WEBINAR

DISTRIBUTED LEDGER TECHNOLOGY (DLT): EMERGING TRENDS AND REAL-WORLD CASES

MODERATOR

SCOTT RILEY, BLOCKCHAIN BUSINESS LEAD, KYNETIX

kynetix

Presenters

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DAYLI Venture Capital
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DLT Lead, Kynetix
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https://clearingandsettlement.blogspot.com/

Matthew Britton
Director, BCS Consulting
https://www.bcsconsulting.com/blog/new-technology-can-enable-human-bank/

✕ Generalisation 1: BTC v DLT

13 Sept 2016

Revolutionary Blockchain Technology Firm, Paxos, Unveiled [1]

itBit

PAXOS

✕ Generalisation 2: Business needs to meet technology.
✕ Generalisation 3. Technology is an enabler.

1. http://www.prnewswire.com/news-releases/revolutionary-blockchain-technology-firm-paxos-unveiled-today-300326663.html

Observations 1

Note: Ledger...is a noun...not a verb!

X Observation 1: The D in DLT is for Distributed

What is distributed & to whom?

X Observation 2: The L in DLT is for Ledger

What are the underlying data structures?

X Observation 3: The T in DLT is for Technology

What is the technology stack?

Generalisation 4. Not everything will be distributed
Generalisation 5. Permissioned is the way to go

Observation 4: Business Models

Observation 5: Adoption - Governance.
Observation 6: Adoption - Legal framework.
Observation 7: Adoption - Regulation

Lack of contracts is a non-starter

"Legal theories aren't the hard part here, jurisdiction is. In the absence of an express contract between someone with bitcoin and someone who can change the rules, you enter into the world of implied contracts and equitable remedies."

- Stephen Palley, attorney

Other challenges with existing anarchic systems (cryptocurrencies)

In addition to governance / dispute resolution:

- Definitive settlement finality (versus probabilistic or heuristic settlement finality)
  - What happens during defaults and bankruptcies?
- Data sovereignty / data custody / regulated data
- Without central bank-issued digital currency, how to have on-chain settlement of financial agreements?
- How to handle controlled transparency, scalability, and risk modeling?
- Assuming DLTs can do what some proponents claim they can, how does this impact market infrastructure participants (e.g., exchanges, clearinghouses, custodians, etc.)?

Prof Philipp Paech (LSE)

- Programs that can enforce and action legal contracts, such as master agreements and CSAs, would potentially be a huge benefit.

- They would increase automation and create more certainty in transactions.

- However, they are legally problematic.

- Existing law recognizes that not every possibility can be anticipated and contractually specified, hence the need for courts.

Cont'd

- Regulators may need the option to stop the execution of some 'Smart Contracts' to protect the stability of the financial system.

- The more exceptions that have to be considered, the less "Smart" the contract can be assumed to be and the more they simply look like existing computer programs.

- Paech also considers the dangers that would occur if there really were many "unstoppable" smart contracts operating and interacting: "the more intertwined smart contracts become and the lower the degree of control by humans, the more difficult it will be to govern this phenomenon."
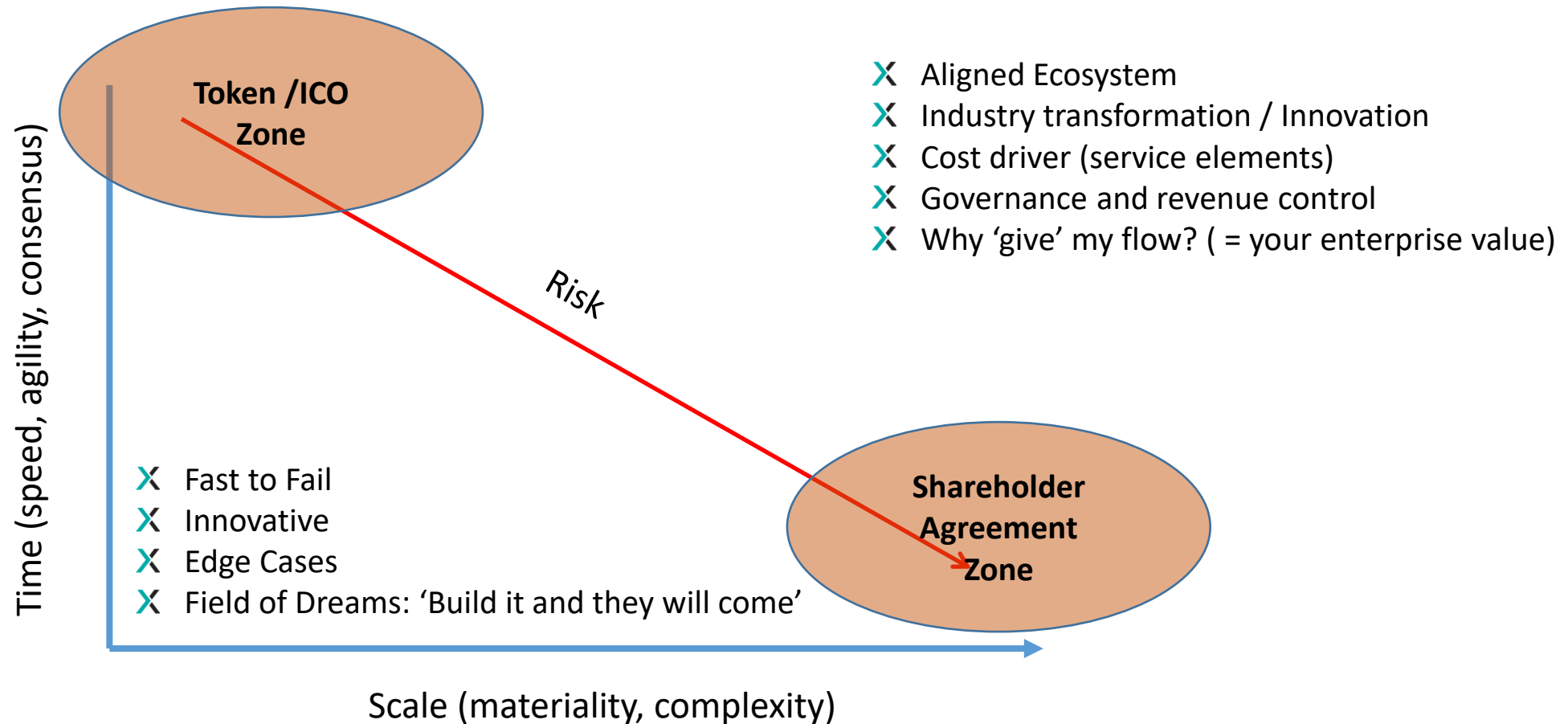
Business Model

Revenue Model

X Identify ontology…and determine where user value is
X Stakeholders control revenues (costs of service)

Expense Model

X Identify technology solution (and scale proportionally)
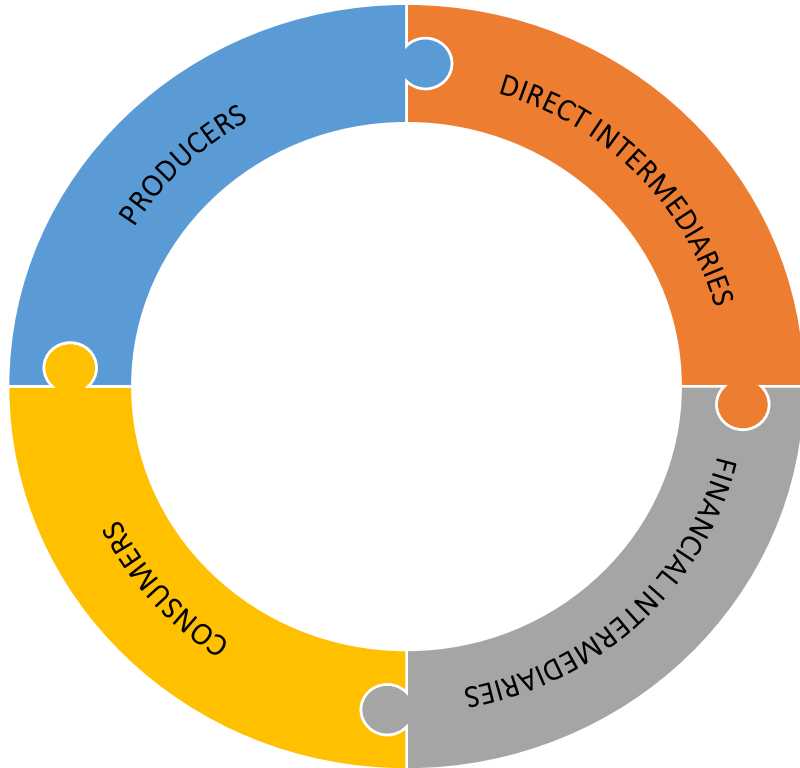X Manage flows and pricing relative to cost base

Value Proposition

X Reduce operational friction (through consensus and distribution);
X Reduce capital costs with clear allocation and ownership (providence)
X Increase velocity of capital (increased abilty to re-cycle capital)

Governance

X Dispute resolution;

X Alignment on business model (and pricing);
X Inclusion / expansion;
X Strategy and priority

Legal

X Certainty and Finality;

X Jurisdiction;
X Recourse;
X 'Fair' and flexible

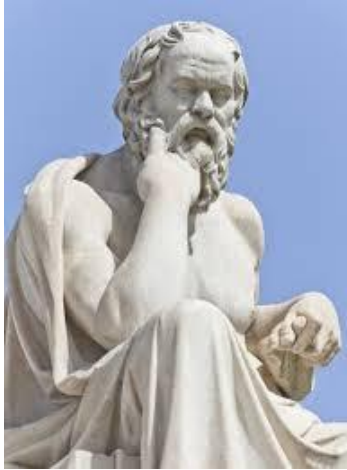**Regulatory**
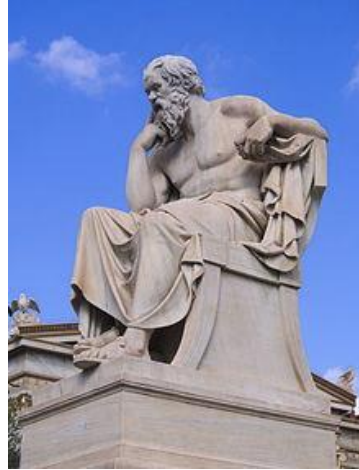
X Fair and orderly, investor protection;

X No surprises;
X No explicit approval, but full awareness.
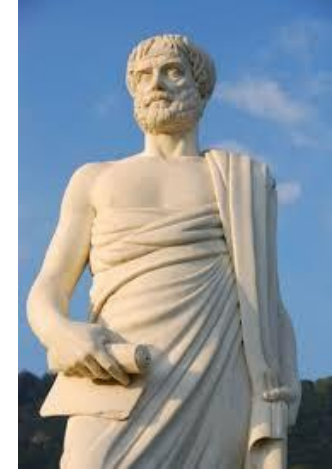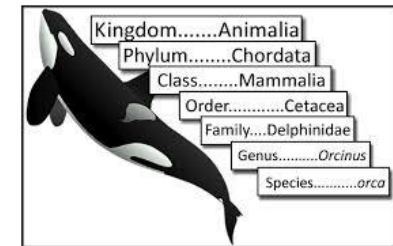
Socrates
470 – 399 B.C.

Plato
428 – 348 B.C.

Aristotle
384 – 322 B.C.

Government

Identity: Age permissioning
Records: NHS
Charity: Distribution

Industry

Pharma / Distribution

Financial Services

Anarchy

Physical

Capital

Workflow

Other

Payments

Securities

Derivatives

Services

CeBM
CoBM
Micro
Retail

Trade Finance

Title

Identity

http://clearingandsettlement.blogspot.com

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Platform / Network

Chain

Fabric

Quorum

Product / Full-Stack

Digital Asset Holdings

RISE FINANCIAL

AXONI

symbiont

SETL

ripple

Proprietary / Closed

Fully Open Source
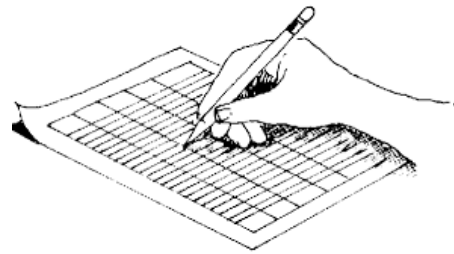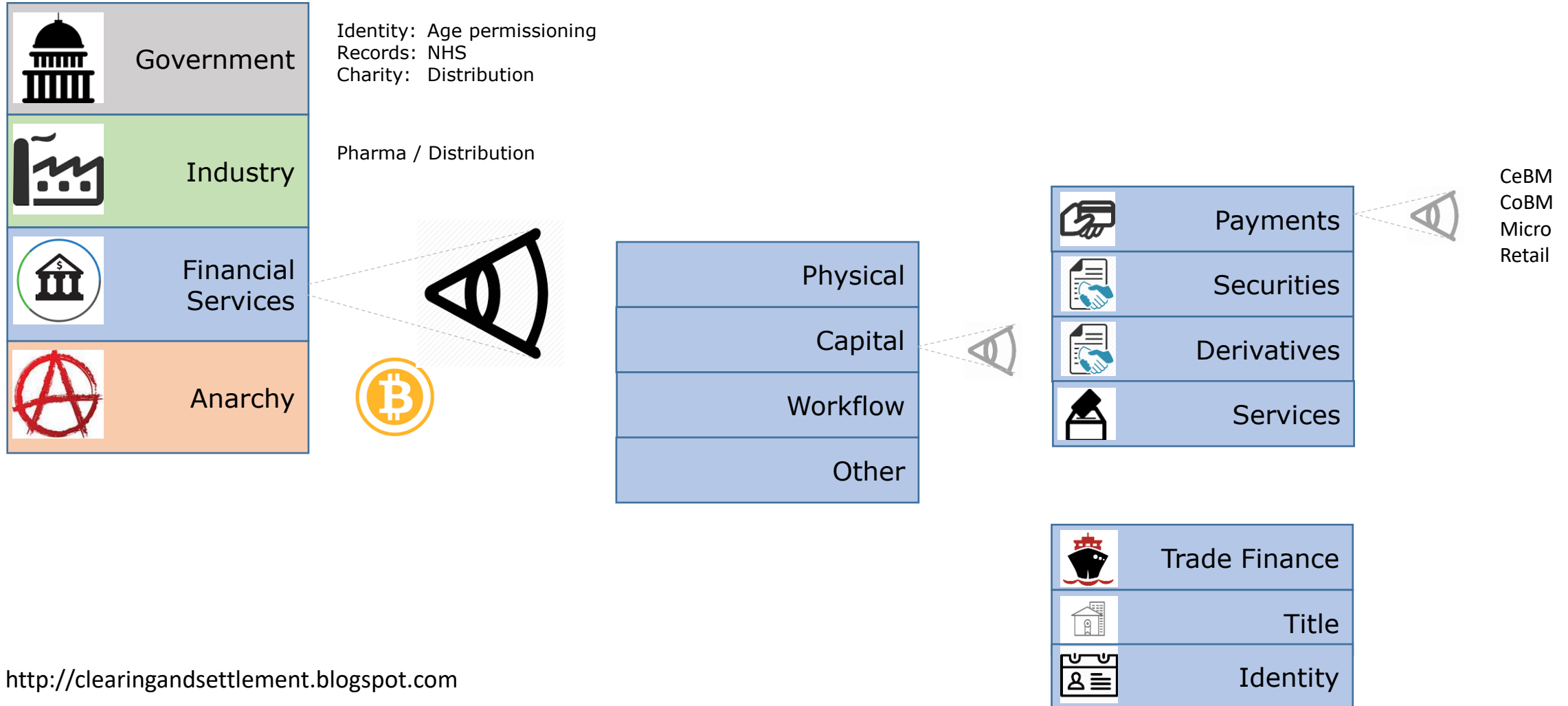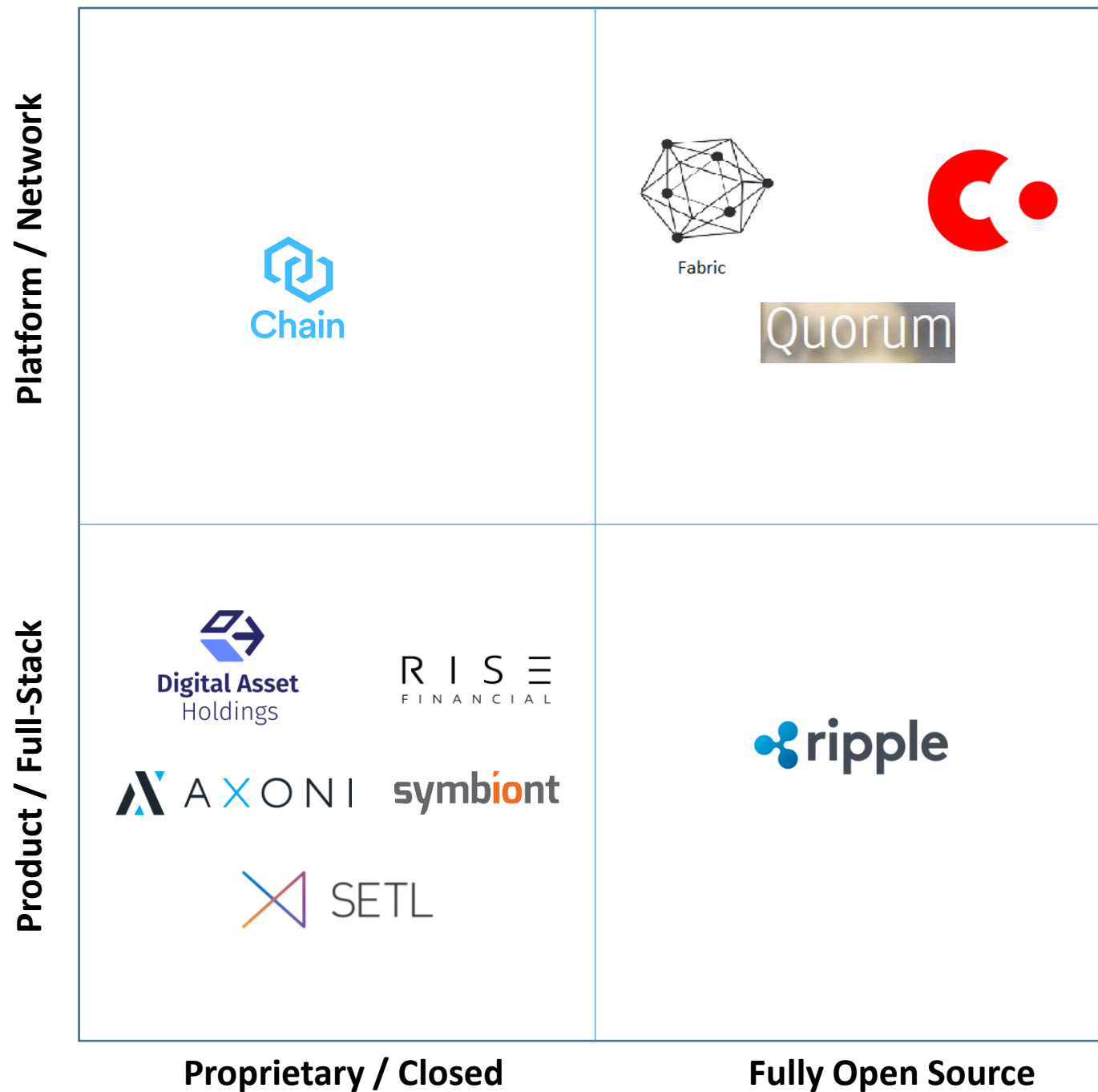
Open source versus closed source

Currently, the Enterprise DLT market consists of firms pursuing, broadly, two fundamentally different strategies:

- **Open/horizontal:** Building and running a big (market-sized) horizontal platform

- **Closed/vertical:** Proprietary, full-stack around specific products, non-interoperable, "faupen source"

Quick stats

- Headcount of the ten most well known Enterprise-focused DLT startups in NYC, London, San Francisco is around 750-800 FTE
  - Also includes: ConsenSys Enterprise (subsidiary only), Clearmatics, Peernova
- Funding collectively for those same ten startups is around $450m

- Worth emphasizing that this doesn't include headcount at banks (who have teams as large as 25+ dedicated to these projects) or large enterprises with their own teams (IBM, Microsoft, Oracle, SAP)

Singapore Diamond Investment Exchange Partners With Kynetix And Everledger To Trial First-Ever Blockchain Verification And Record-Keeping Service For Diamond Trading

http://www.mondovisione.com/media-and-resources/news/singapore-diamond-investment-exchange-partners-with-kynetix-and-everledger-to-tr/

What's going on: Elsewhere

🗝️ Media

🗝️ Unique Items

🗝️ Proxy Voting

🗝️ Insurance

🗝️ Voting

🗝️ Identity

🗝️ …anything…your thing

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ICO Liquidity

ICOs: What are the risks?

Unregulated space: Most ICOs are not regulated by the FCA and many are based overseas.
No investor protection: You are extremely unlikely to have access to UK regulatory protections like the Financial Services Compensation Scheme or the Financial Ombudsman Service.
Price volatility: Like cryptocurrencies in general, the value of a token may be extremely volatile – vulnerable to dramatic changes.
Potential for fraud: Some issuers might not have the intention to use the funds raised in the way set out when the project was marketed.
Inadequate documentation: Instead of a regulated prospectus, ICOs usually only provide a 'white paper'. An ICO white paper might be unbalanced, incomplete or misleading. A sophisticated technical understanding is needed to fully understand the tokens' characteristics and risks.
Early stage projects: Typically ICO projects are in a very early stage of development and their business models are experimental. There is a good chance of losing your whole stake.

https://www.fca.org.uk/news/statements/initial-coin-offerings

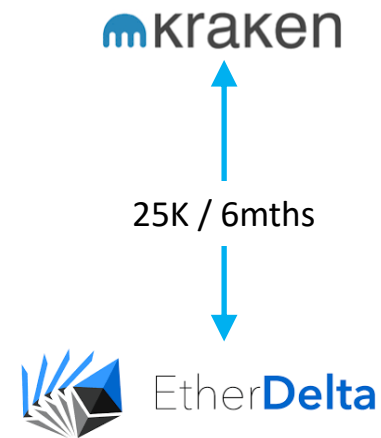https://www.sec.gov/oiea/investor-alerts-and-bulletins/ib_coinofferings

ICO Liquidity

WooHoo, I have a token!
….now what do I do with it?

Trade it!
….liquidity, Primary and Secondary trading
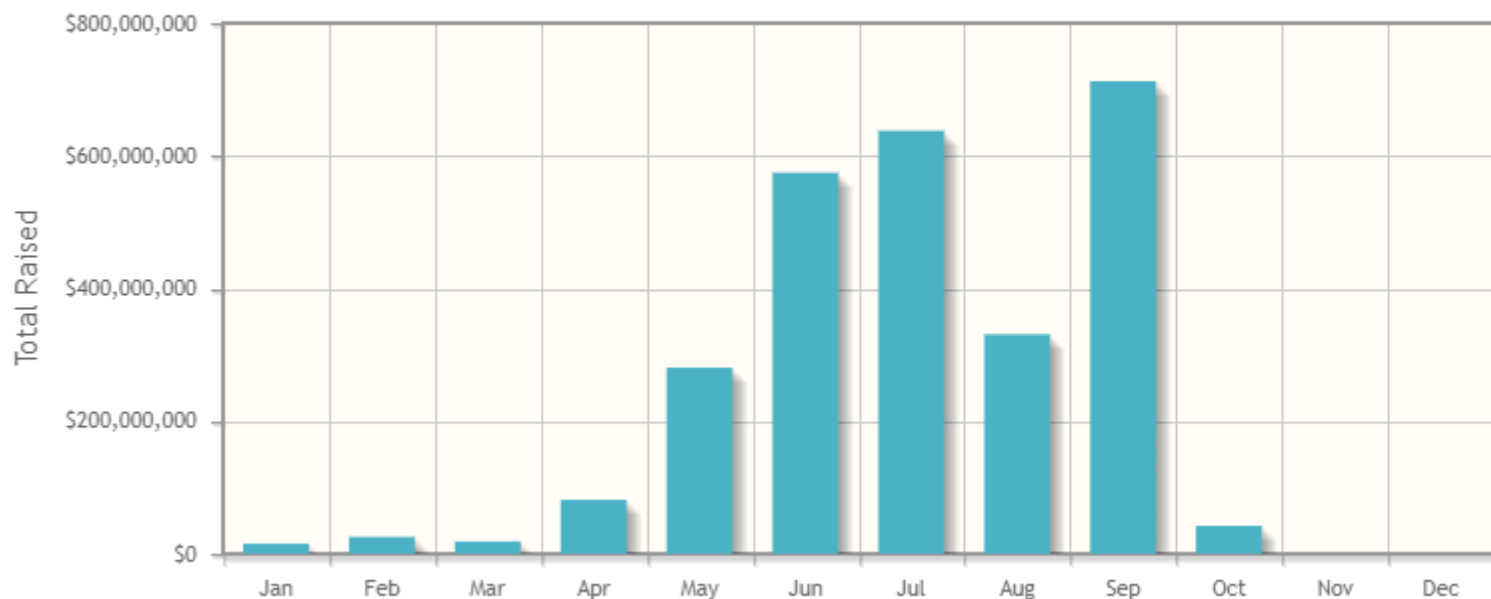
kraken (By invitation)

25K / 6mths

EtherDelta DIY

CoinSchedule
The Best Cryptocurrency ICO Crowdfundings and Projects

Cryptocurrency ICO Stats 2017

Totals raised are grouped by the ICO closing date and are valued using BTC exchange rate at that time. Data correct on 9th October 2017 14:00 UTC

Total Raised: $2,719,758,302

Total Number of ICOs: 175

Top Ten ICOs of 2017

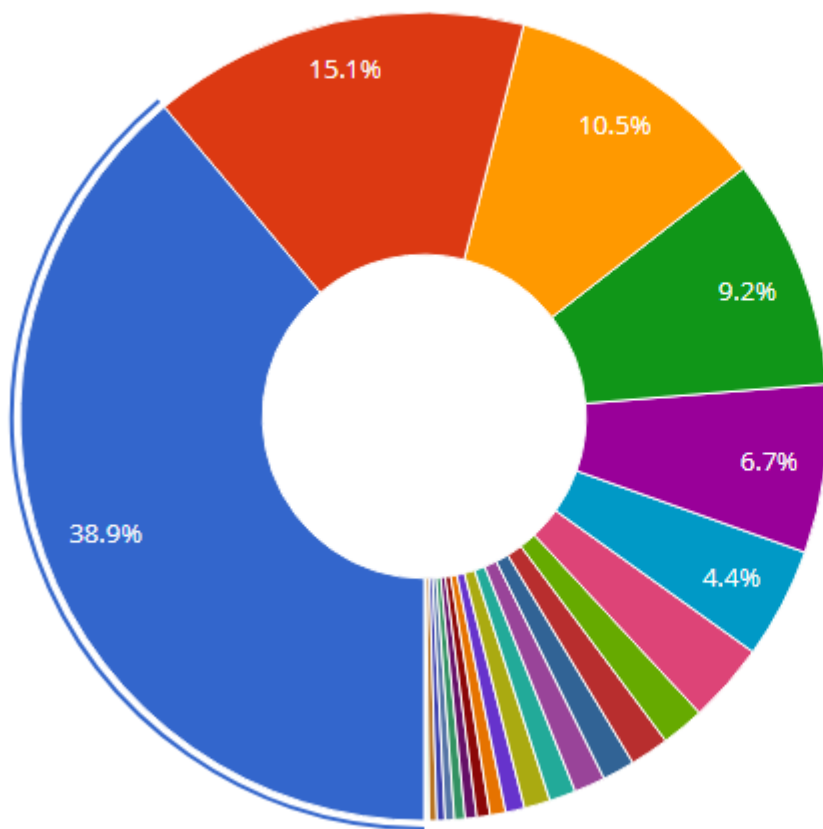| Position	Project	Total Raised
1	Filecoin	$257,000,000
2	Tezos	$232,319,985
3	EOS Stage 1	$185,000,000
4	Bancor	$153,000,000
5	Kin	$97,041,936
6	Status	$90,000,000
7	TenX	$64,000,000
8	MobileGO	$53,069,235
9	KyberNetwork	$48,000,000
10	MCAP	$45,192,400

Unintended Consequences….

CoinSchedule
The Best Cryptocurrency ICO Crowdfundings and Projects

ICOs by Category 2017

- Infrastructure 38.9% ($1,057,285,169.8)
- Trading & Investing 15.1% ($410,288,845.68)
- Data Storage 10.5% ($286,222,856)
- Finance 9.2% ($250,924,265)
- Payments 6.7% ($183,379,902.36)
- Gaming & VR 4.4% ($120,710,678.9)
- Gambling & Betting 3.2% ($86,825,095.92)
- Commerce & Advertising 1.7% ($46,980,049)
- Identity & Reputation 1.6% ($42,359,520)
- Real Estate 1.3% ($35,132,362)
- Art & Music 1.2% ($33,870,901)
- Energy & Utilities 1.1% ($28,866,928)
- Events & Entertainment 1.0% ($28,274,811.5)
- Mining 0.8% ($20,647,239)
- Content Management 0.6% ($17,030,260.08)
- Recruitment 0.5% ($14,473,034.6)
- Social Network 0.5% ($12,460,182.12)
- Commodities 0.4% ($11,602,632)

▲ 1/2 ▼

Has ICO Cryptocapital Exceeded Early Stage Venture Capital Funding? Yes.

10 Jul 2017   By : William Mougayar   0 Comments   Tag: blockchain, ICO, Venture Capital

G+ **Share** ⟨ 1

in **Share**
⟨ 37

Ever since the Bancor and Gnosis ICOs kicked the door open on creativity and boldness in ICO campaigns, the appetite for ICOs has been steadily increasing during the month of June and continuing into early July.

I sensed that June was a pivotal month that may be setting the tone for the next months to come. So, I spent a good part of the past several days trying to tally-up exactlyhow much what raised during that month, and by whom.

I was surprised (and you should be appalled) to find out that many ICOs were completed, yet the amount raised were not visible on their ICO sites.

To sum it up, 36 companies raised $601.1M in June 2017 alone.

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In other words

- ICO-backed projects raised more capital (~$601m) in one month alone than the ten most well known Enterprise-specific DLT startups did in two years.

- Valuation mismatch?

- Fair comparison of B2B versus B2C/C2C?

- Investor / speculator goals aligned with long-term platform goals?

Different community dynamics for ICOs

- Employee
- Investor
- Advisor
- Volunteer
- Enthusiast
- Advocate
- Partisan
- Maximalist! and their sock puppets

How to measure success and traction?

- Enterprise had an unrealistic short time horizon causing fatigue
  - Press releases for nearly every proof of concept.
  - A near infinite amount of PoCs in 2015 and 2016 created noise that was difficult to meet expectations of the hype during the same period
- Long term: institutions may begin to announce enterprise licensing deals in early 2018 (this is the real measure of market share)

Cont'd

- For an ICO: press releases are also the order of the day

- Short term: a lot of half-baked / non-baked ideas hitting up unsavvy speculators (globally)

- Long term: navigating regulatory challenges and building a sustainable business / application / platform that does not solely rely on coin/token appreciation for funding.

Pivots

What evolving visions look like

Thought process

Several high profile startups now working with banks originally were just focused on providing services to the cryptocurrency but didn't see much growth/traction and so they pivoted.

Examples in the US

Chain

- Chain.com was originally founded as Albumatic in 2013 (an iOS app for sharing photos on social media), then pivoted to Chain (Bitcoin API), and then two years later to its current phase in financial services and capital markets.

- Its seed and series A came from VCs, not banks/FIs.

- Currently working closely with Nasdaq, Citi, and Visa on multiple different enterprise projects.

Axoni

- Axoni was originally founded as Tradeblock (which still exists as a separate entity).

- The staff for TB (originally 12-15 people) later became the staff of Axoni.

- Currently working on FMI with DTCC and other market operators.

Digital Asset Holdings

- DAH was originally founded as a colored coin company managing off-chain assets on the Bitcoin blockchain in late 2014.

- Shaul Kfir, its CTO, came from a Bitcoin company (Bits of Gold) and the Chief Ledger Architect at DAH is Tamas Blumen who was the CEO of Bits of Proof, also a Bitcoin company.

- Currently working on projects with the DTCC, JP Morgan, and ASX

Peernova

- Peernova was formed with the merger of two bitcoin companies: Cloudhashing and and HighBitcoin; Peernova built customized mining gear for their own use as a mining farm.

- In December 2014 they pivoted from being a Bitcoin hardware company and became a software company focused on enterprise solutions (that aren't Bitcoin-based).

- Have announced "Cuneiform" platform for FIs including State Street.

Ripple

- Ripple was founded as OpenCoin in 2012 by Jed McCaleb and two others and basically positioned itself as a type of competitor to what Bitcoin (and hawala) was doing.

- Jed McCaleb ended up leaving and founding Stellar (which works with FIs) in 2014 and Stefan Thomas became the new CTO of Ripple (previously was a senior dev/engineer).

- Stefan was quite active in the Bitcoin community, even creating WeUseCoins.com and subsequently lost ~5,000 bitcoins he had mined in the early days.

- Today Ripple primarily is focused on serving FIs on cross border payment products.

Symbiont

- Symbiont was originally founded by three enthusiasts (Adam, Evan, and Robby) who had previously co-developed the Counterparty platform on top of Bitcoin which was released in Feb 2014

- They spent a few months over at Overstock in the Medici subsidiary in 2014 before leaving and forming as Symbiont in early 2015.

- Robby eventually left altogether last year but Adam and Evan are still at Symbiont; working with governments (State of Delaware) and FIs (Ipreo)

itBit

- itBit was originally founded in 2012 in Singapore. A reverse-acquisition took place and it is now run and operated from NYC.

- In 2015, the company effectively split into two: itBit (the cryptocurrency exchange) and Paxos (with its "Bankchain" platform).

- Paxos now works with Euroclear and other FIs on a gold-based settlement platform.

Summary on Enterprise

- Certainty and definitive settlement finality is good (and sought after)
- Coping with every eventuality in the contract is impossible (hence courts)
- The need for a stop button arises due to regulatory and practical needs
- Only legal persons can do lawful things
  - People, companies and other legal persons can do lawful things. Machines can only be their agent and the legal person ultimately has to take legal responsibility.
- The legal prose contract is always what the courts will look at

Distributed Ledger Technology

Conclusions

✖ Adoption.

      Business model (alignment)

      Distribution (eco-system)

      Operational elements (Gov, Legal, Reg)

✖ Don't boil the ocean

✖ DLT is here, now….the ICO mayhem will be capped….and DLT will power on.

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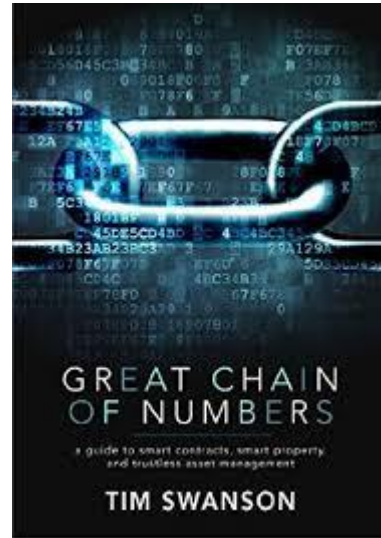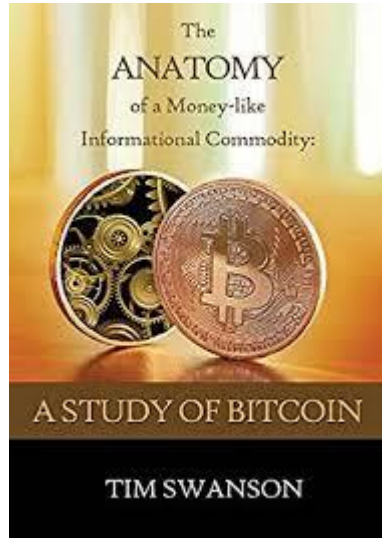
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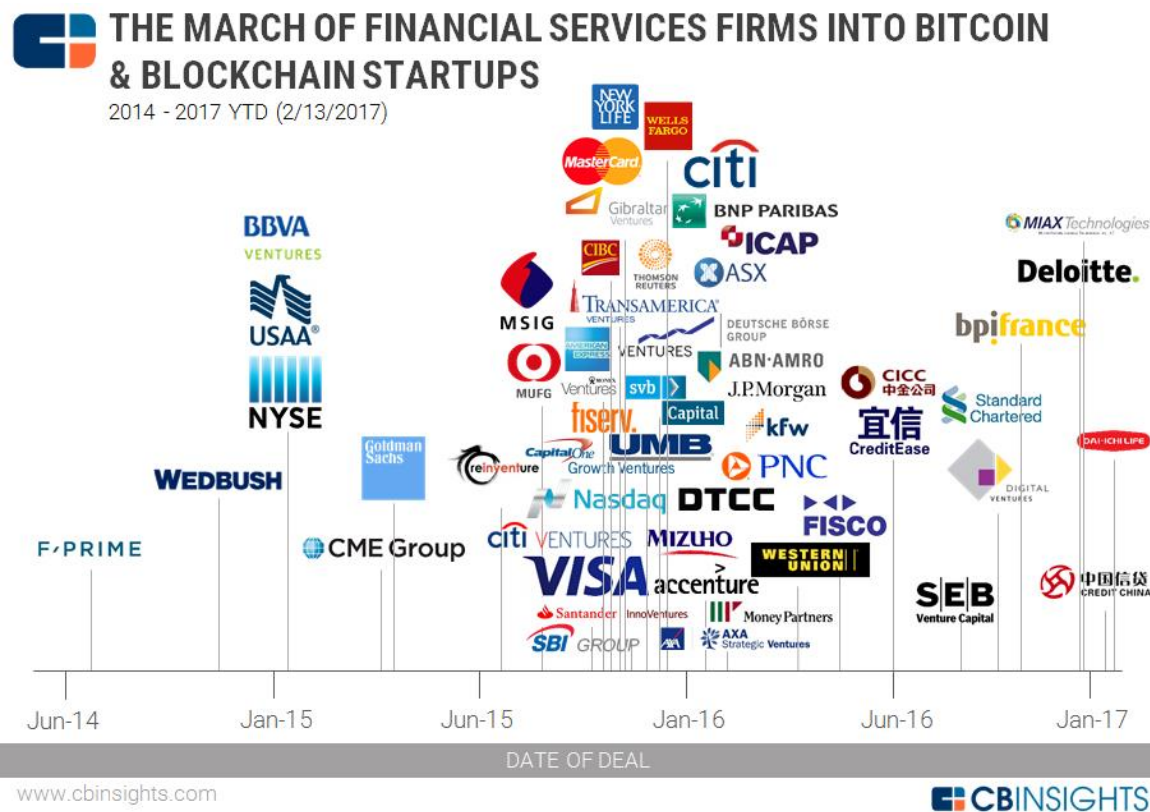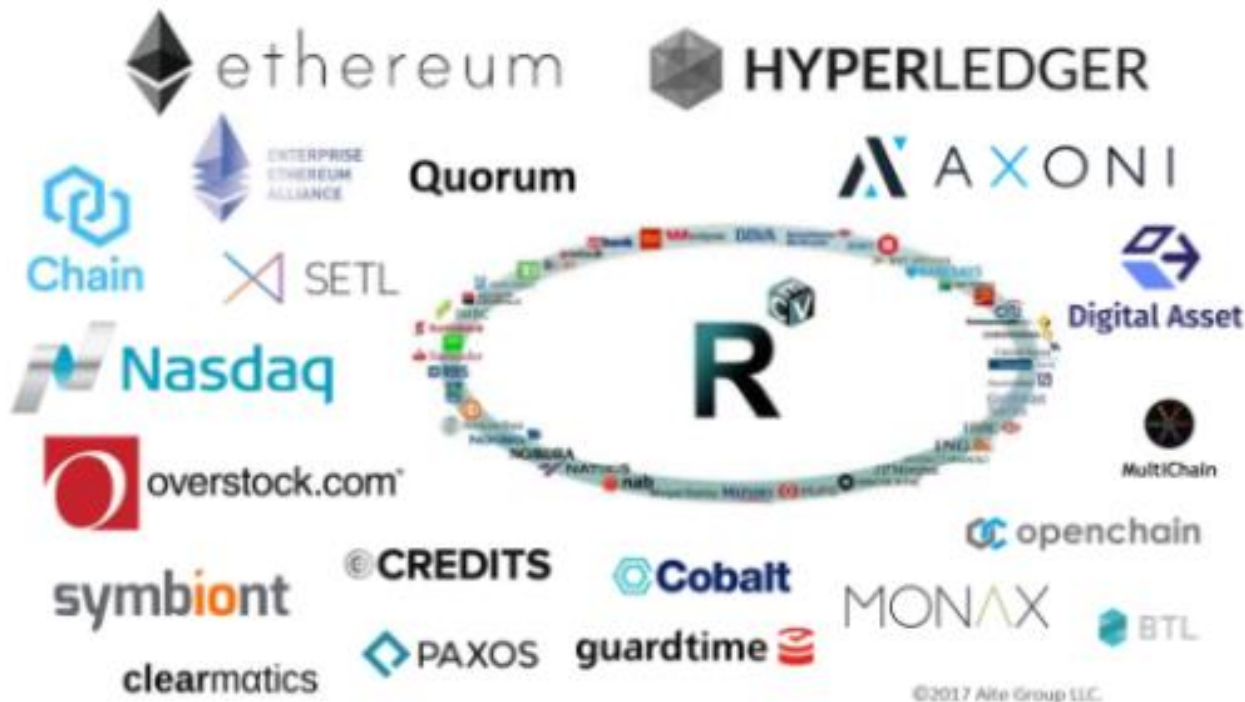✉ scott.riley@kynetix.com

kynetix

Why DLT

- Digital Age….and taking control of your data

- Intensive manual processes

- Dovetail with IoT

- ✗ Platform / **Framework**
  - ✗ Ethereum, Hyperledger, Corda, Credits, Nxt

- ✗ **Vendor**
  - ✗ Digital Asset, Axoni

- ✗ **Consortium**
  - ✗ R3, clearmatics

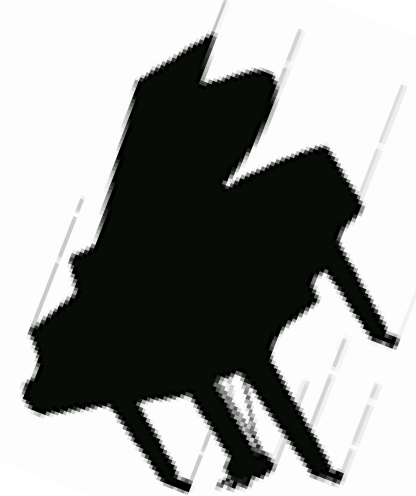- ✗ **Other? /** Infrastructure
  - ✗ Nasdaq

Trust…and forking

"The truth is more common than any one lie"

"No man has a good enough memory to be a successful liar"
— **Abraham Lincoln**

"If you tell the truth, you don't have to remember anything."
— **Mark Twain**

Liars can try, but ultimately, they'll be ignored by all others