HS18

DISTRIBUTED SYSTEMS ADVANCED & BLOCKCHAIN

ICOs

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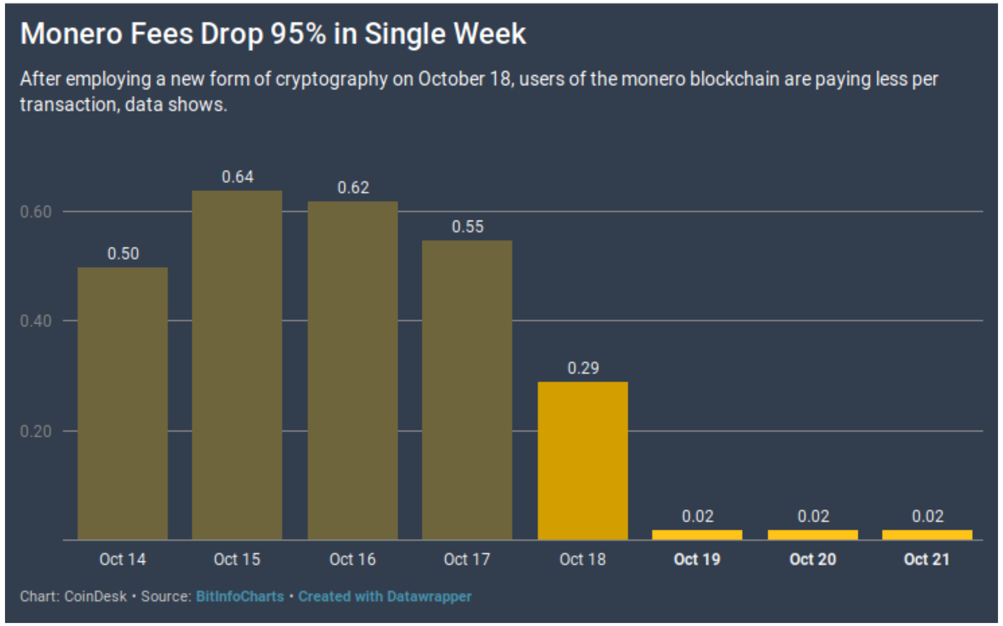
HSR
HOCHSCHULE FÜR TECHNIK
RAPPERSWIL

FHO Fachhochschule Ostschweiz

Distributed Systems - In the *News*

- Brand new on HN: **Naming and Synchronization in a Decentralized Computer System (1978, pdf)**
- **10.10.2018: Release 1.0.0 of PeerTube**
  - Decentralized video hosting network
  - Federated (ActivityPub) video streaming platform using P2P (BitTorrent) directly in the web browser with WebTorrent and Angular
    - ActivityPub: decentralized social networking protocol and official W3C recommended standard
  - Illegal content: PeerTube allows users to report problematic videos
- **Personal note: since 12.10.2018, I'm syncing Ethereum with parity on a HDD, currently I'm at block #4246812**
- **Monero lecture on the 20.11.2018, recently (18.10.2018) added Bulletproofs**
  - Range proof: 13.2 KB, bulletproofs: 2.5 KB

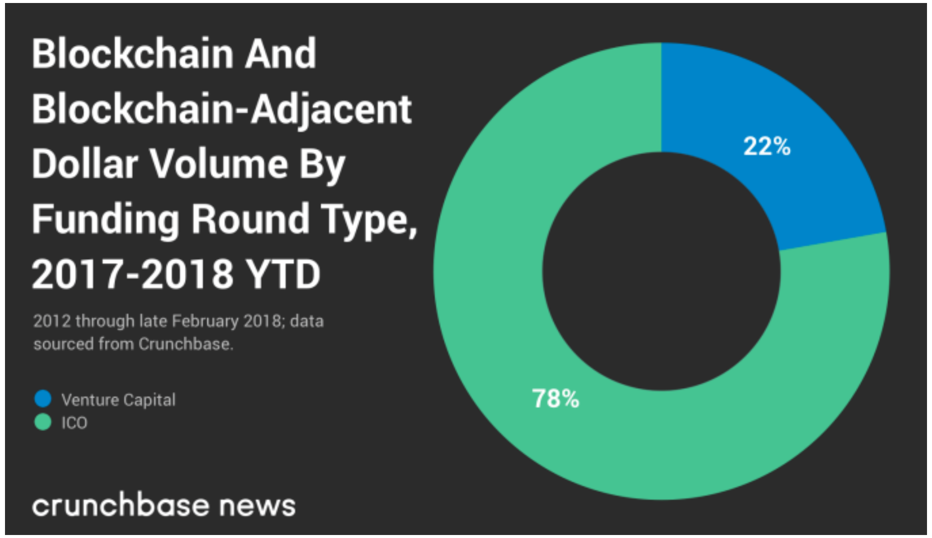


- **19.10.2018: Ethereum's Constantinople Hard Fork Is Being Delayed Until 2019**

What is an ICO

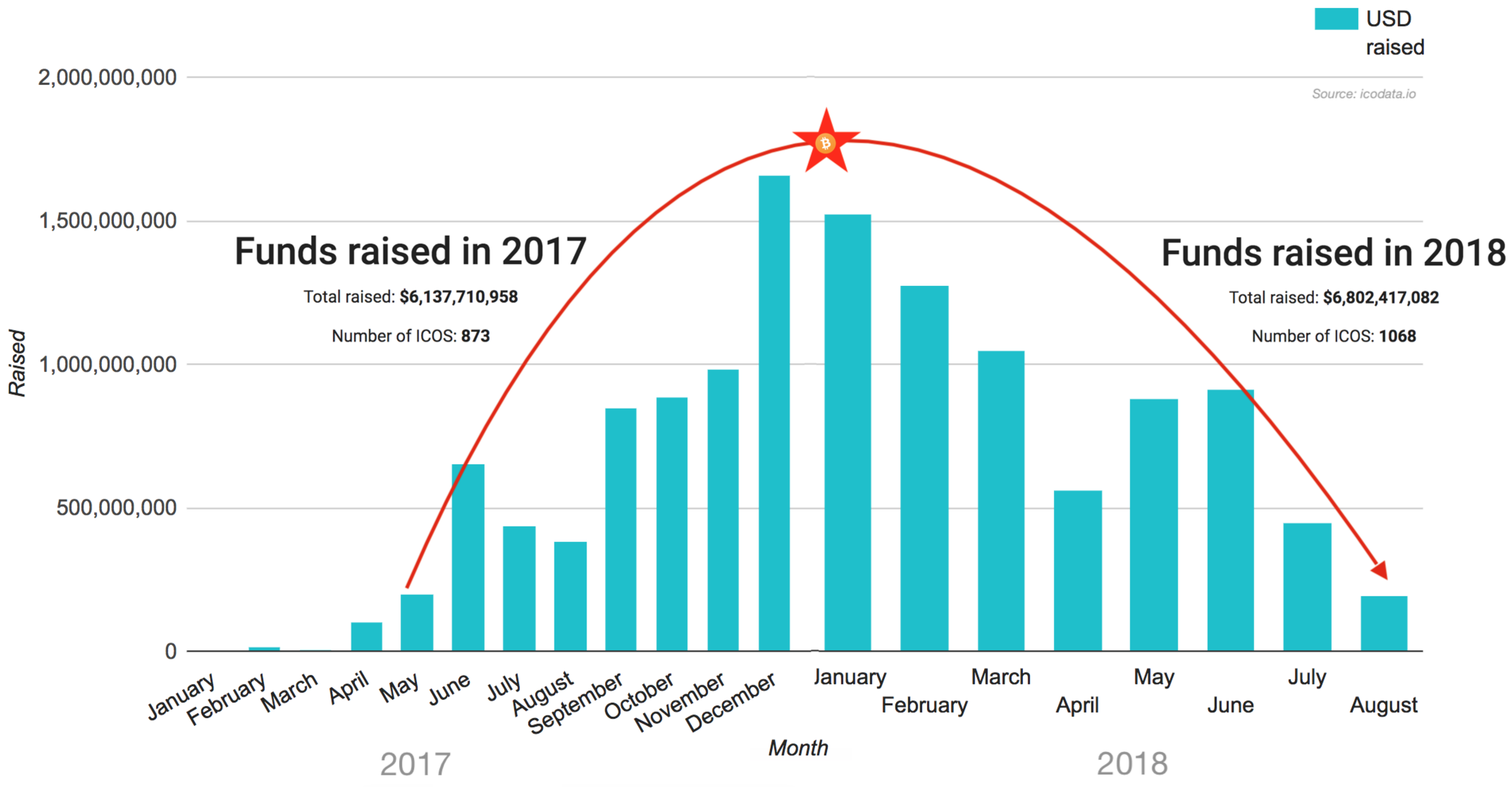
- **An initial coin offering (ICO) is a means of crowdfunding**
  - Tokensale - release of a new cryptocurrency, e.g. Ethereum
  - 1490 listed cryptocurrencies with a marketcap, 4942 with coinlib.io
- **ICOs vs IPOs**
  - ICO little regulation, IPO are heavily regulated
  - ICO short in duration, IPO much longer
  - IPO are exclusive, ICO are open to anyone
- **TechCrunch: Over 1000 Crypto Projects Are Considered 'Dead' Now**

- **ICOs delivered at least 3.5x more capital to blockchain startups than VC since 2017**



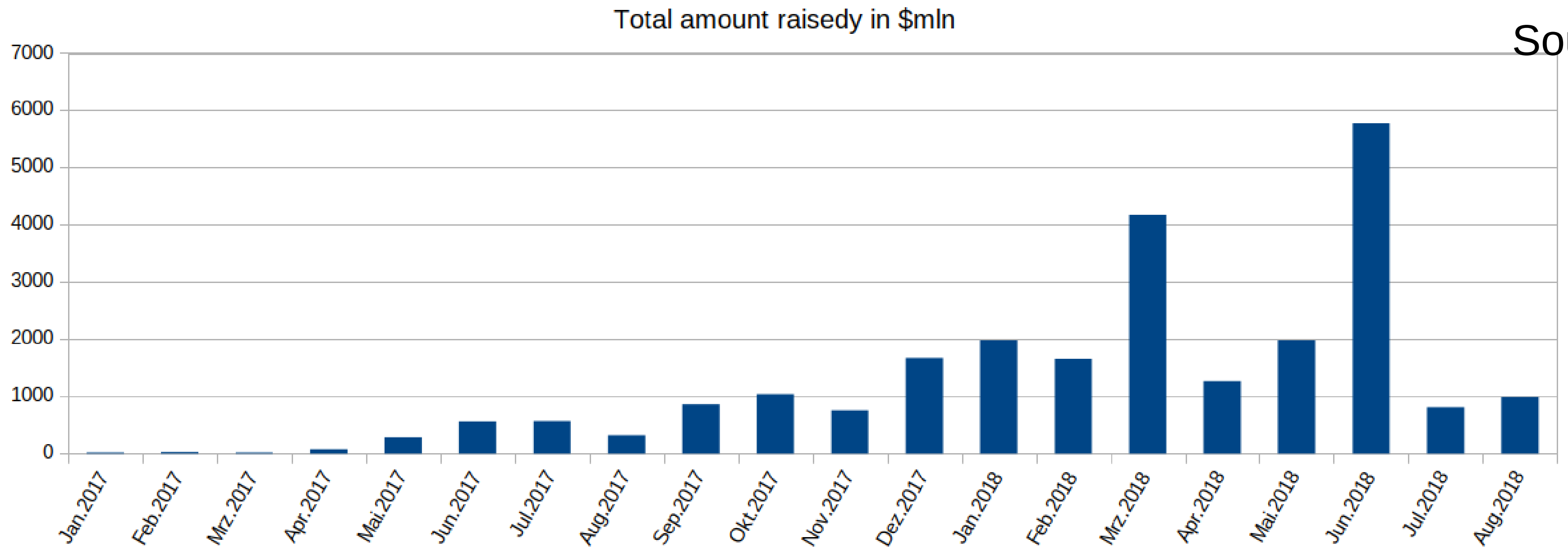
- **Wall Street Journal: 20 percent of all ICOs are fraudulent**
- **SATIS Group Report: '78% of ICOs are Scams'**

Total amount raised by all ICOs in total ($)

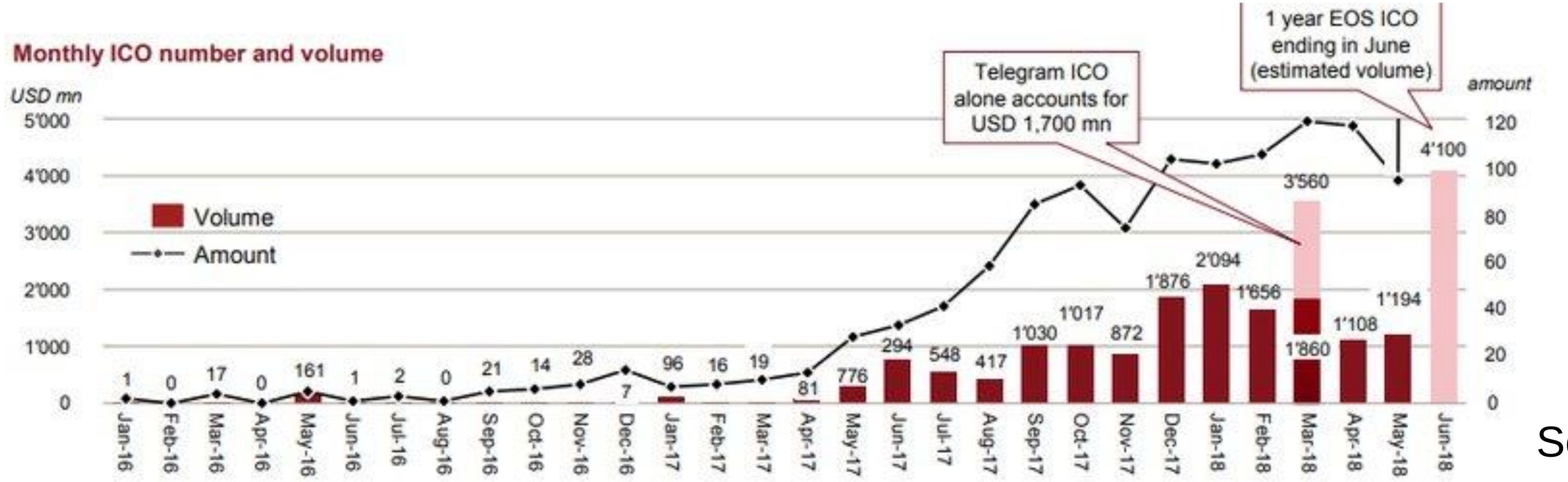


Source: icodata.io

Total amount raised by all ICOs in total ($mln)



Source: [Coinschedule]()



Source: PwC Report

ICO countries and categories

Number of projects

	Country	% of Projects	Total Raised
1	USA	16.3%	875m $
2	UK	9.6%	173m $
3	Singapore	7.5%	316m $
4	Russia	7.2%	1003m $
5	Switzerland	6.8%	540m $
6	Estonia	4.1%	35m $
7	Australia	3.2%	31m $

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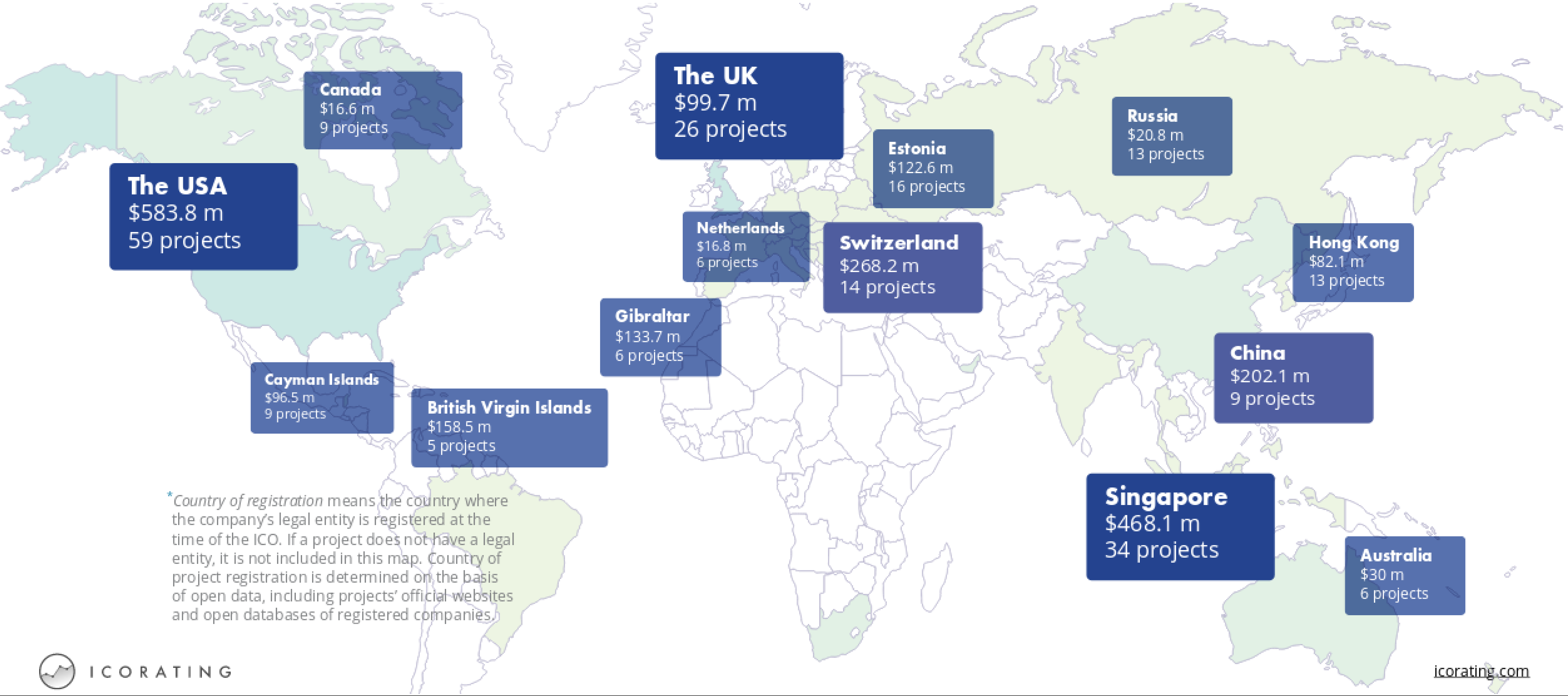
Source: [icowatchlist]

ICO countries and categories



Country of registration means the country where the company's legal entity is registered at the time of the ICO. If a project does not have a legal entity, it is not included in this map. Country of project registration is determined on the basis of open data, including projects' official websites and open databases of registered companies.

URL: b.socrative.com/student/

Room: HSR

Pros and Cons

Fundraising Advantages / Disadvantages

+ “Everyone” can participate

+ Global audience

- High chance that ICO won’t work: In 2017 from 913 projects only 435 (48%) were successful (source: TokenData and FabricVentures report)

- Time consuming, lots of effort

- Regulations not clear (improving)

Investor Advantages / Disadvantages

+ You have a token

+ Easy to participate for tech savvy people

- Token may be worth nothing or worse, a scam

- Due diligence time consuming, even if you are tech savvy

What to do as in investor?

- **Perform Your Due Diligence**
  - Read and understand the whitepaper
  - Check github/medium/reddit/telegram/bitcointalk for more information
  - Be critical!
- **Only invest as much money as you are willing to throw out of the window!**
- **Register via Email for ICO on project website**
- **If you don’t have cryptocurrencies, open account with e.g., coinbase, bitstamp, kraken**
- **Transfer fiat to exchange, trade to BTC or ETH or any accepted crypto currency by the ICO**
- **Follow ICO instructions: either pay directly to address, or to your own wallet**
- **Store or trade your tokens securely**
- **After ICO if token is traded and list, trade on binance, bittrex, poloniex**

What to do as a project initiator? (assuming you have a good team & advisors)

- **Prepare Whitepaper (probability of success of an ICO is unaffected, according to [1])**
  - Simplify your idea (translations)
  - Define token economics, check legal
- **MVP (47% of the projects do not have MVPs)**
  - Probability of success is higher [1] if code available
  - Audit smart contracts
- **Write blogs (medium), SEO**
- **Write press releases about significant events**
- **ICO listings**

[1] *Why do businesses go crypto? An empirical analysis of initial coin offerings*; Saman Adhami, Giancarlo Giudici, Stefano Martinazzi, Elsevier Journal of Economics and Business

- **Polish profiles on Linkedin**
- **Conduct pre-sale**
  - Positively related to ICO success [1]
- **Prepare roadshow, do interviews or AMA, speak at conferences**
- **Create bounty program, for cheap clicks airdrop**
  - marginally significant [1]
- **Social media: use twitter for updates, bitcointalk/reddit for announcements and bounty**
  - Answer questions on Telegram
  - Other sites to consider: Steemit/Discord/Quora/Facebook

What to do as a project initiator? (assuming you have a good team+advisors)

- **After ICO**
  - Progress update (at least monthly)
  - Seek partnerships
  - List token on exchanges

- **ICO, technical steps**
  - Create public / private keys for payin
    - Store them in a bank vault, copy public keys
  - Create ICO backend / frontend
    - Backend minimal endpoints: tiers, register, address, whitelist (e.g. ICOnator)
  - Minting – aka – create coins out of thin air ☺
  - Consolidation
    - x investors, x accounts → 1 account

- **Common Mistakes**
  - Army of advisors + many employees
  - Promise high returns for your investors
  - Buy telegram members (airdrop)
  - Spend your Token like crazy
  - Hackers, Phishers, Spyware, and Thieves
    - Social media phishing
    - Web site

```
pragma solidity ^0.4.24;
contract FundMeICO {
          mapping(address => uint256) tokenBalances;
          function () public payable {
              tokenBalances[msg.sender] = msg.value;
          }
}
```

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My Next 2 Upcoming ICOs

EUREKA

- **Scientific publishing and rating with tokens and micropayments**
  - CTO
- **Payed in EKA tokens, stared before HSR engagement**
- **No active HSR involvement from student side, as token situation at HSR is unclear**

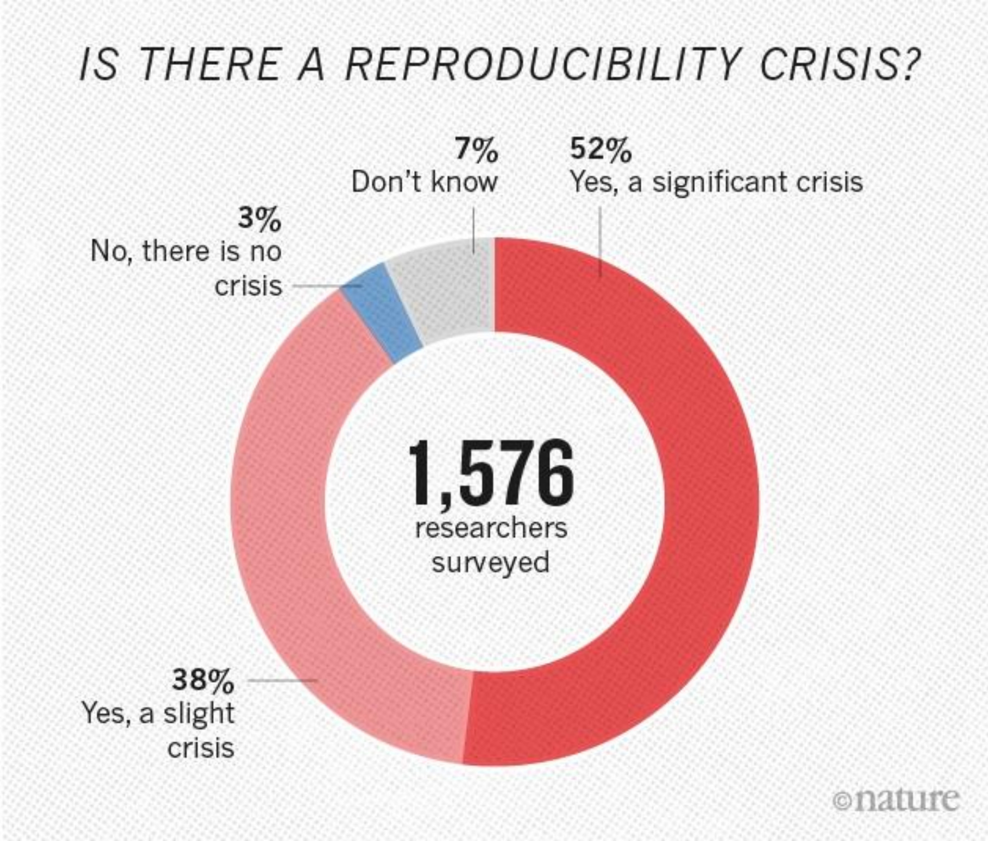
DEZOS

- **Decentralized ownership, asset tracking with a global register**
  - Advisor
- **Payed in DOS tokens – trying to convince HSR to accept it as part of aF&E**
- **No active HSR involvement yet…**

EUREKA: publishing now

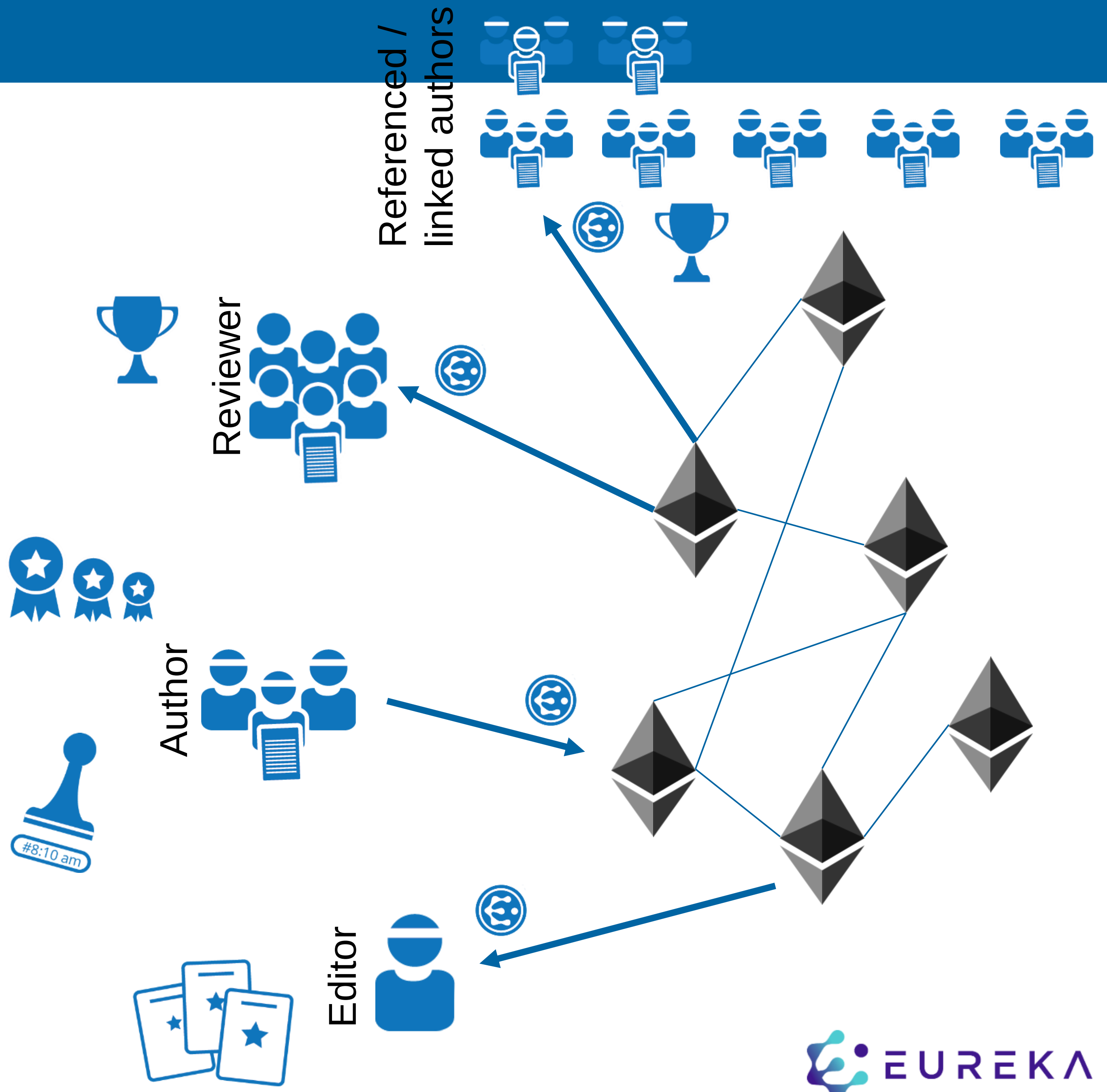
- **Researcher wants to publish**
  - Researcher pays publisher for publication
- **Quality control by publishers**
  - Done by researchers for free
- **Researcher wants to access publications**
  - Researcher (or its University) pays publisher for access
- **Brilliant business model for publishers**

- **Publishers as gatekeepers**
  - Reproducibility is difficult to publish



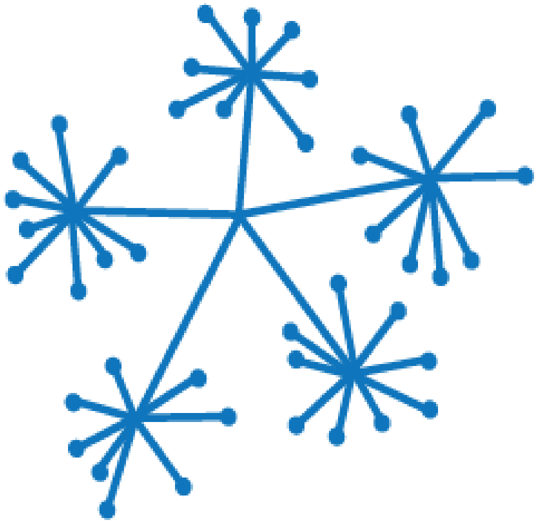
Reinventing the Incentives

- **EUREKA tokens = track record + $$$**
- **Author fee distribution proposal:**
  - 1% for token holders
  - 2% for Eureka platform provider
  - 30% for reviewers
  - 12% for handling editor
  - **30% for referenced/linked authors**
  - **25% will be locked in case of invalidation**
- **Author has:**
  - Publicly timestamped manuscript
  - Public rating record
  - If author was referenced: EUREKA tokens
- **Reviewer has:**
  - Public record of reviews
  - EUREKA tokens
- **Editor has:**
  - Public record of journal manuscript
  - EUREKA tokens



Why Blockchain?

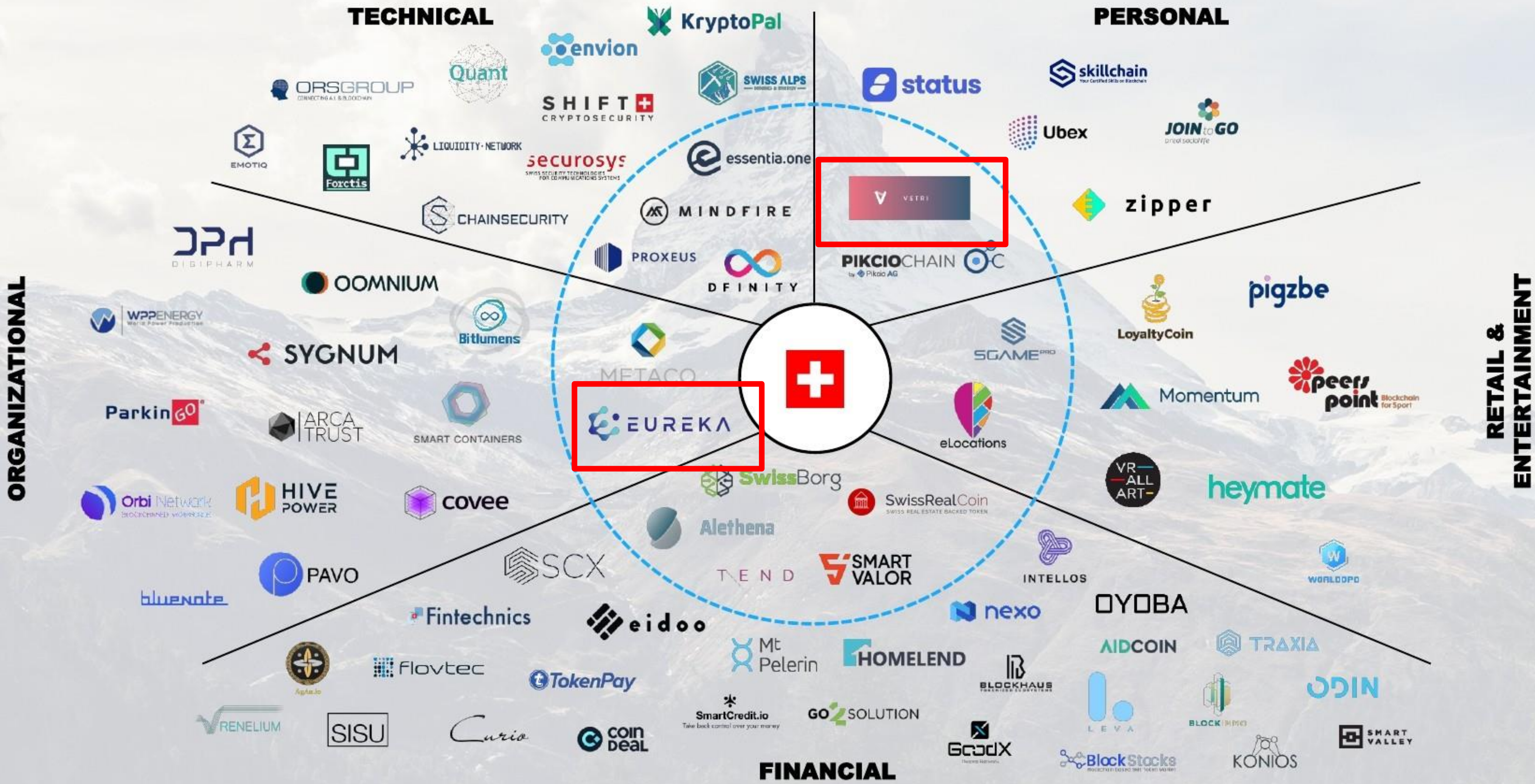
- **It can be done with todays technology!**
- **However…**
  - Micro payment with our banking system not feasible
    - Solution: Use central service collection funds until threshold
  - Banking transactions are expensive (sending to Africa/India?)
    - Solution: Increase threshold (e.g., low for SEPA, higher for payment outside)
  - IBAN can change – if you change your bank
    - Solution: keep IBANs in sync with users where possible



- **Or, use a blockchain (e.g. Ethereum)**

SWISS BLOCKCHAIN STARTUPS – NEWCOMERS 2018[1)]

MARKET SCREENING OF 78 PROJECTS & SELECTION OF TOP 15 STARTUPS



BLOCKNOVUM

Note: Inclusion on map is no endorsement and does not indicate the quality and investment potential of an individual startup. Selection of top projects represents a current view and might change in the future.

1) Selection includes Blockchain-related companies that were founded / have their headquarters in Switzerland. Projects count as "Newcomers" if they have conducted / are planning an ICO in 2018, if they were founded in 2018, or gained market traction in 2018.

Top 50 Crypto Valley Companies in Switzerland

- **Selection criteria:**
  - “Funding in excess of US$10 million, a valuation of more than U$10 million or the provision of at least 10 full-time positions in Switzerland or Liechtenstein.”
- **Funding total: 2.2b CHF**
- **Valuation total: 44b CHF**
- **Employees: 443**

http://fintechnews.ch/blockchain_bitcoin/top-15-swiss-blockchain-newcomer-startups-in-2018/21649/

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Questions?

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