

Blockchain : from the flurry of alternatives to the fury of ICOs

ASPROM
November 8th, 2017

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Some major alternatives

	Private	Public
Native Token		  ethereum  
No Token	 HYPERLEDGER * 	Lightning Network

* Corda has been developed by R3 (financial industry) while B3i (insurance) uses Hyperledger.

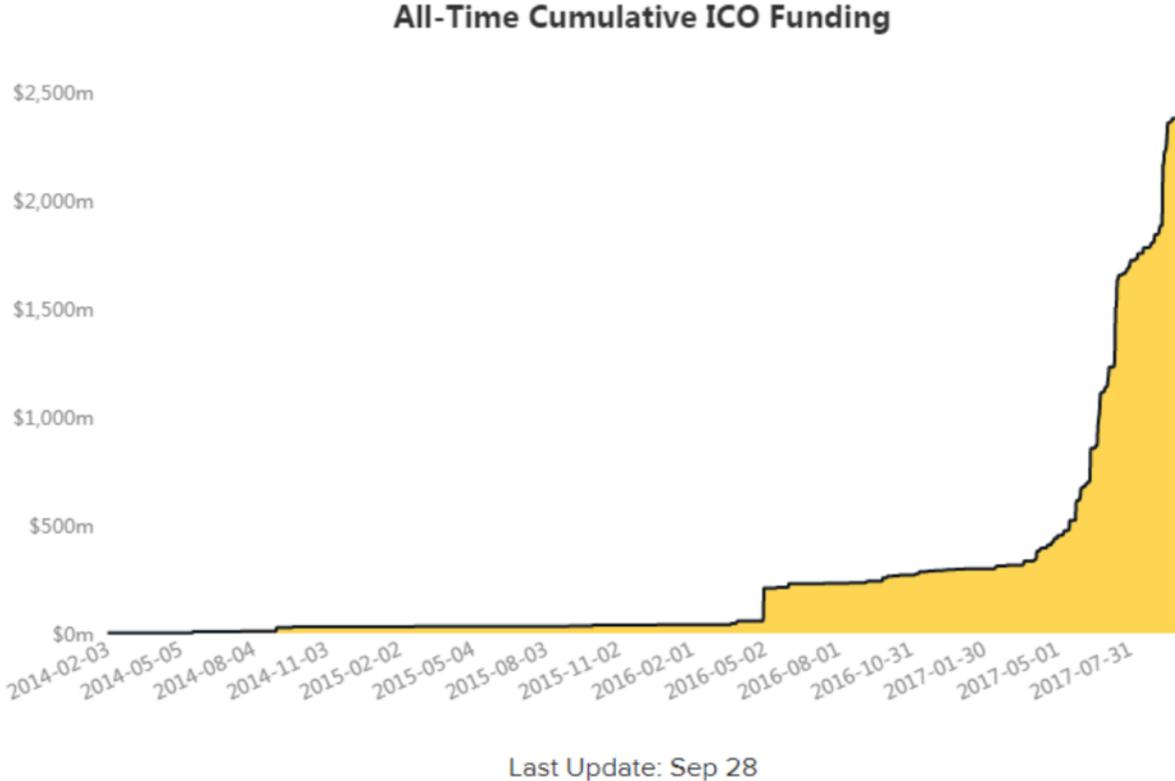
First remarks

- Not all platforms retain certain crucial characteristics of Bitcoin's first blockchain and can indeed pretend to be a blockchain ;
- Some central issues :
 - Information security ;
 - System/platform control and data immutability ;
 - Choice of usage and scalability throughput (sidechains, payment channels, and so forth can greatly simplify things ; choosing what needs to be recorded on a blockchain is key) ;
 - Interoperability ;
 - Traceability and how to reduce the physical/virtual chasm (issue across many industries / supply chain, counterfeiting, etc.) ;
 - Very interesting prospects for academic research (distributed systems / synchronous and asynchronous) ;
 - Race to become a standard, and leverage a first-mover advantage, is visible in the ICO phenomenon.

What is an ICO ?

- An initial coin offering (ICO), or "token sale" or "token generating event" can be loosely described as a means of crowdfunding whereby tokens giving their owners certain rights are sold in exchange for cryptocurrencies (or fiat money) ;
- The first ICO took place in July 2013, for Mastercoin, followed in 2014 by Ethereum's token sale and a few others ;
- Volumes started picking up with TheDAO's offering in May 2016, which rose c. \$150m, but it is only in 2017 that significant volumes were achieved ;
- ICOs pose certain regulatory challenges as, similar to crowdfunding in its initial days, they are usually (very) different from standard securities offering and there is little (or simply no) regulatory framework that exists yet in most jurisdictions to monitor them ;
- As we will see, existing regulatory stances vary a lot from from one country to the next.

ICO Funding (1/3)



Source : CoinDesk

ICO Funding (2/3)



Source : CoinDesk

ICO Funding (3/3)



Total Raised: \$2,345,301,347

Total Number of ICOs: 153

Top Ten ICOs of 2017

Position	Project	Total Raised
1	Filecoin	\$257,000,000
2	Tezos	\$232,319,985
3	EOS Stage 1	\$185,000,000
4	Bancor	\$153,000,000
5	Kin	\$97,041,936
6	Status	\$90,000,000
7	TenX	\$64,000,000
8	MobileGO	\$53,069,235
9	Sonm	\$42,000,000
10	Aeternity	\$36,960,594

Total Raised: \$96,389,917

Total Number of ICOs: 46

Top Ten ICOs of 2016

Position	Project	Total Raised
1	Waves	\$16,436,095
2	Iconomi	\$10,576,227
3	Golem	\$8,596,000
4	SingularDTV	\$7,500,000
5	Lisk	\$5,700,000
6	Digix DAO	\$5,500,000
7	FirstBlood	\$5,500,000
8	Synereo	\$4,700,000
9	Decent	\$4,178,357
10	Antshares / NEO	\$3,608,378

Tezos



Bancor

Source : CoinSchedule

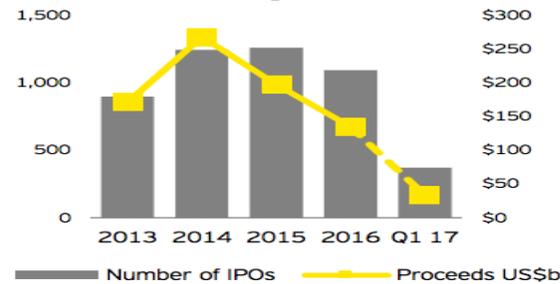
IPO Funding

Markets Q1 2017

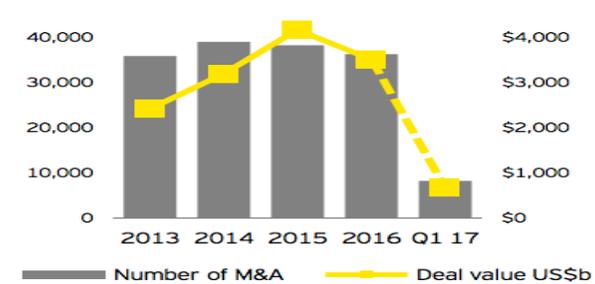


All amounts in table are in US\$

IPO activity

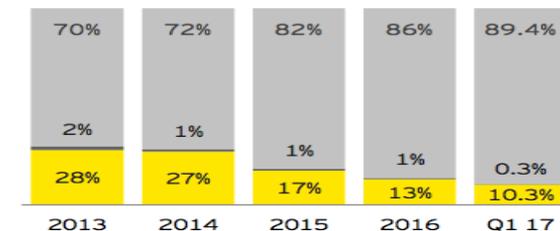
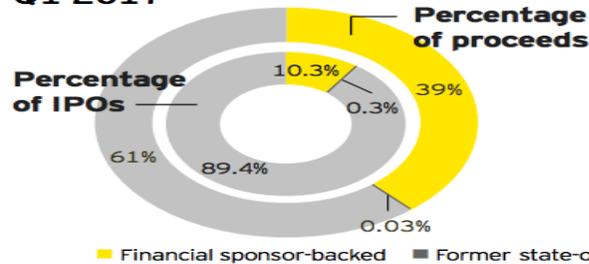


M&A activity



Sources of IPOs

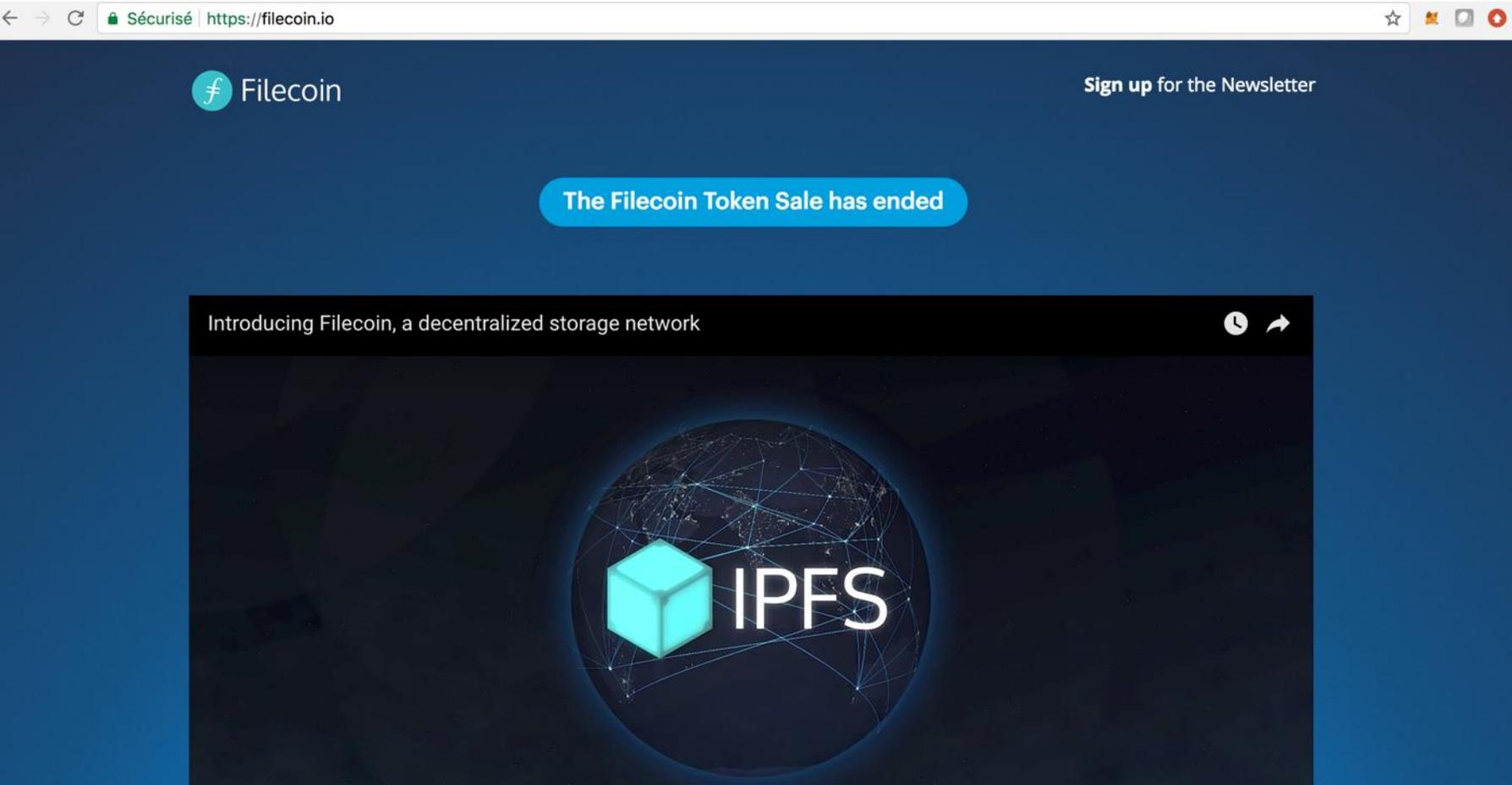
Q1 2017



Figures may not total 100% due to rounding

Source : E&Y.

Filecoin : a decentralized storage network...



Tezos : a new digital commonwealth...

← → ↻ Sécurisé | <https://www.tezos.com> ☆ 📧 📱 🔔

Tezos

A new digital commonwealth

Tezos is a new decentralized blockchain that governs itself by establishing a true digital commonwealth. It facilitates formal verification, a technique which mathematically proves the correctness of the code governing transactions and boosts the security of the most sensitive or financially weighted smart contracts.

[Learn more](#)

[Learn more about the Tezos Foundation and the fundraiser](#)

[Position paper](#) [Technical white paper](#)

Fundraiser has closed

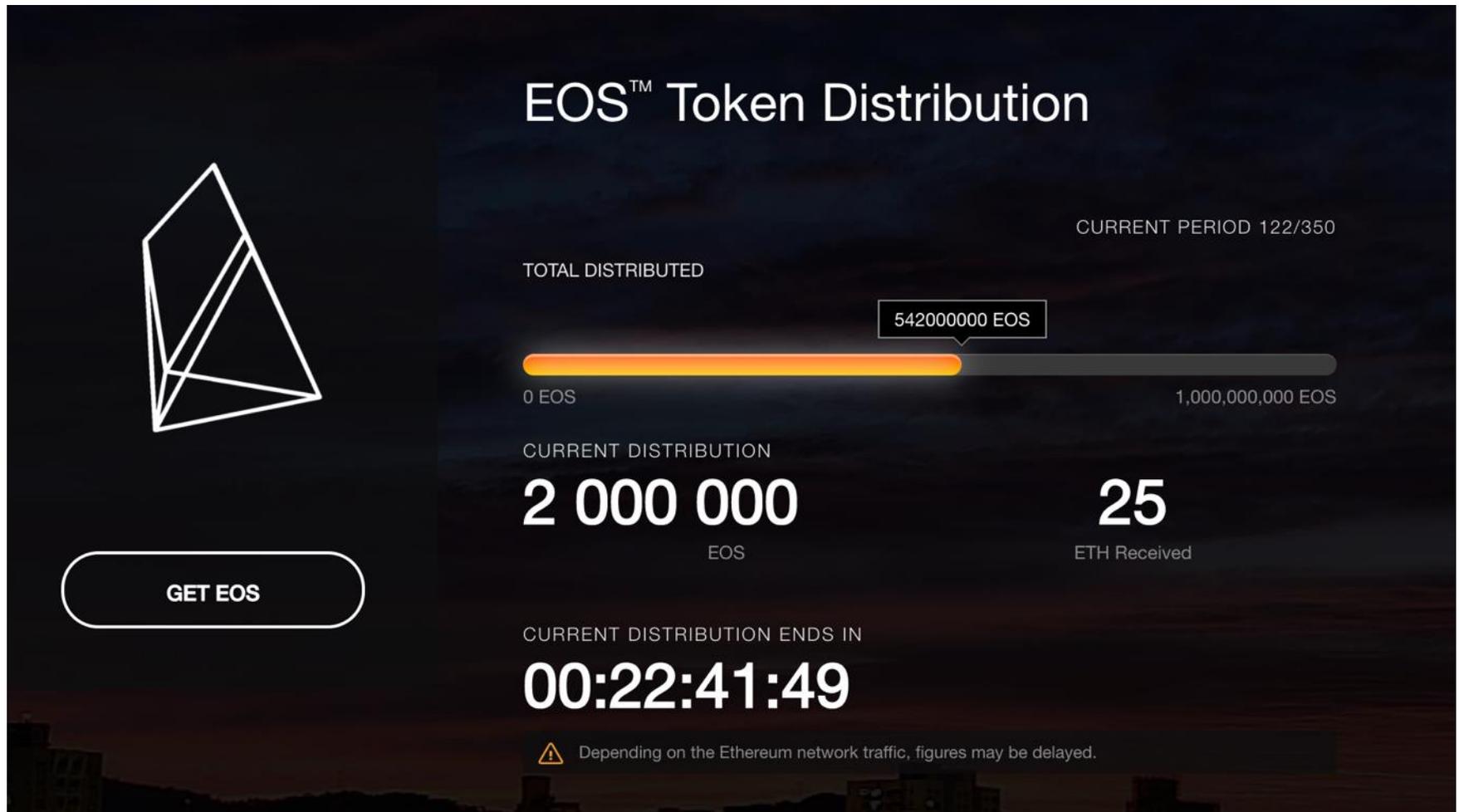
XBT ETH

CONTRIBUTED

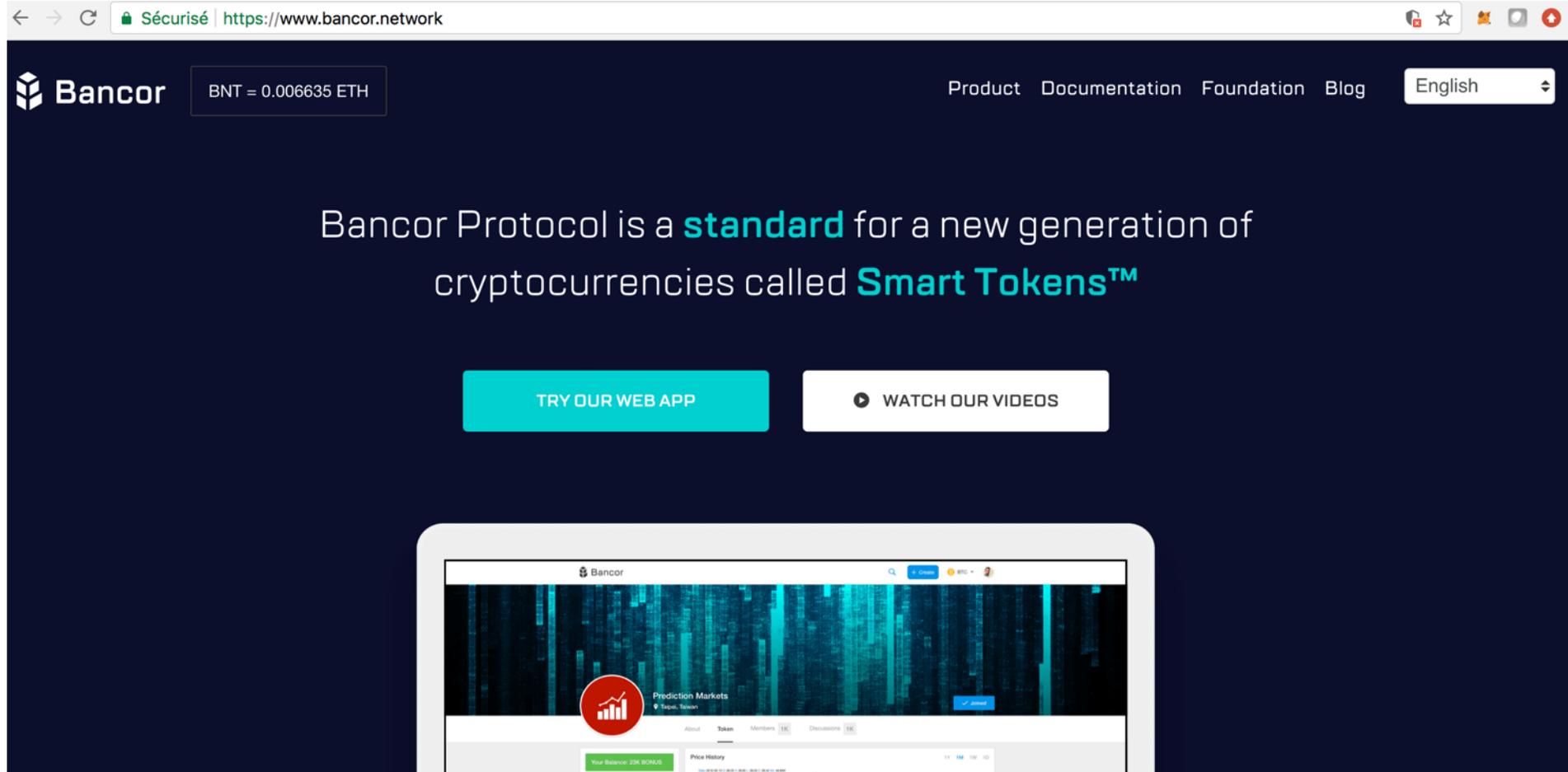
You can check your contribution at check.tezos.com

Like 5.5K Tweet

EOS : an infrastructure for decentralized applications...



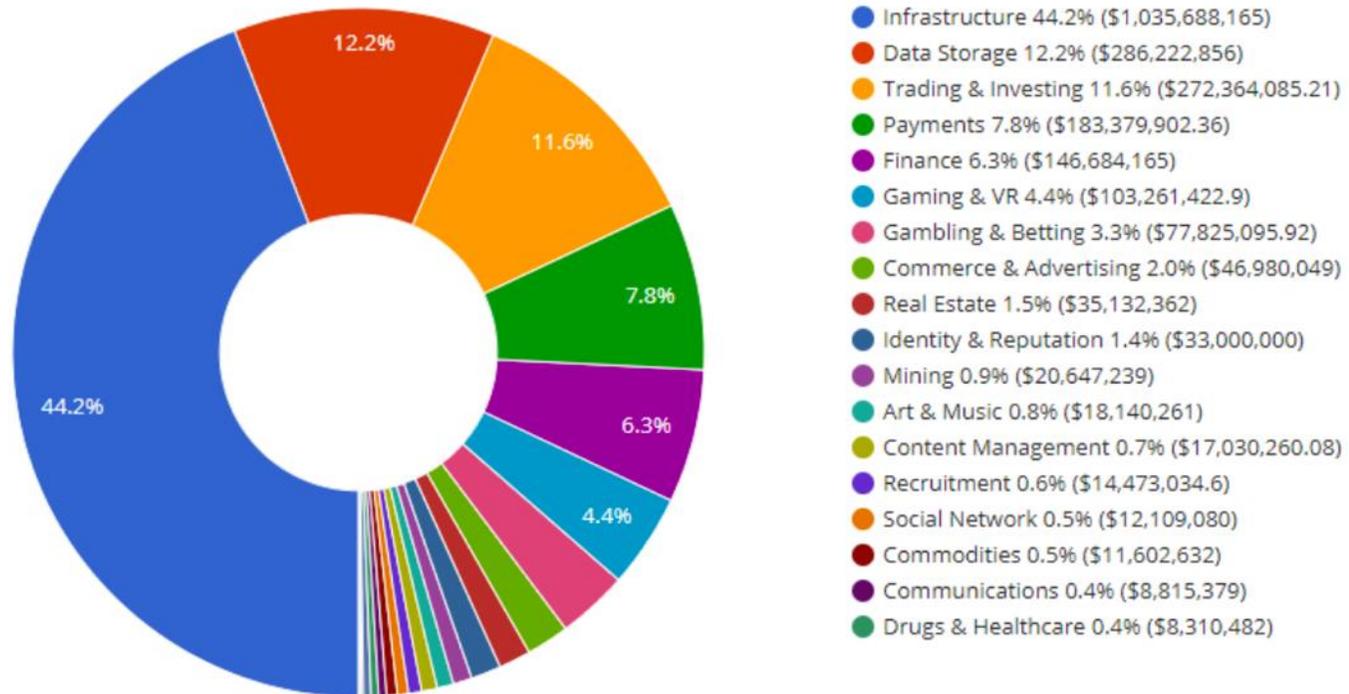
Bancor : a standard for Smart Tokens



The image shows a screenshot of the Bancor website homepage. At the top left is the Bancor logo and a price display showing "BNT = 0.006635 ETH". The top right navigation menu includes "Product", "Documentation", "Foundation", "Blog", and a language selector set to "English". The main content area features the text: "Bancor Protocol is a **standard** for a new generation of cryptocurrencies called **Smart Tokens™**". Below this text are two buttons: "TRY OUR WEB APP" (in a teal box) and "WATCH OUR VIDEOS" (in a white box with a play icon). At the bottom, a laptop displays a "Prediction Markets" interface with a red circular icon containing a white bar chart, and sections for "Your Balance: 23K BONUS" and "Price History".

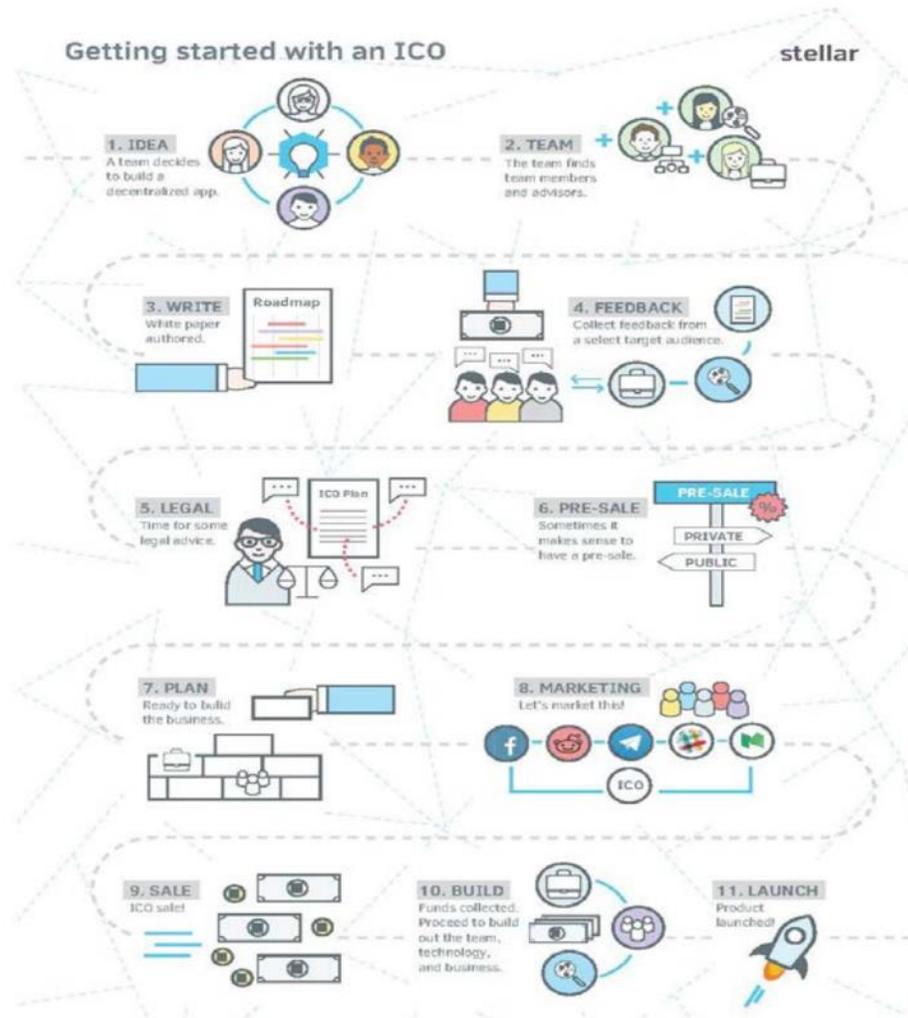
Sectors covered by ICOs

ICOs by Category 2017



Source : CoinSchedule

ICO Process



Source : Stellar

Token Characteristics and ICO typology

- Tokens are digital representations of a set of rights. These rights can vary :
 - (i) utility tokens - tokens can be exchanged against goods or services ;
 - (ii) equity tokens - tokens represent rights to a share of future profits or voting rights ;
 - (iii) community tokens - tokens can be exchanged within a community ;
 - (iv) asset token - tokens are backed by an asset.
- Most of current ICO regulatory inquiries focus on whether the token can be deemed an equity token and/or create an investment contract (so-called “Howey Test” ; SEC Release No. 81207 / July 25, 2017 , Report of Investigation Pursuant to Section 21(a) of the Securities Exchange Act of 1934: The DAO) ;
- Other situations are not as clear ;
- An extended ICO typology takes many other characteristics into consideration : legal structure of the ICO sponsor (or lack thereof) ; means of acquiring ICO tokens (with cryptocurrencies or fiat money) and trading support on crypto-exchanges ; presence of AML/KYC procedures ; quality of white paper and other documentation and access to the code ; pre-sale and sale process, audit process, etc.

ICO Regulatory Landscape (1/3)

Positions vary a lot from an outright ban (China) to a wait-and-see approach for most countries trying to find a good balance between enabling innovation and protecting investors/consumers. Some of the jurisdictions that have made public statements on ICO regulation include :

- UK FCA – opinion on 12/9/2017 – (i) risky/warning to investors and (ii) FCA considers itself as not appropriate to regulate all ICOs ;
- France AMF – statement on 2/10/2017 – AMF wants to take a stance (quickly) ;
- Switzerland FINMA – 29/9/2017 – announcement is made that various ICOs are being investigated ; Guide 04/2017 published same date states that depending upon their structure, ICOs should be treated with various bodies of existing legal framework ;
- Canada CSA – note on 24/8/2017 – (i) ICO tokens could be considered as financial securities but not necessarily all of them (ii) tokens could also in certain cases be considered as derivatives securities ;

ICO Regulatory Landscape (2/3)

- Gibraltar - 22/9/2017 - announces it is considering putting in place a regulation on cryptocurrency transfers and warns investors of risks ;
- Israel ISA - 30/8/2017 - announced that a committee would be put in place to rule on whether ICOs should be considered financial securities ;
- Russia - warnings on ICO risks and would like to restrict them to certain qualified investors through Moscow Stock Exchange ;
- South Korea FSC - 3/9/2017 - working group created and need to improve KYC and combat terrorism financing - 29/9/2017 - ICOs are declared illegal and position is justified by the alleged claim that there are a growing number of fraudulent ones ;
- China - 4/9/2017 - forbidden and money must be returned to “investors” for past ones ;

ICO Regulatory Landscape (3/3)

- US SEC – 25/7/2017 - Companies that are issuing tokens as part of an ICO (if they are considered securities) need to register with the commission ; and similarly, online exchanges where tokens are bought and traded may have to register as security exchanges ;
- Singapore MAS – 1/8/2017 – certain tokens should be considered financial securities... in which case a prospectus is needed and so forth... ;
- HK SFC – 5/9/2017 – essentially same as Singapore ;
- Malaysia SC – 7/9/2017 – warns investors of ICO risks, in particular related to checking/doing due diligence on issuer and its operations ;
- Vietnam – PM has tasked SBV and various ministries to assess how the government should approach this process by August 2018, with the expectation that legal documents required to recognize cryptocurrencies under a regulatory framework should be completed by the end of 2018 (tax treatment for cryptocurrencies should also be clarified).

Focus on EU : are ICOs MiFID compatible ?

- MiFIR deals with* :
 - ensuring that organised trading takes place on regulated platform ; [ICOs : *Few token platforms are not regulated*]
 - introducing rules on algorithmic and high frequency trading ; [ICOs : *some smart contracts can be considered as algorithmic trading*]
 - improving the transparency and oversight of financial markets – including derivatives markets - and addressing some shortcomings in commodity derivatives markets ; [ICOs : *transparency in secondary markets is difficult*]
 - enhancing investor protection and improving conduct of business rules as well as conditions for competition in the trading and clearing of financial instruments. [ICOs : *the protection of investors is the big debate*]

*Source : <https://ec.europa.eu>

Focus on EU : are ICOs MiFIR compatible ?

- MiFID 2 aims to reinforce the current European rules on securities markets by* :
 - disclosure of data on trading activity to the public ; [ICOs : *difficult because of P2P nature of platforms*]
 - mandatory trading of derivatives on organised venues ; [ICOs : *derivatives market is small*]
 - removal of barriers between trading venues and providers of clearing services to ensure more competition ; [ICOs: *does it even make sense ? There are no such barriers*]
 - specific supervisory actions regarding financial instruments and positions in derivatives. [ICOs: *only equity tokens can be considered financial instruments*]

*Source : <https://ec.europa.eu>

What should an IPO prospectus contain ?

- ✓ Risk factors
- ✓ Auction process
- ✓ Use of proceeds
- ✓ Dilution
- ✓ Operational/technical data
- ✓ Financial data
- ✓ Management
- ✓ Corporate governance
- ✓ Principal and selling stockholders
- ✓ Underwriters
- ✓ Legal matters

Why it matters : evidence that the quality of a prospectus has predictive value for post-IPO performance (e.g. Bhabra & Pettway [2003])

How is it addressed by an ICO ?

[Whitepaper + website and Medium blog posts] as best proxies for IPO prospectus

- Risk factors : minimal (warning of total loss risk during the contribution process)
- ✓ **Auction process**
- ✓ Use of proceeds
- Dilution
- ✓ **Operational/technical data : can be very extensive**
- Financial data
- Management
- ✗ *(Corporate) governance* [In some cases yes, though rarely “corporate”]
- Principal and selling stockholders
- Underwriters
- Legal matters

Where are we heading with ICOs and their regulation ?

- Investor protection is the primary concern but participants in ICOs are not always investors and can have other motivations than purely financial (e.g. legal structure of the hosting entity is often a foundation) ;
- If some ICOs provide tokens that can be easily qualified as investment securities/contracts, many others are hard to classify and can be many-sided new objects ;
- Despite lack of explicit regulation in many situations, there are implicit control mechanisms in place to prevent total scams (team reputation, technical due diligence on developers' forums, etc.) ;
- In the long run, precisely because of control mechanisms (multi-sigs, timers, etc.) that smart contracts can put in place, it should be possible to mitigate risk factors and improve participant/investor protection (in particular, relative to an IPO mechanism) - a proper ICO mechanism could be a tool for better regulation ;
- In France, there is an on-going consultation with AMF offering 3 options ((i) legal status quo but best practices ; (ii) using existing offering memorandum legal framework ; (iii) new dedicated regulation, either compulsory or optional).



THANK YOU FOR YOUR ATTENTION !