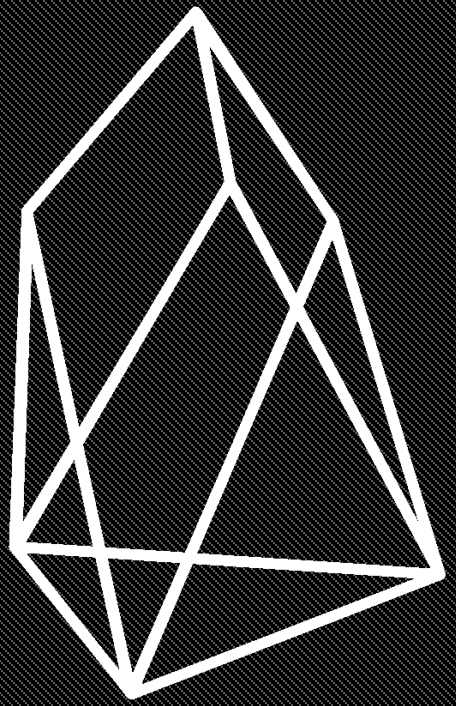


EOS

THE NEXT STEP IN SMART-CONTRACTS?

Presented by

Tokenika

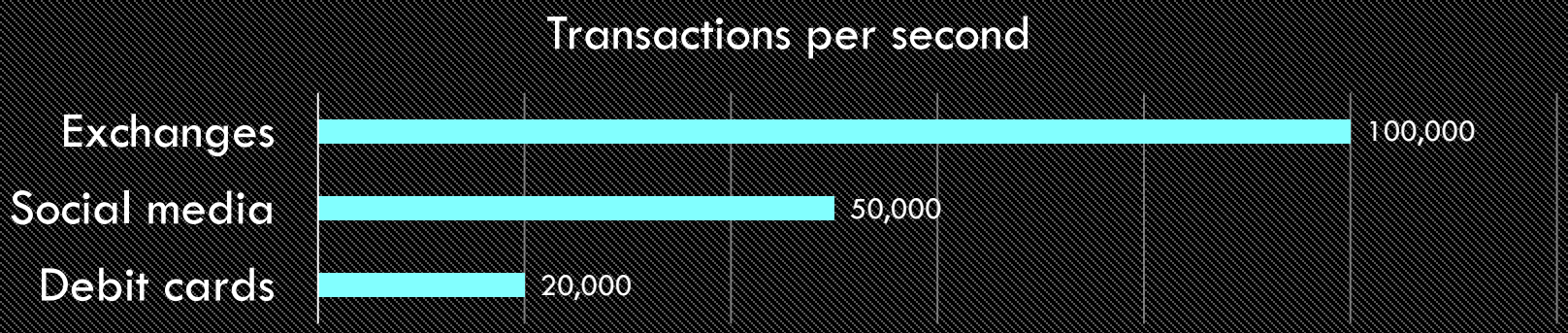
DISCLAIMER

- We are NOT in any way associated with block.one, the company developing EOS code. We are just part of the emerging EOS community.
- We have no interest in you buying EOS tokens, and this certainly should not be treated as financial advice.
- Our goal is to encourage you to take interest in the concept and possibly consider building businesses on top of EOS.

WHAT DO DECENTRALIZED APPS REQUIRE?

Cheap to run	Free for the users	Easily accessible
No fancy cryptographic stuff	Account recovery	Privacy protection
Access to other blockchains	Upgradability	Bug recovery

WHAT'S NEEDED VS. WHAT'S AVAILABLE



BTC: 4 trxn/sec
ETH: 15-30 trxn/sec

BTC: 4 bln USD/year (12 mln USD/day)
ETH: 2 bln USD/year (6 mln USD/day)

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SCALING SOLUTIONS AVAILABLE

- Moving transactions off-chain: state channels
  - Lightening Network in Bitcoin
  - Raiden in Ethereum
- Splitting the problem into smaller chunks:
  - Sub-domains within one blockchain (Ethereum's sharding)
  - Hierachy of sub-chains (Ethereum's Plasma)

WHAT IS EOS?

EOS is a general-purpose smart-contract platform, just like Ethereum.

“EOS is the blockchain for building commercial scale decentralized applications that are indistinguishable from centralized alternatives.”

Daniel Larimer, CTO of block.one

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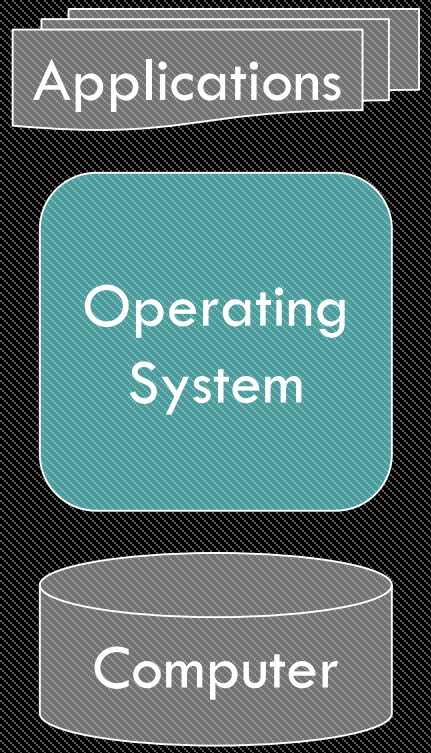
HOW DOES EOS WORK?



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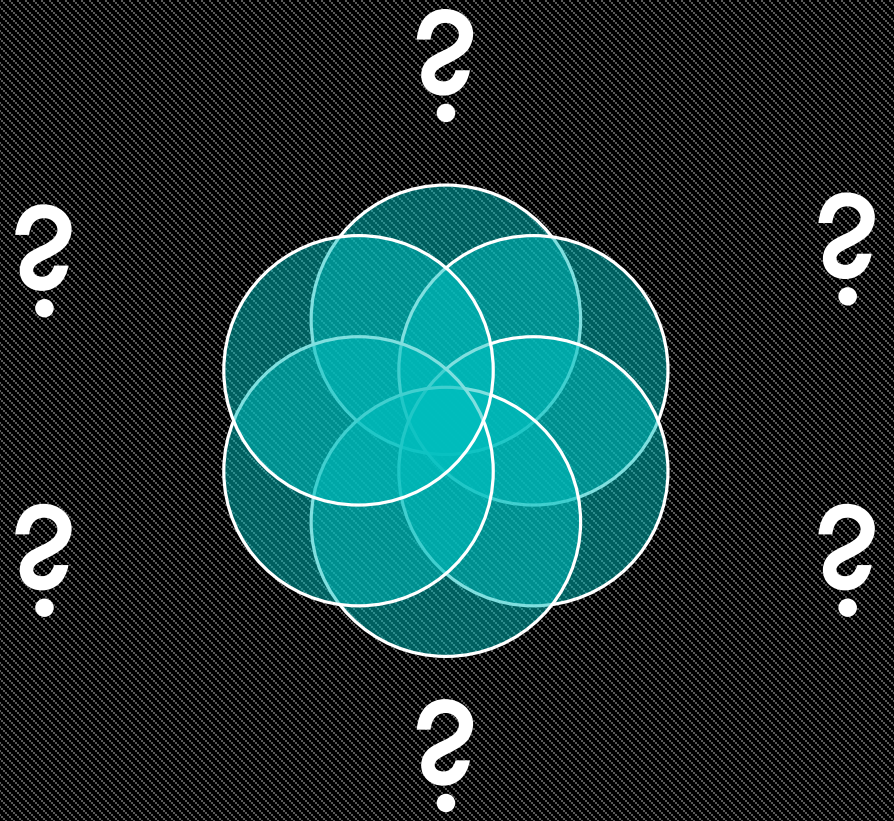
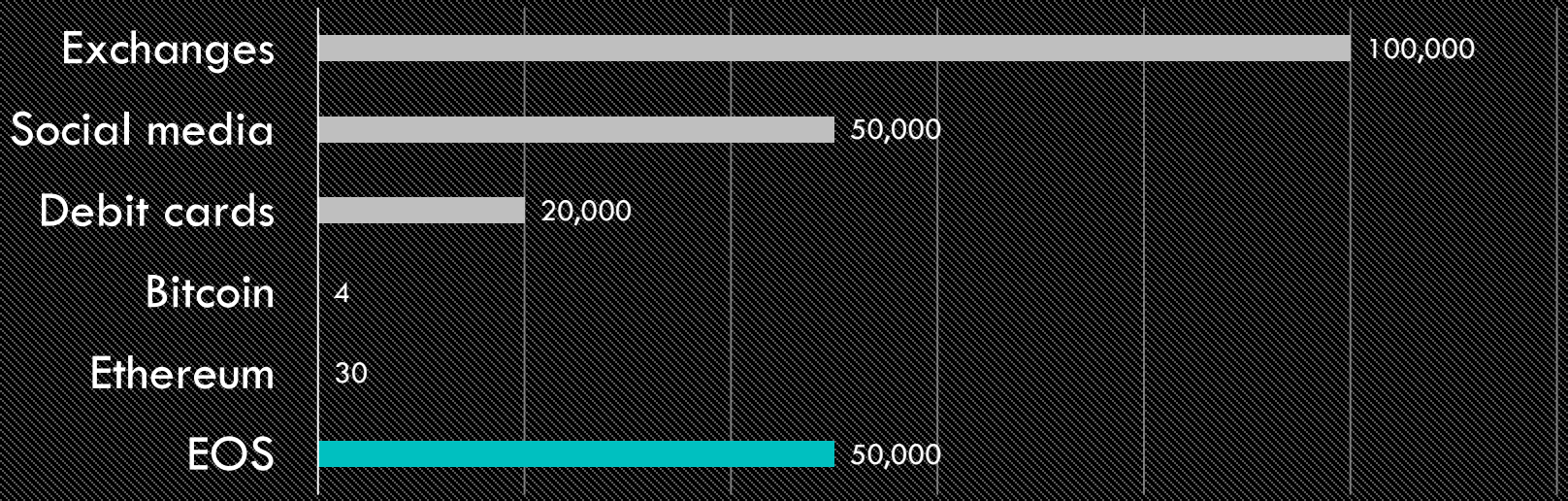
WHAT ARE EOS MAIN FEATURES?



EOS MAIN FEATURES

#1 PROCESSING POWER

On day one: 50,000 trxns per second or more.



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EOS MAIN FEATURES

#1 PROCESSING POWER

- Sequential processing technology borrowed from LMAX exchange
- Parallel processing for horizontal scaling
- Consensus over events instead of consensus over state
- No need to count CPU operations

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EOS MAIN FEATURES

#2 BUILT-IN GOVERNANCE

- Consensus mechanism: Delegated Proof of Stake
- Block producers able to freeze & fix broken apps
- Built-in governance mechanisms:
  - Constitution encoded in the blockchain (legally binding)
  - Arbitration for resolving disputes
  - Shareholders voting on important decisions

EOS MAIN FEATURES

#3 INFRASTRUCTURE FOR APPS

- Common/low-level features & services embedded in the blockchain: account permissions, account recovery, scheduling, authentication, inter-app communication, biometric 2nd factor validation
- Integrated storage solution based on IPFS

EOS MAIN FEATURES

#4 NO TRANSACTION FEES

- EOS token is never consumed, no concept of gas
- If you own 1% of the tokens, you own 1% of the network
- You can own blockchain resources or rent them

EOS MAIN FEATURES

#5 UPGRADEABLE APPS & MULTIPLE VMS

- Publish source code, not assembly
- Upgradable smart-contracts
- Multiple virtual machines

EOS MAIN FEATURES

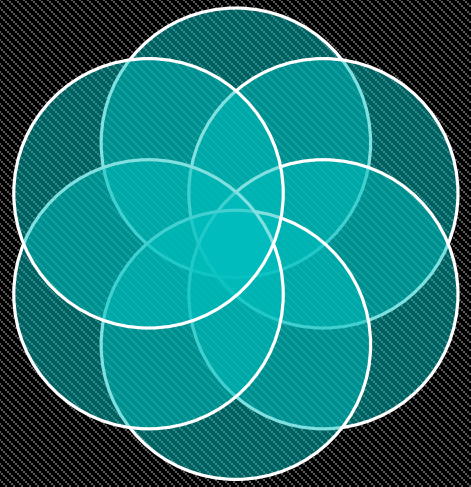
#6 ASYNCHRONOUS COMMUNICATION

- Everything is based on messages
- Cross-blockchain communication becomes possible

WHAT ARE EOS MAIN FEATURES?

Processing power

Asynchronous communication



Built-in governance

Upgradeable apps & multiple VMs

Infrastructure for apps

No transaction fees

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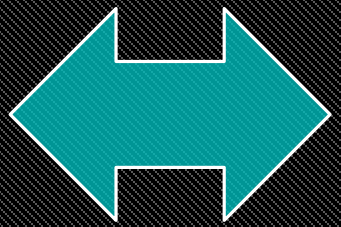
EOS BACKGROUND

Top-down

Attempt to generalize something that you have not figured out how to build yet.



Bottom-up

Figure out how to build something first and then start generalizing it.

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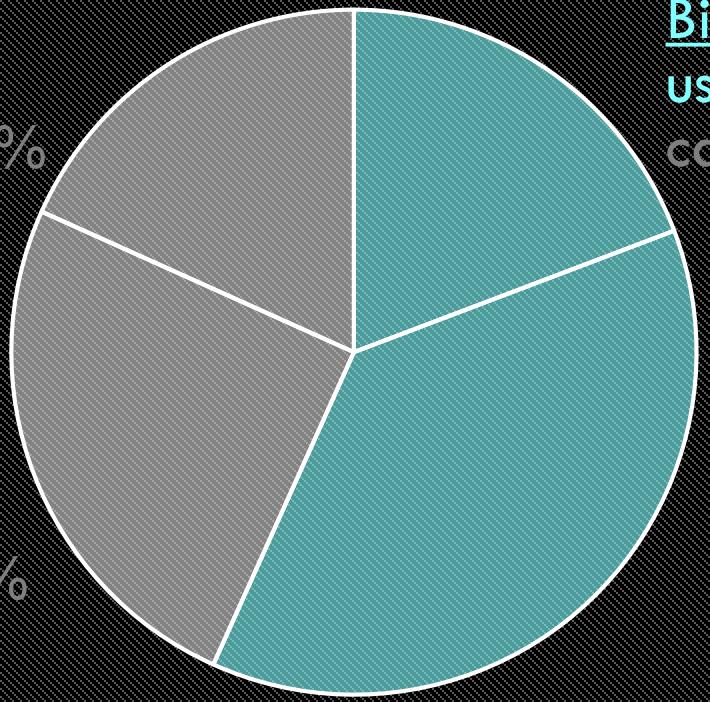
TOP FOUR MOST USED BLOCKCHAINS

Bitcoin
usage: 3.8 trxns/sec
capacity utilized: 100%

BitShares
usage: 4.0 trxns/sec
capacity utilized: <1%



Ethereum
usage: 5.2 trxns/sec
capacity utilized: ~35%

Steem
usage: 7.8 trxns/sec
capacity utilized: <1%

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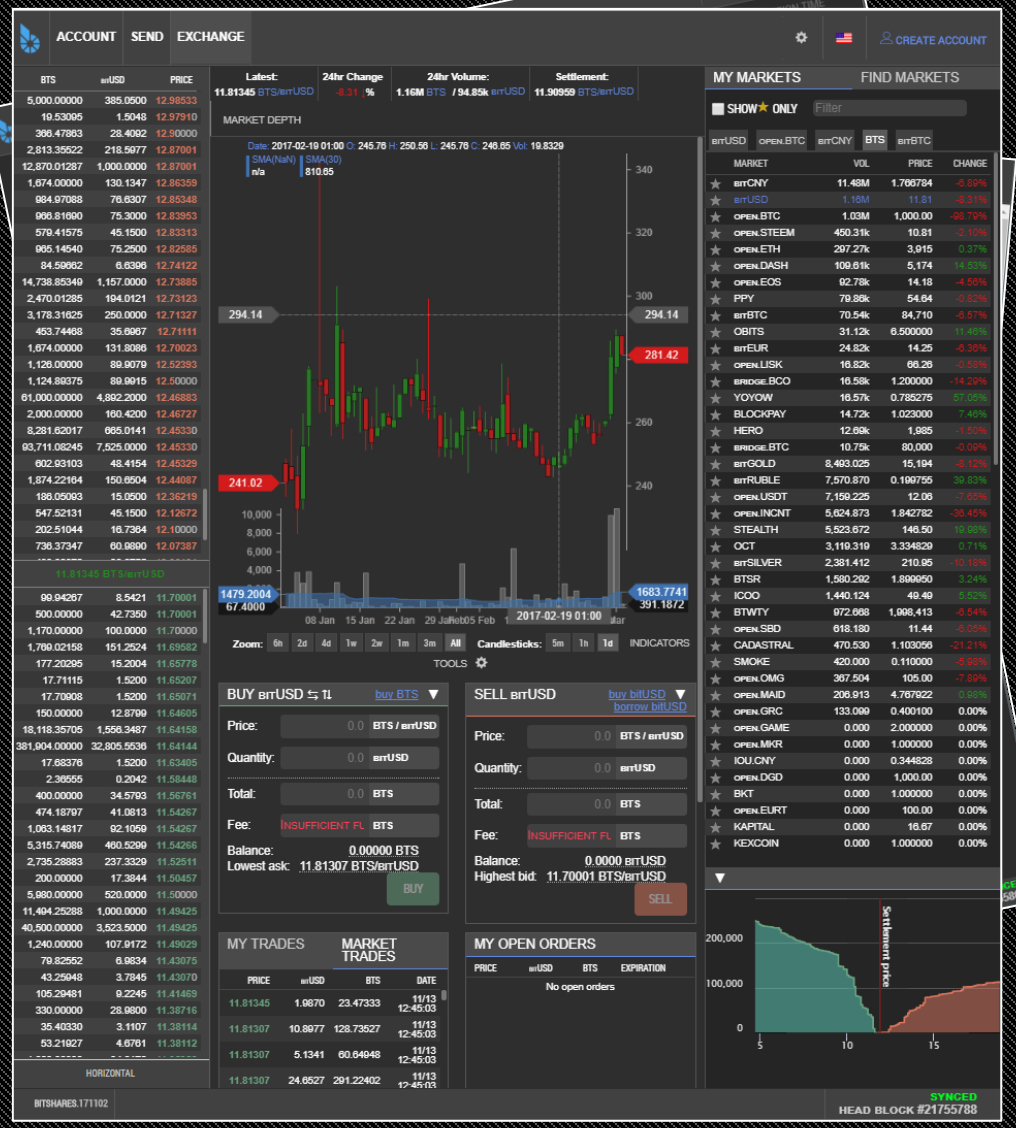

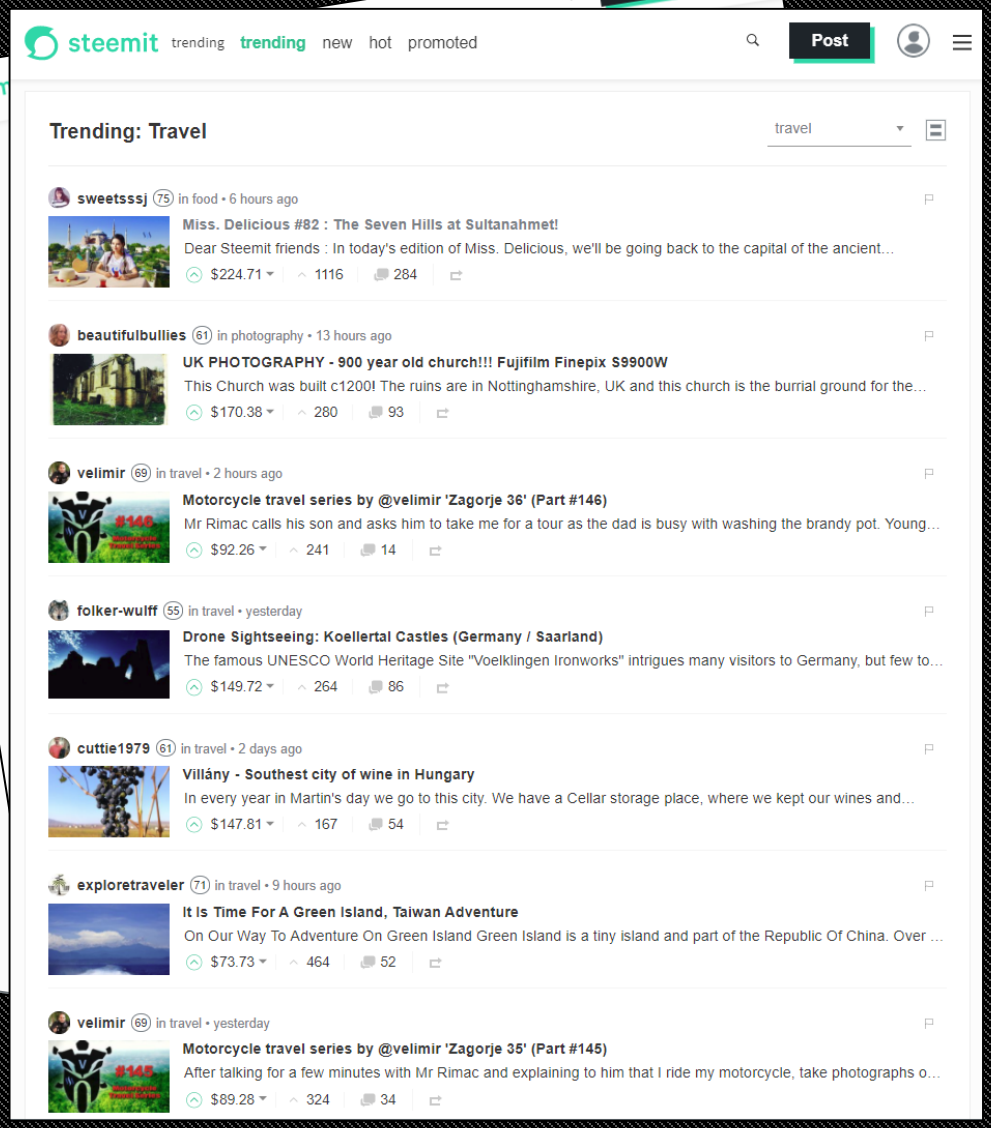

Source: bitshares.org & steemit.com

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DELEGATED PROOF OF STAKE (DPOS) HOW DECENTRALIZED IS IT?

- Purpose of decentralization:

  To make the system resilient against dishonest players on the inside and against attempts to shut it down from the outside.

- Measure of decentralization:

  (1) How many unique entities are involved in producing 80% of the blocks?

  (2) How resilient the system is to an attempt to attack it?

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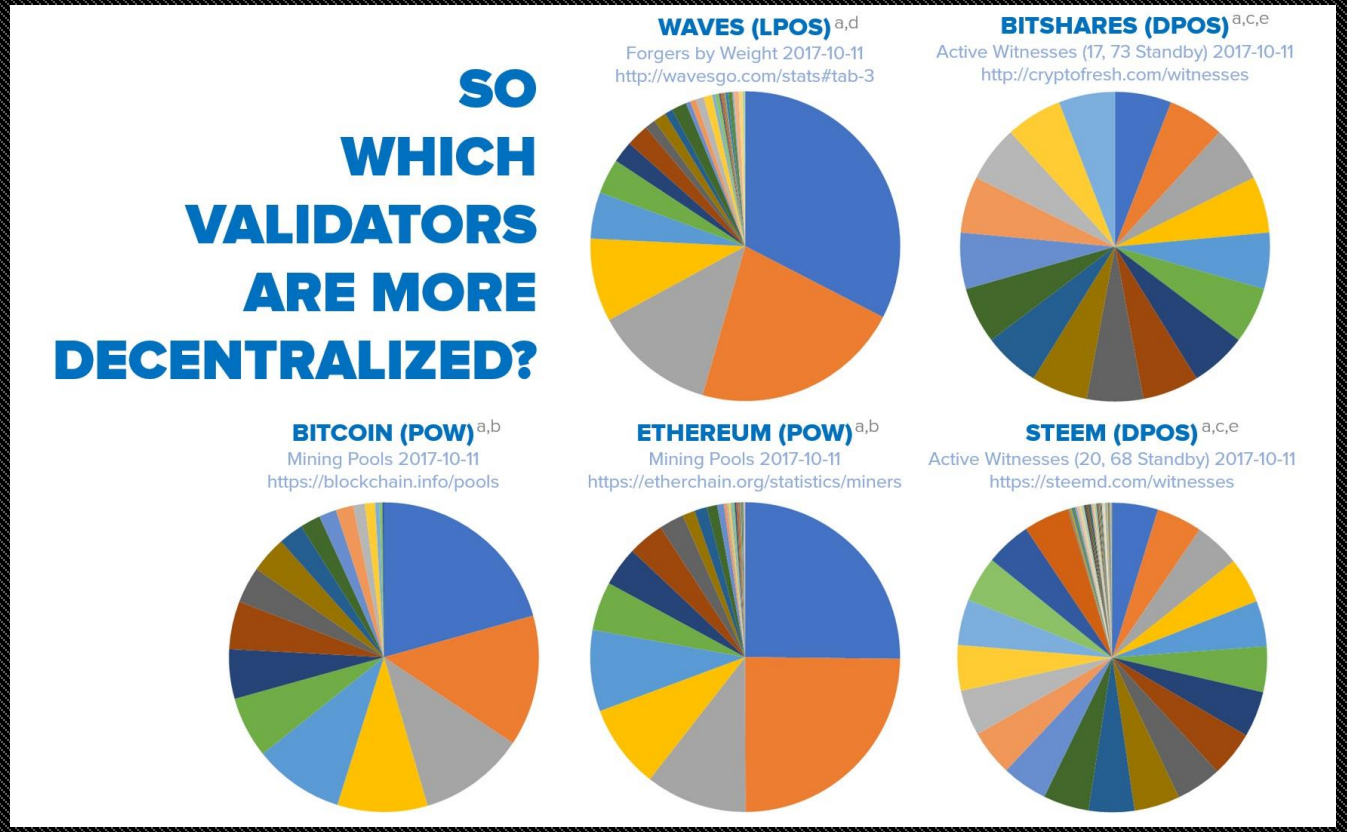
DELEGATED PROOF OF STAKE (DPOS) HOW DECENTRALIZED IS IT?



Source: senzheng on reddit.com

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DELEGATED PROOF OF STAKE (DPOS) HOW RESILIENT IS IT?

- Very easy to replace non-performing block producers
- When in trouble, the system degrades in a graceful, detectable manner that is trivial to recover from
- Continues to function even when a majority of producers fail, or a large minority of producers go rouge

WHAT ARE THE STRONG POINTS?

- Very efficient team implementing a concept proved in practice
- Web Assembly as a virtual machine
- Strong financial backing: Brock Pierce & Bo Shen (Fenbushi Capital)
- Commitment to spend 1 bln USD to boost the ecosystem

“EOS is the most well-funded project in history and we plan to soon announce a program for up to one billion USD of capital for EOS projects.”

Brendan Blumer, CEO of block.one

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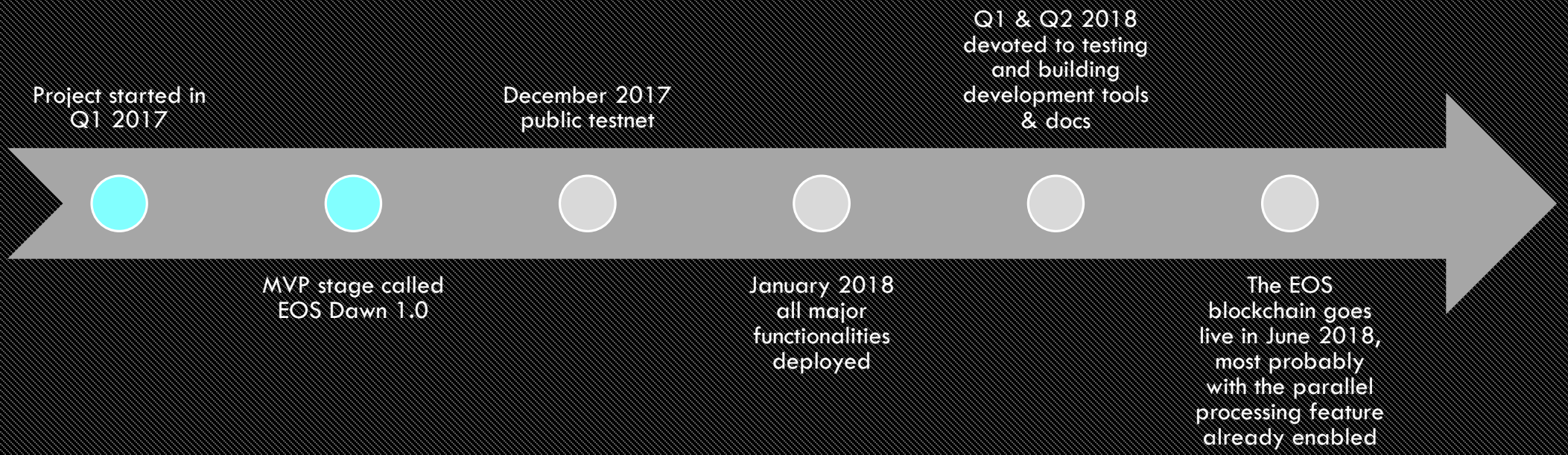
WHAT ARE THE WEAK POINTS?

- Almost non-existent ecosystem
- Track-record of poor documentation
- C++ has a very steep learning curve
- Not live yet

EOS ROADMAP



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EOS VS. DECENTRALIZED APPS REQUIREMENTS

Ethereum		EOS
✗	Cheap to run	✓
✗	Free for the users	✓
?	Easily accessible	✓
?	No fancy cryptographic stuff	✓
✗	Account recovery	✓
?	Privacy protection	?
✗	Access to other blockchains	✓
✗	Upgradability	✓
✗	Bug recovery	✓

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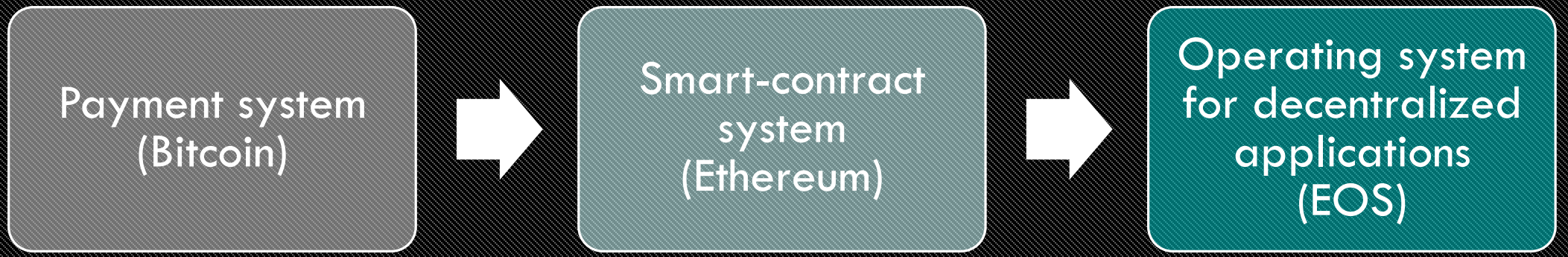
SUMMARY

- Incremental improvement to stuff that's already been proven to work
- Extremely business oriented
- Can other systems copy EOS solutions?

BLOCKCHAIN EVOLUTION



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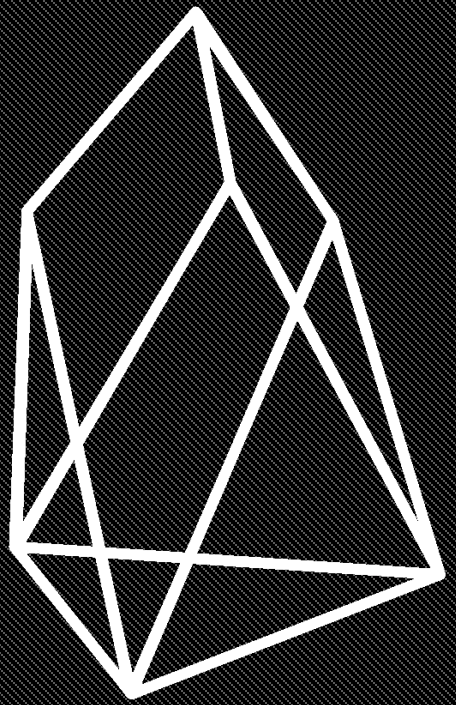
ABOUT TOKENIKA

- Focus on blockchain-based fundraising and digital asset management solutions, e.g. Neufund, Melonport, Iconomi
- Software house for building dApps (both on EOS and Ethereum)
- Aiming to be elected as one of the 20 block producers for EOS

WHAT DO WE NEED?

- Not looking for funding, looking for ways to spend money
- Looking for good ideas that can be converted into dApps
- Hiring developers with background in C++ and/or Ethereum smart-contracts



EOS - official website
www.eos.io

THANK YOU

ANY QUESTIONS?

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