An Outlier Venture

BLOCKCHAIN ANGELS

Coming to a major European City near you. Subscribe for details.

hosted by @jamie247 of www.outlierventures.io

www.BlockchainAngels.eu

Quick Survey

Q. Who has made a blockchain investment?

Q. Who is actively assessing an investment?

Q. Who feels they don't have enough knowledge to invest at this stage?

Purpose

- Increase early stage blockchain investment in Europe

- Empower entrepreneurs to connect the dots

- Increase breadth of use-cases beyond capital markets

- Provide a platform for deal-flow

Event Format

- 6 week cycle across Europe cities

- Each session 20min on the basics

- Market Overview Update

- 4+ Startup pitches

Who am I & what's in it for me?

- Co-founder of Europe's 1st blockchain venture builder

    - Outlier Ventures Ltd / OutlierVentures.io

    - Block Stars Ltd / Blockstars.io

- Chief Exec Europe's 1st angel investment fund & portfolio

    - Outlier Capital LLP

    - Entry level £25k

Agenda

(7:00 to 7:20) Introduction to blockchain technology

(7:20 to 7:40) Investment to date

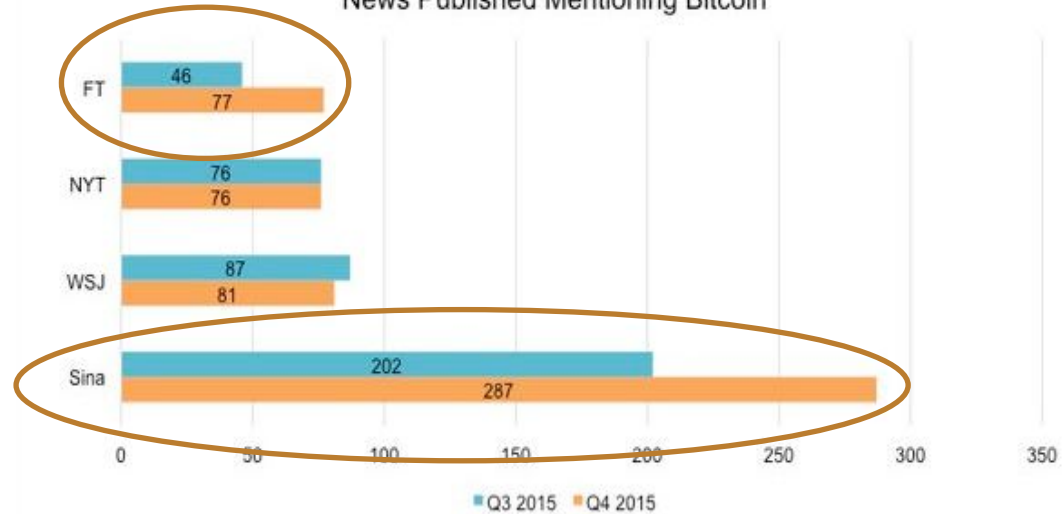(7:40 to 8:00) Investing today with case-studies

(8:00 to 8:10) Break

(8:10 to 8:30) Investment horizon

(8:30 to 10:00) Live Pitches

Why are you here?

The Economist, October 31st–November 6th 2015

INSIDE: A 12-PAGE SPECIAL REPORT ON COLOMBIA

Our guide to America's best colleges
Myanmar's free-ish election
Those ever-creative accountants
America takes the fight to IS
Coywolves: the new superpredator

The trust machine
How the technology behind bitcoin could change the world

News Published Mentioning Bitcoin

FT: 46 (Q3 2015), 77 (Q4 2015)
NYT: 76 (Q3 2015), 76 (Q4 2015)
WSJ: 87 (Q3 2015), 81 (Q4 2015)
Sina: 202 (Q3 2015), 287 (Q4 2015)

- Q3 2015 - Q4 2015

Note: Numbers of stories obtained by searching 'bitcoin' on respective publishers' websites
Sources: Financial Times, New York Times, Wall Street Journal and Sina

It all started with..

Who is Satoshi Nakamoto?

Bitcoin core protocol likely created by a group in academia

The bitcoin blockchain experiment

- Protocol is free & open source

Creators profited from owning bitcoins not the protocol

Has the experiment worked?

THE BEST PERFORMING CURRENCY OF 2015

Most currencies backtracked against the strong dollar, but **Bitcoin surged 35% in value** after a rally near the end of the year.

35.0%	BTC	BITCOIN	
0.3%	ILS	ISRAEL	
0.0%	JPY	JAPAN	
0.0%	CHF	SWITZERLAND	
-4.2%	CNY	CHINA	
-4.5%	INR	INDIA	
-5.9%	GBP	GREAT BRITAIN	
-10.0%	GOLD	GOLD	
-10.2%	AUD	AUSTRALIA	
-10.9%	EUR	EUROPEAN UNION	
-11.0%	SILVER	SILVER	
-12.3%	NZD	NEW ZEALAND	
-14.7%	NOK	NORWAY	
-15.9%	CAD	CANADA	
-17.6%	MXN	MEXICO	
-20.8%	RUB	RUSSIA	
-26.7%	ZAR	SOUTH AFRICA	
-28.8%	ARS	ARGENTINA (OFFICIAL)	
-30.5%	BRL	BRAZIL	
-33.8%	UAH	UKRAINE	

Data uses USD as base currency. | Data: Dec 29, 2014 to Dec 29, 2015 (The Economist)

Bitcoin was / is an experiment ' decentralised monetary system'

It has succeeded & it has failed

Major centralisation of mining / 51% processing China

Major centralisation of wealth distribution

But it's now a world of many Blockchain'S'

Understanding blockchains

1. Distributed Ledgers

2. Un-Permissioned / Permissioned

3. Unique Digital Tokens

4. Smart Contracts

5. Cryptographically secured

6. Decentralisation / Disintermediation

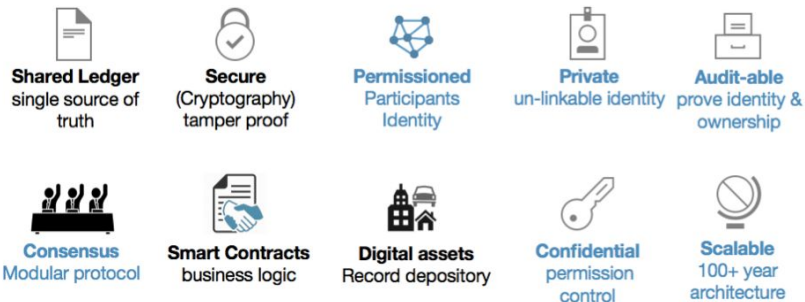7. Decentralised Autonomous Organisations
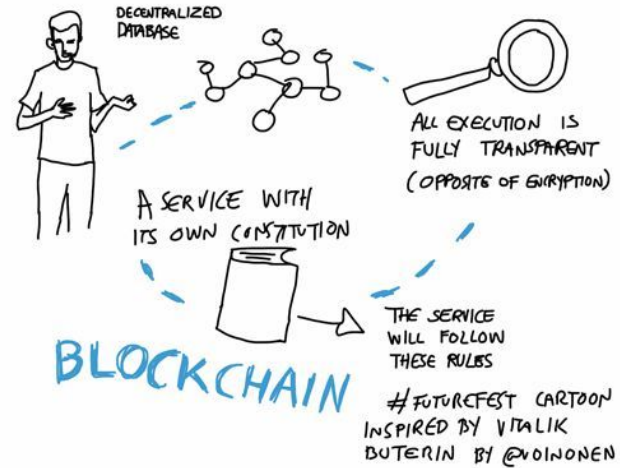
Paradigm Shift: The Phase of Web

- Today trust is managed by intermediaries
- Blockchains have trust inbuilt
- Are 'trustless' or 'trustfull'
- That removes friction
- That improves liquidity
- That equals growth in trade especially cross-border
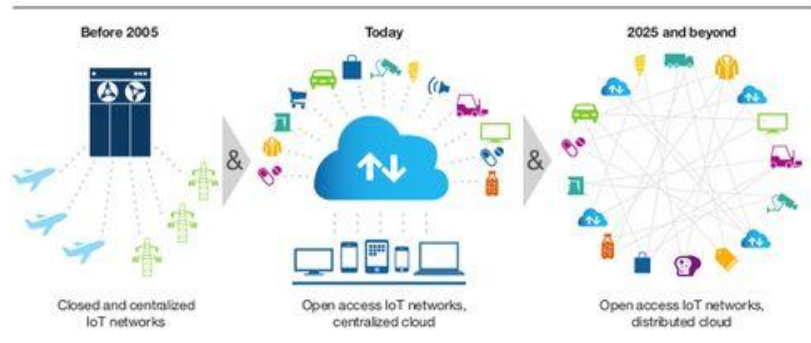
Blockchains, what are they good for?

1. Secure digital assets value

2. Secure 3rd party data

3. Automate manual tasks

4. Remove trust barriers

5. Expedite processes

6. Enable true p2p marketplaces

7. Secure supply-chains

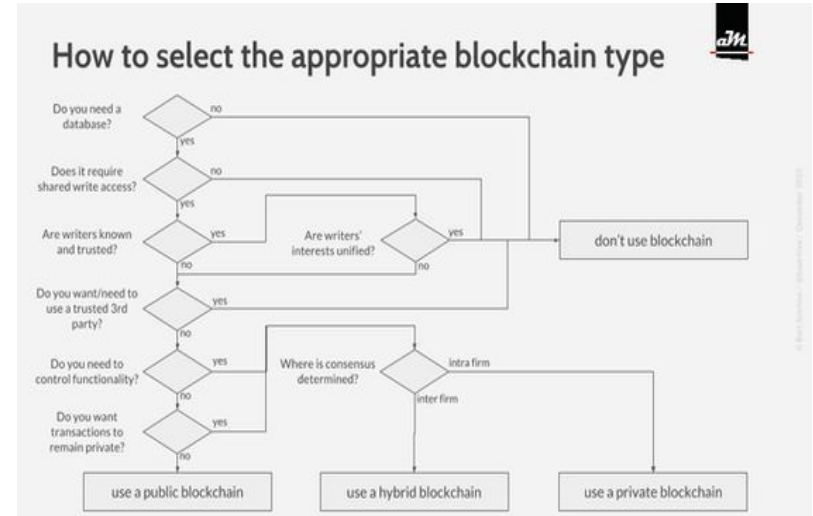Make Blockchain real for **Business: Scalable and Viable**

Shared Ledger single source of truth

Secure (Cryptography) tamper proof

Permissioned Participants Identity

Private un-linkable identity

Audit-able prove identity & ownership

Consensus Modular protocol

Smart Contracts business logic

Digital assets Record depository

Confidential permission control

Scalable 100+ year architecture

IBM Confidential :: © 2015 IBM Corporation   12

Blockchain as accelerator & combinator
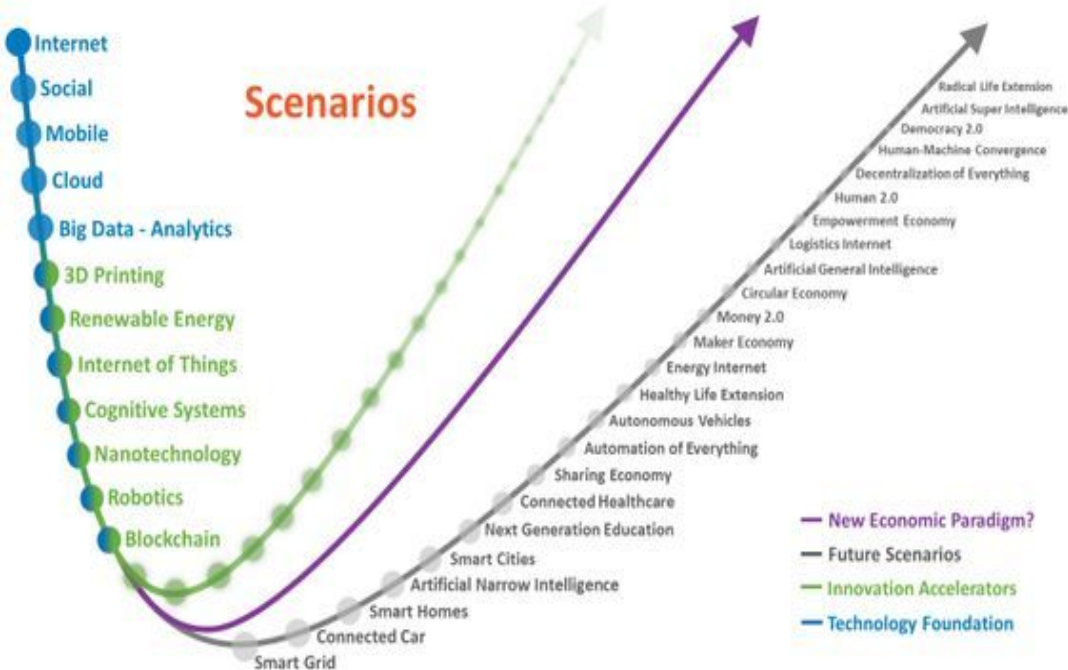
When is a blockchain appropriate + Limitations today

1. Smart contracts are only as good as their connection to the real world

2. Legal state of smart contracts unclear:

3. Limited capacity / performance: smart contracts are extremely limited in storage and speed.

4. Usable security and identity: giving end users autonomy over their data comes with responsibility.

5. Slow evolution of capability so far..

How to select the appropriate blockchain type

- Do you need a database? → no → don't use blockchain
  - yes
- Does it require shared write access? → no → don't use blockchain
  - yes
- Are writers known and trusted? → yes → Are writers' interests unified? → yes → don't use blockchain
  - no → no
- Do you want/need to use a trusted 3rd party? → yes
  - no
- Do you need to control functionality? → yes → Where is consensus determined? → intra firm
  - no → inter firm
- Do you want transactions to remain private? → yes
  - no

- use a public blockchain
- use a hybrid blockchain
- use a private blockchain

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$1 Billion in Bitcoin & Blockchain Infrastructure (end of 2015)

Silicon Seed (50 VCs & 30 Angels)

Specialist

Generalist

The blockchain is the most important innovation since the Internet itself

Blockchain invest lags behind Bitcoin

The Valley's got a lot riding on Bitcoin..

Distribution of Investment Among Bitcoin, Blockchain and Hybrid Companies
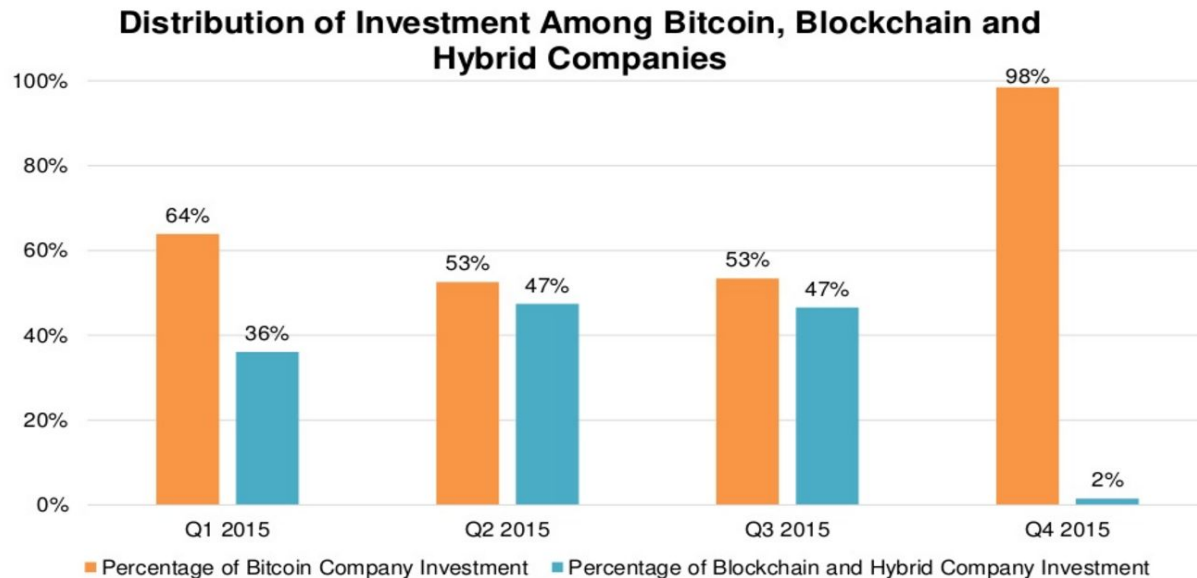
Data source: CoinDesk

2nd Half of 2015 Funding by Region

$ Invested as of Q4

$ Invested as of Q3
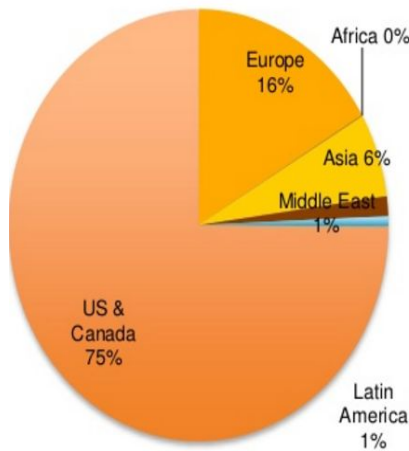
Regions	Q4 ($m)	Q3 ($m)	Q/Q Δ ($m)	Q/Q Δ
US & Canada	710.7	694.3	16.5	2.4%
Europe	156.4	155.8	0.57	0.4%
Asia	59.5	50.2	9.3	18.5%
Middle East	14.0	14.0	0.0	0.0%
Latin America	7.5	7.5	0.0	0.0%
Africa	1.1	1.1	0.0	0.0%
Total	949.2	922.9	26.3	2.9%
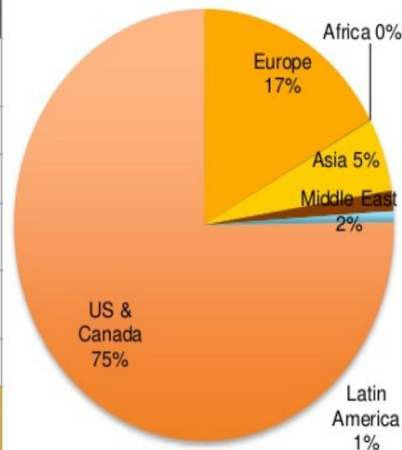
- No VC investment in Middle East, Latin America and Africa for three consecutive quarters
- US continues to dominate bitcoin VC investment

Note: $ invested represents all-time total bitcoin VC investment at the end of each quarter. Data sources: CoinDesk, CrunchBase

Total Funding by Country $m
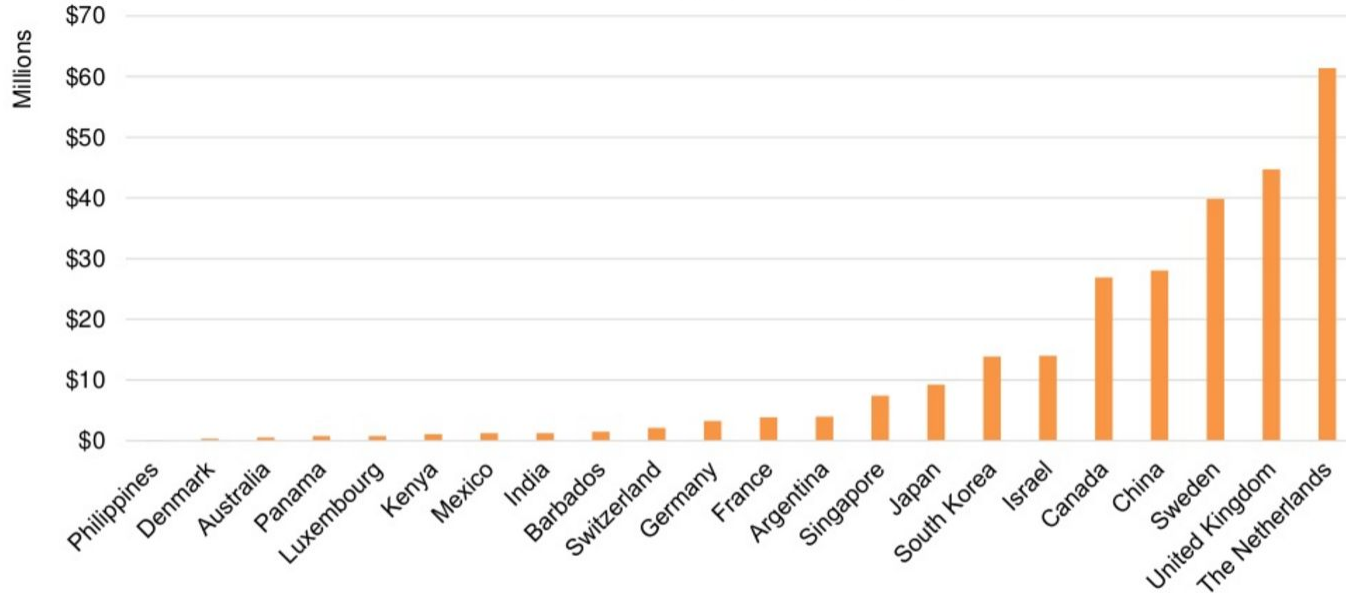
Note: US is excluded from above chart. Data sources: CoinDesk, CrunchBase

Where are we in the hype?
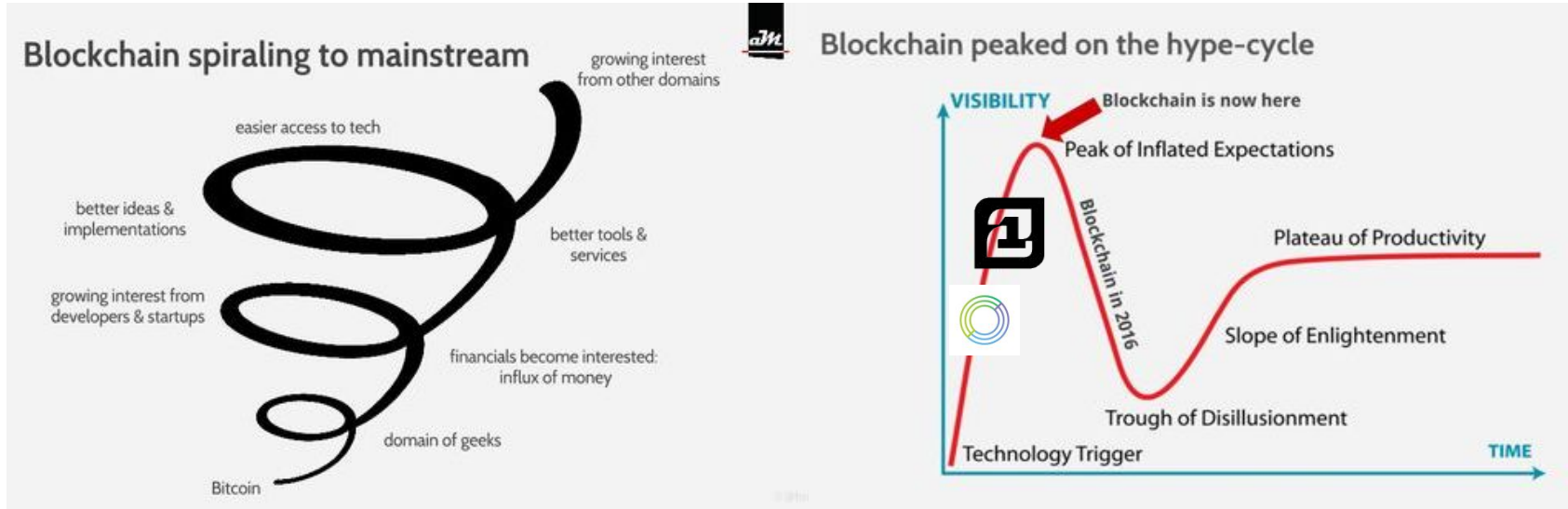
Big investments: Circle & 21inc

VC Deal Size Declining

Largest Quarterly VC Deals

Millions

coinbase $75 *

CIRCLE

$50

bitpay

Chain

coinbase

$31

$30

$25

BLOCKCHAIN info

$30

$20

$20

xapo

xapo

$13

Align Commerce

	$80								
	$70								
	$60								
	$50								
	$40								
	$30								
	$20								
	$10								
	$0								
	2013 Q4	2014 Q1	2014 Q2	2014 Q3	2014 Q4	2015 Q1	2015 Q2	2015 Q3	2015 Q4
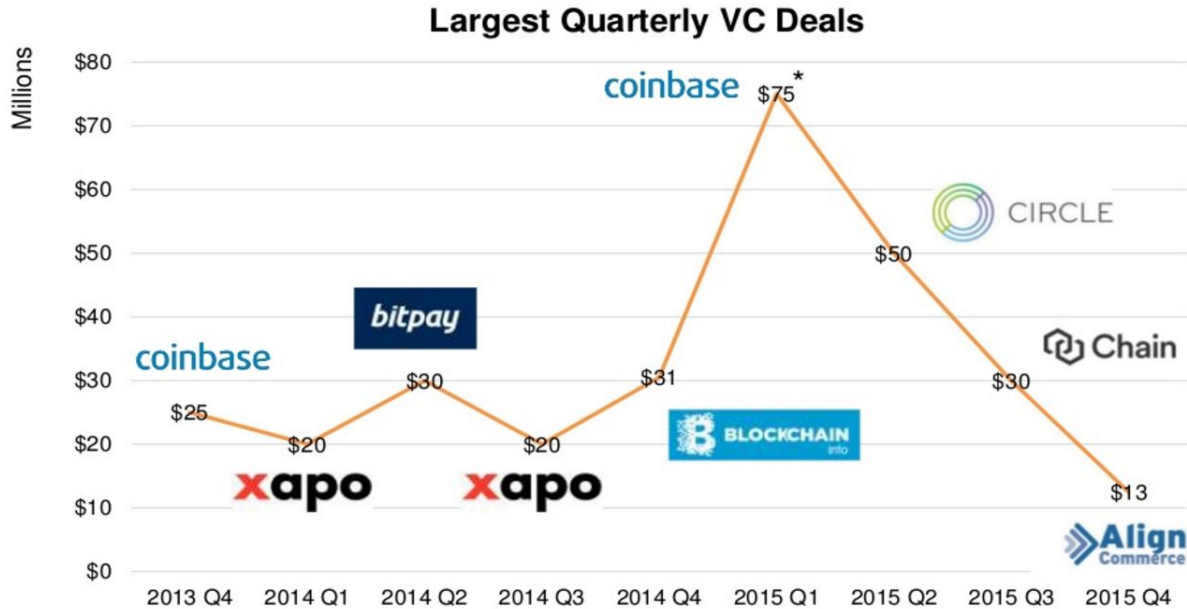
*Note: 21 Inc. is excluded because the precise timing of when it raised the $116m, which occurred in various individual stages, has not been revealed.
Source: CoinDesk

Internet VC investment did the same

Annual Internet VC Investment
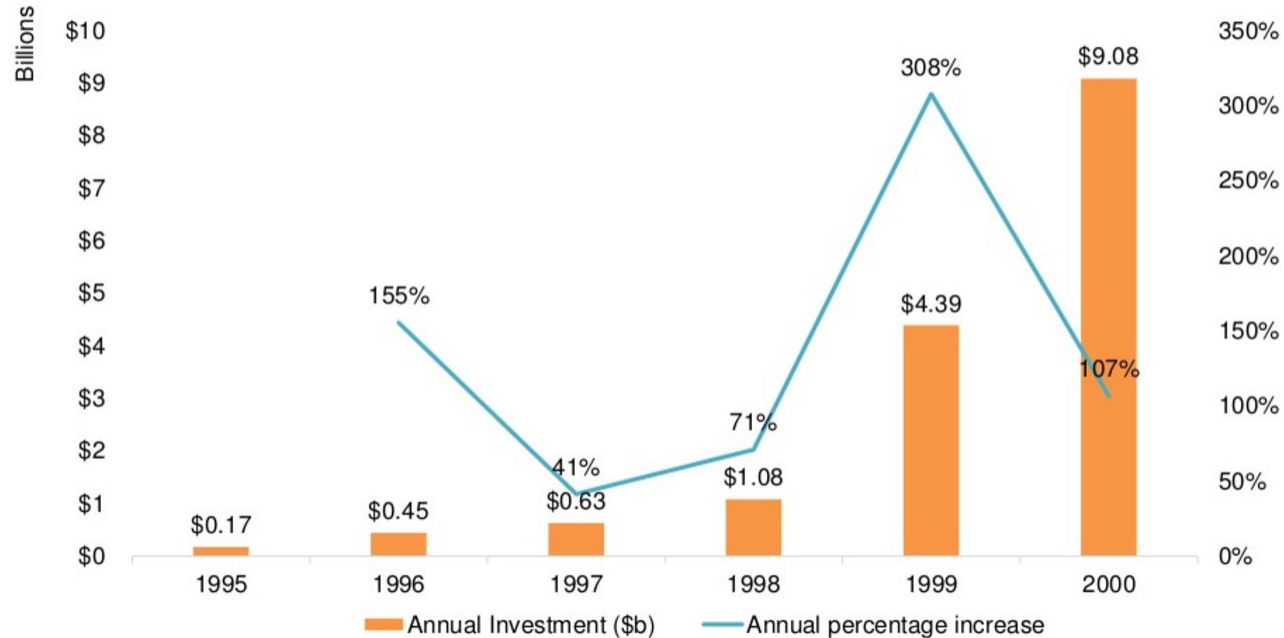
Data source: PricewaterhouseCoopers

Total VC Investment & Average Deal Size Dropped

Quarterly VC Investment ($m)
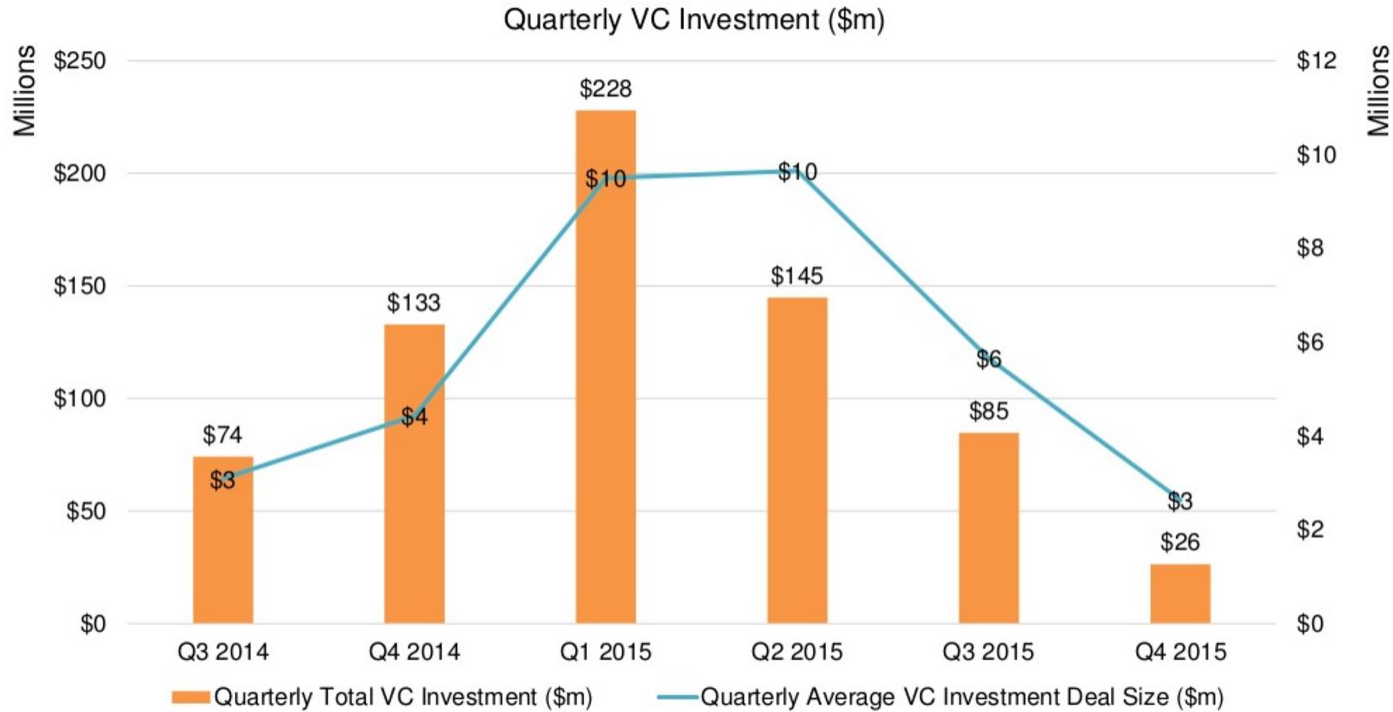
Data sources: CoinDesk, CrunchBase

Blockchain VC Investment Growth Decline in line with general

Quarterly Percentage Growth in All-Time VC Investment

Data sources: CoinDesk, CrunchBase

US Venture Capital Investment ($bn)
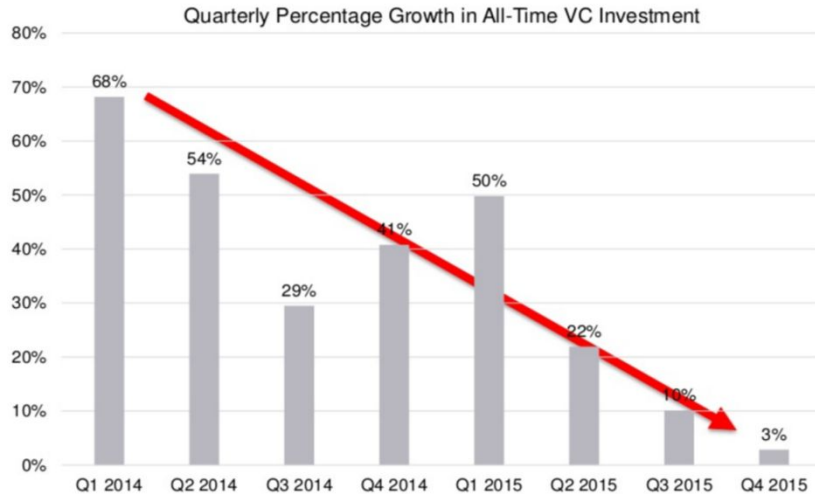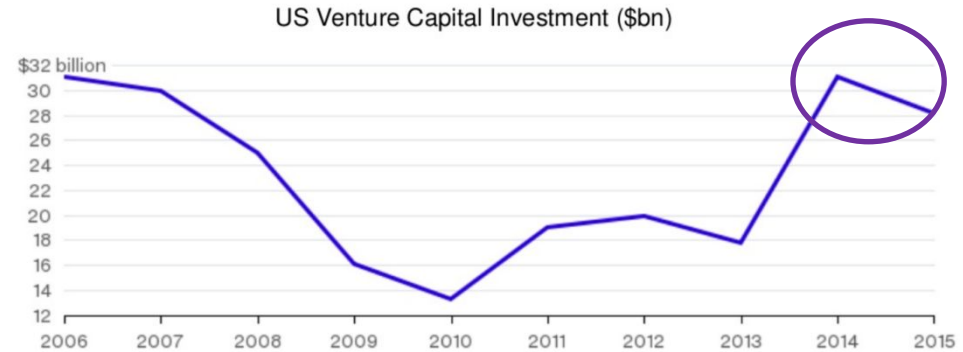
- Total VC investment across all tech sectors decreased 9% from $31.1bn in 2014 to $28.2bn 2015; number of deals decreased 13% from 2014

Data source: Bloomberg

Where are the next start-ups innovating?
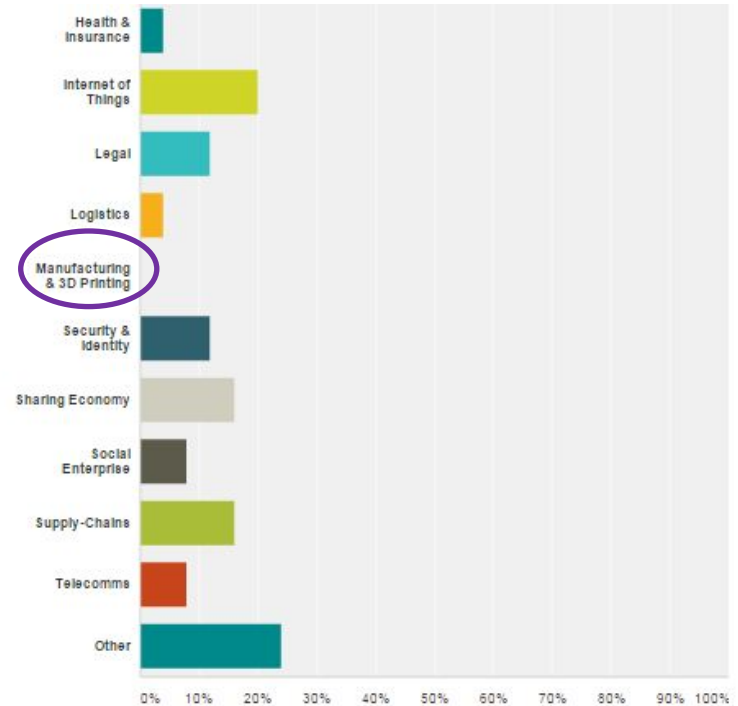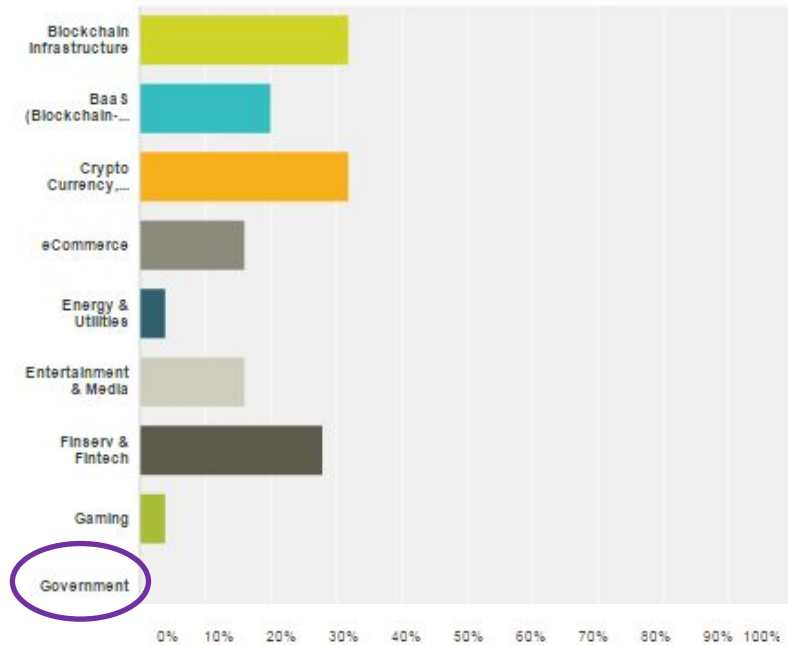
Size of new ventures
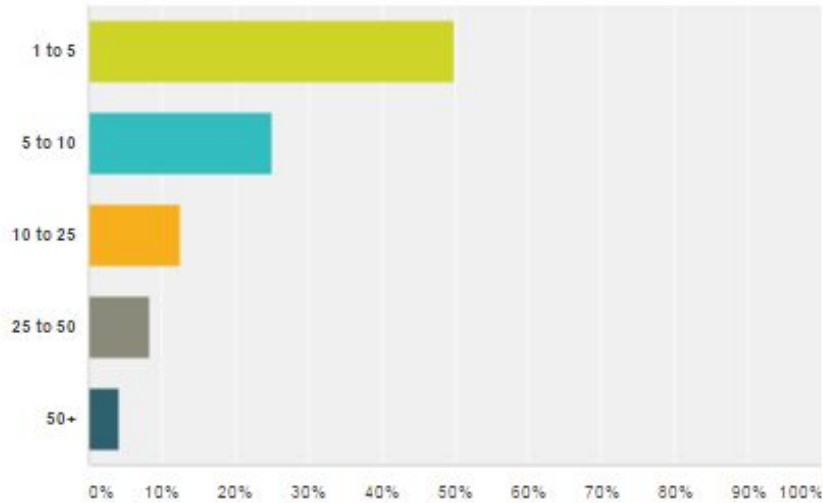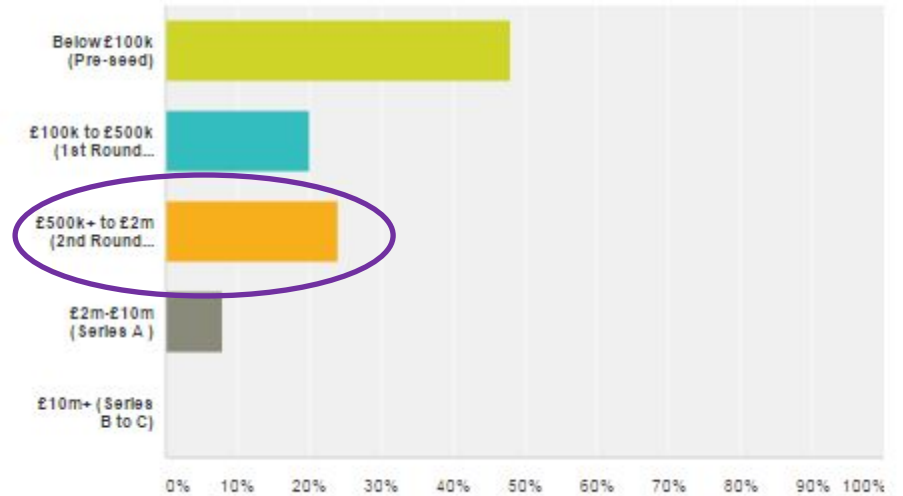
How have they been funded?
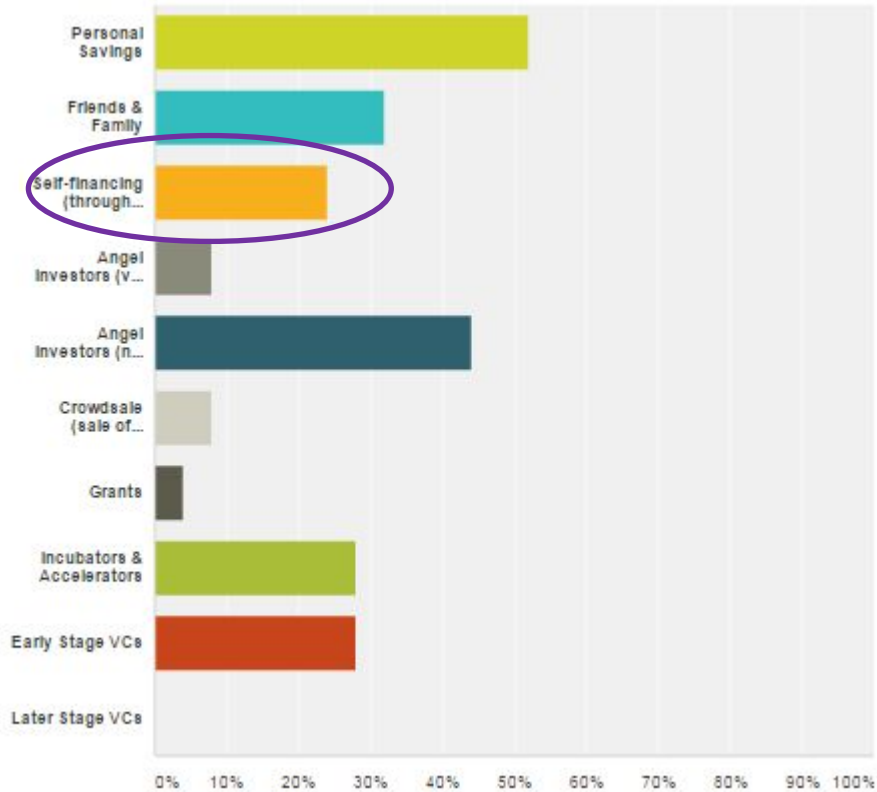
Are you actively fundraising now?
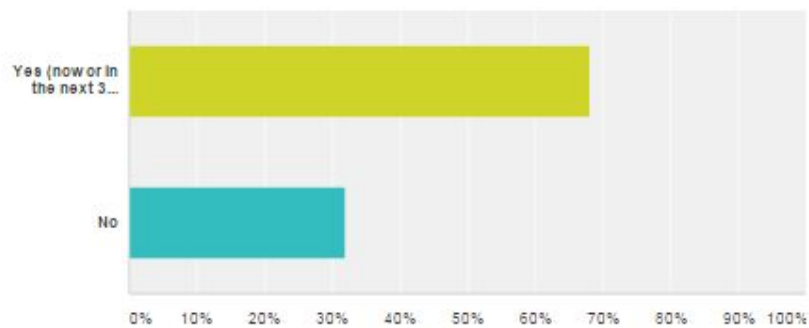
Yes (now or in the next 3...)

No

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

Are you profitable?
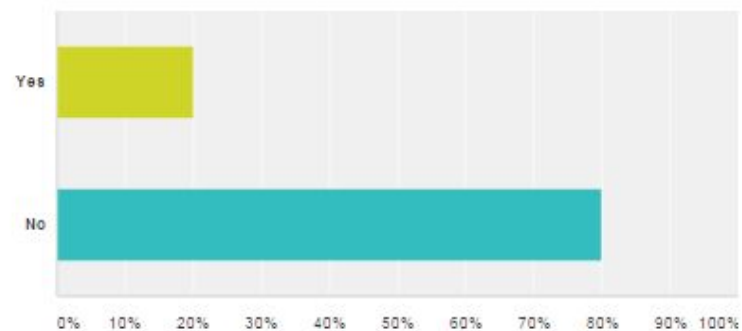
Yes

No

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

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Predictions: $10 Billion Will Be Invested in 2016

@leashless

My view:

•That isn't necessarily from the same people going to same places as pre '16

• More Northen Europe and Asia (particularly China)

• More from Corporates both venturing & internal

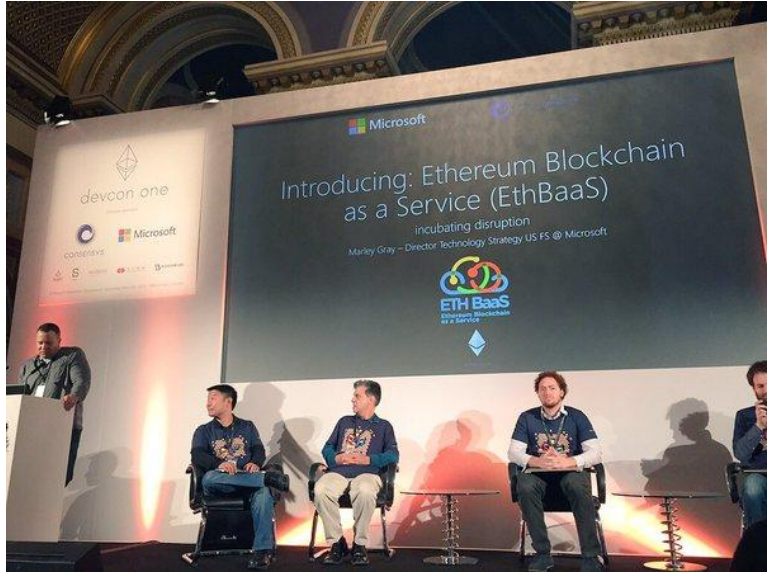• Capital Markets, Insurance, Health & Govt

Crossing the chasm

Bitcoin Experiment

BaaS

'Open Ledger Standards

The chasm

Widening of verical use cases

Use-case Crossover Aligned markets

Relative % of customers

Innovators, technology enthusiasts

Early adopters, visionaries

Early majority pragmatists

Late majority conservatives

Laggards, skeptics

Time

Customers want technology and performance

Customers want solutions and convenience

Early Market

Mainstream

Figure 4: What does adoption look like?

2015
Exploration & Investment
- Initial capability & use case assessments
- Early adoption likely for internal reconciliation

2016–2017
Early Adoption
- Leading-edge banks see the value of blockchain and begin deployments for asset classes that are bilaterally traded and/or have no central clearing authority
- Regulatory certainty drives adoption for external uses
- Regulatory authorities realize the benefits of blockchain for auditing and compliance, and rule-making begins

2018–2024
Growth
- Banks begin to see the benefits accorded to early adopters and – combined with regulatory guidance and certainty – the network effect takes hold
- New service providers and models emerge
- Deployments go viral across numerous asset classes
- New products and services are created; incumbent processes and services are discarded

2025
Maturity
- Blockchain adoption is considered mainstream and integral to the capital markets ecosystem

Source: Accenture Research

The Chasm Deepview

doesn't understand · cares about

governance & regulatory issues

business models

IP & licensing

accessibility, performance & scalability

proof-of-whatever & mining

tokens, altcoins, metacoins, x-coins

hashing, merkle proof & PKI

the gap that needs to be bridged

Ethereum DevCon & EthBaaS

Devcon Zero

Devcon One

FREE

'BaaS' & Professionalisation of Industry

Gray indicated the plan is for the Azure BaaS platform to scale up into a "certified blockchain marketplace" by this spring and that, at this stage, the technology providers undergo a more serious security vetting.

"For our clients, understanding new world applications of Bitcoin and blockchain technology, adapting it for myriad uses, and using it optimally are critical to improving financial security, efficiency and compliance," said PwC FinTech Co-Leader Haskell S. Garfinkel.

Rubix will help or allow you to prototype, test, and build your own customized blockchain and smart contract application for any use case.

Capital Markets & R3 Consortium

42 banks including JP Morgan, UBS, HSBC and Barclays.

Consortiums for regulated markets

• BaaS sandbox to experiment with one another alongside internal programs

• Largely around market efficiencies and then into competitive innovations

Insurance Ledger

"Blockchain has the potential to improve the way insurers record risk, increasing the speed, accuracy and transparency of our processes. As part of the TOM consultation we will be interested to see how blockchain could help us resolve some of the challenges facing our industry."

Shirine Khoury-Haq (Lloyd's Director of Operations)

Health Ledger

PHILIPS
Healthcare

CISCO

Interaction

Open Ledger for standards & governance

Accenture, ANZ Bank, Cisco, CLS, Credits, Deutsche Börse, Digital Asset Holdings, DTCC, Fujitsu Limited, IC3, IBM, Intel, J.P. Morgan, London Stock Exchange Group, Mitsubishi UFJ Financial Group (MUFG), State Street, SWIFT, VMware and Wells Fargo.

Bitcoin & Ethereum Corporate 'Brain Drain'

Entreprise Led Venturing (up to 20% of intake)

Santander

UBS

Barclays

Accenture

IBM

Citigroup & Visa

Cisco

Today's Industry Challenges

1) Not enough experienced developers, with senior architect grade backgrounds, to CTO projects

2) Not enough entrepreneurs exposed to blockchain beyond bitcoin or financial services to connect dots. Means limited in scope and application

3) Further compounded by the pull of large consultancies and banks feverishly mopping up talent generally.

4) Absence of an informed angel investor community so very VC and corporate led

UK's Setl: institutional payments & settlements

Setl Claims a Blockchain Milestone with 1 Billion Transactions in a Day

12/10/2015   Samburaj Das   1

✖ Bitcoin Technology, Blockchain News, News

UK institutional payment & settlements infrastructure

Deliver operational efficiencies and reduce costs borne by savers & investors

Uses payments data from Bank of England and just hired ex director as Chairman

Complete transactions in seconds or minutes, instead of days.

Displace out of date back-office systems

Uphold: remittance bigger* than Transferwise?

Company Name	Year Launched	Funding Stage	Total Funding	Current Valuation	Total Lifetime Transactions	Year 1 Total Transactions	Capital Efficiency Ratio*
Uphold	2014	Series B	$20M	$124.9M	$714.8M	$700.4M	2.8x
TransferWise	2011	Series E	$92M	$1B	$3.5B	$20M	0.7x
Coinbase	2012	Series C	$107M	$475M	$3B	$35M	1.6x
BitPay	2011	Series C	$33M	$190M	$523M	$4M	0.6x
Circle	2013	Series C	$76M	$250M	< $80M	< $25M	0.1x
Align Commerce	2014	Series A	$13.5M	< $30M	< $7M	< $3.5M	0.1x
itBit	2012	Series B	$82M	$150M	< $195M	$45M	0.3x
ABRA	2015	Series A	$14M	< $25M	$0M	$0M	0.0x

Refer to being a platform to store, transfer 'cloud money'

Can transfer fiat money from any bank account to a wallet where it is turned into 'digital money or assets' in any one of 23 currencies or precious metals

Foreign exchange transactions for free targeting $500bn international remittance
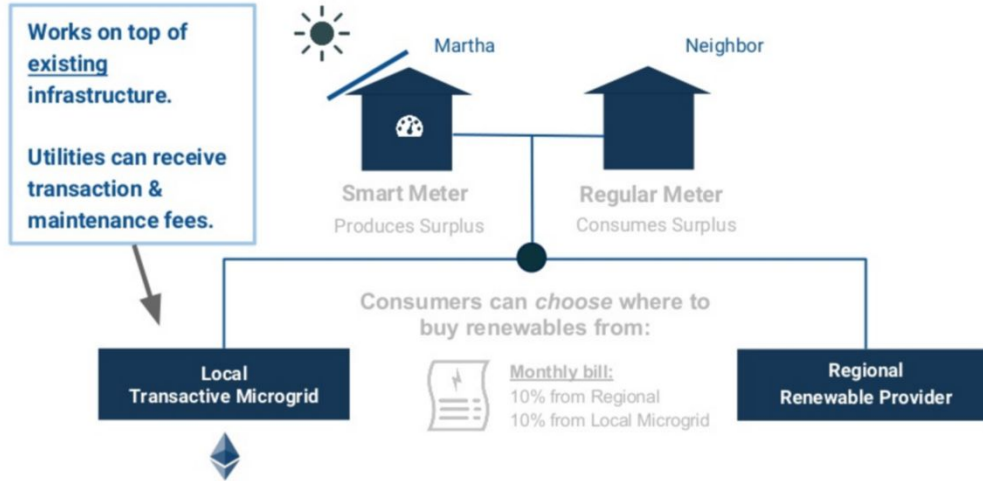
100% verifiable transparency on their reserves

Raised $20m to date and has 3rd party app market

uphold

Lo3: Sharing Economy for Energy Markets

Allows neighbourhood to create a marketplace for green / surplus energy micro-grids using smart meters
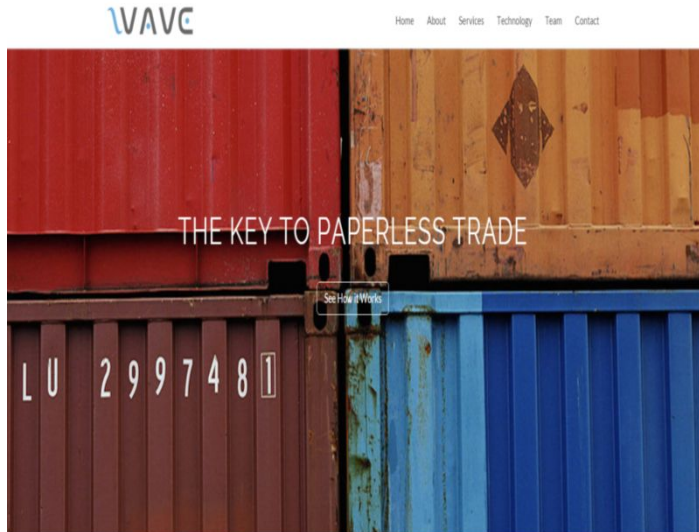
Users become 'prosumers'. Producing and consuming from local / regional marketplace

Surpluses can be traded from those producing more energy than consuming

Testing in a Brooklyn community using 'energy credits' via ethereum

Wave: Paperless Trade

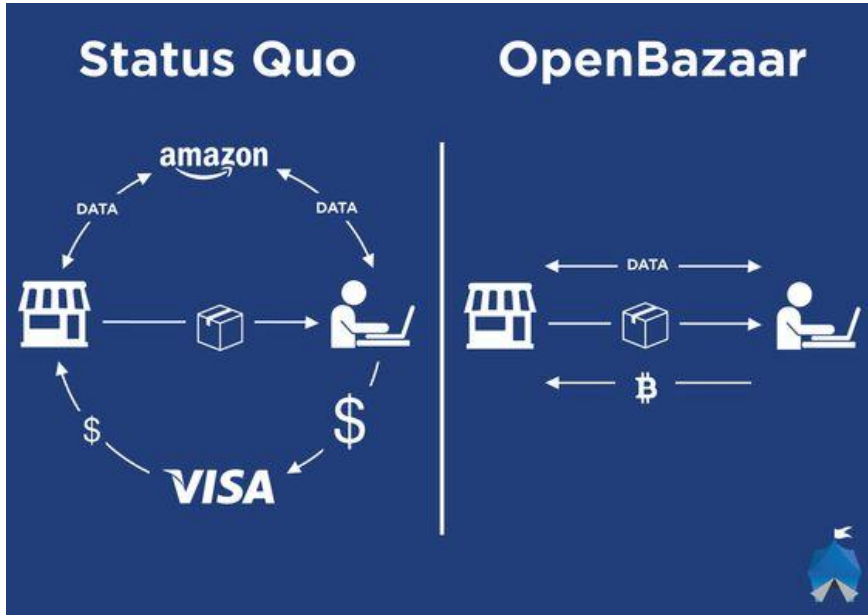WAVE connects all members of the supply chain to a decentralized network

Allows them a direct exchange of documents.

Manages ownership of documents on the blockchain

Eliminates disputes, forgeries and unnecessary risks.

Will help in trade finance like fluentfunds.com
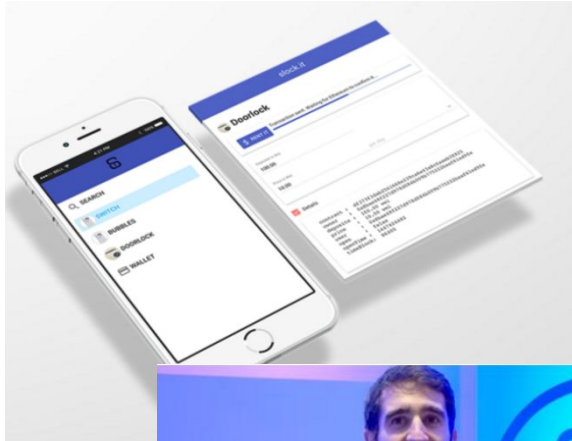
OpenBazaar - dCommerce

Free Market for all. No Fees. No Restrictions. With total anonymity

Opensource p2p markets without any middleman

No Amazon, eBay or Paypal payment processors ran from desktop apps

You can build various apps on-top to custom to various markets

Slock.it: Gateway to IoT & Sharing Economy

Rent, sell or share anything - without middlemen

Blockchains for The Sharing Economy and gateway to your IoT

 Making trusting the other party as unnecessary as possible

Handling secure direct P2P payments **as a DAO**

Providing a mechanism of deposits, and eventually, full blown insurance

Freeing the users from having to coordinate with each other to hand over keys

Supporting almost any objects including cars, lockers, apartments, sheds, office space, etc.

Everledger – Securing diamond supply chain
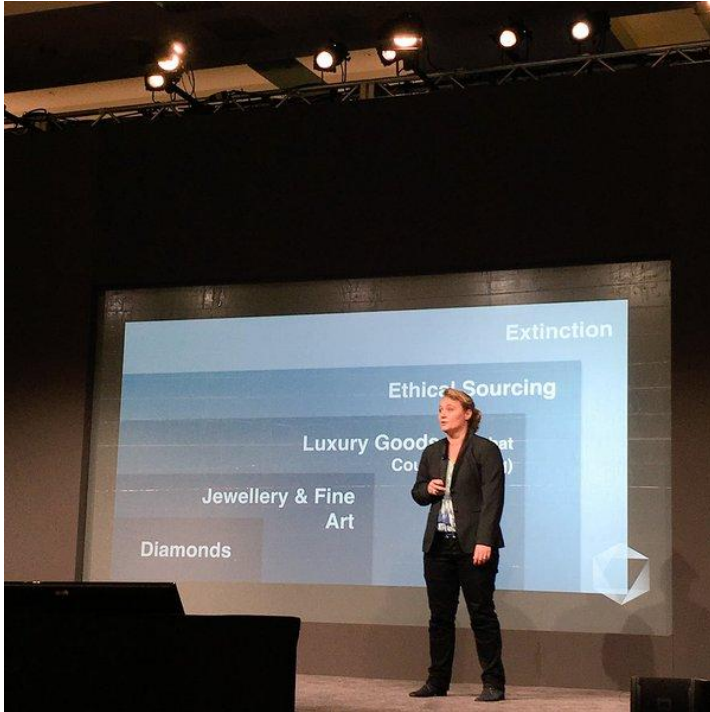
Permanent immutable ledger for diamond certification & transaction history for insurance companies, owners and law enforcement

Securing back to mining companies

Fraud detection system, overlaying big data from closed sources like insurers and law enforcement.

Targeting £45 bn lost in UE & Europe insurance fraud

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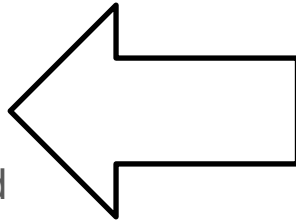
Next Level innovation

1. P2P / dCommerce

2. dMarkets (Uber for

3. Truer Sharing Economy (without the platform)

4. Smart Money (Programmable Money)

5. BaaS (3-5 year app market explosion)

Coop 2.0

'Developed' World

• focuses on integration into existing systems

• and gradual replacement of legacy

• firewall to disruption of regulated industries

• centralised platforms gradually disintermediated

'Developing' World

• Blank canvas to truly innovate new models

• Greater incentive to bypass intermediaries (govt control, data)

• Blockchain becomes THE infrastructure

• Allowing for truly decentralized p2p systems

• Major breakthroughs in financial inclusion etc

Reverse Engineer Innovations

Public Sector Innovation

• Estonia has created eResident program, blockchain notary service allow citizens, regardless of where they live or do business, to notarise their marriages, birth certificates, business contracts and more, on the blockchain in minutes.

• UK Govt mulls applications for DVLA, Land Registry, Voting & more
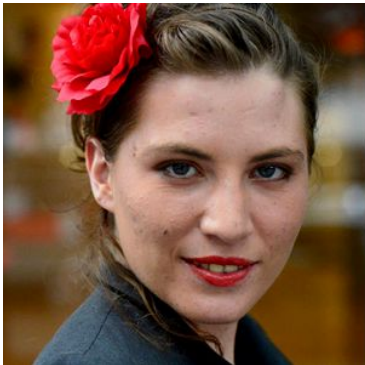
BITNATION
GOVERNANCE 2.0

Your key to e-Estonia

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MIDASIUM

The Blockchain of Real Estate.

We are now taking **pre-orders** for our **Smart Tenancy** product.
To become an early adopter, please register your interest:

Register Interest

CITIBANK CHALLENGE

Midasium is selected for the Citibank Mobile Challenge Final.
Watch the presentation of our **Smart Tenancy** prototype.

Ridesharing Coops

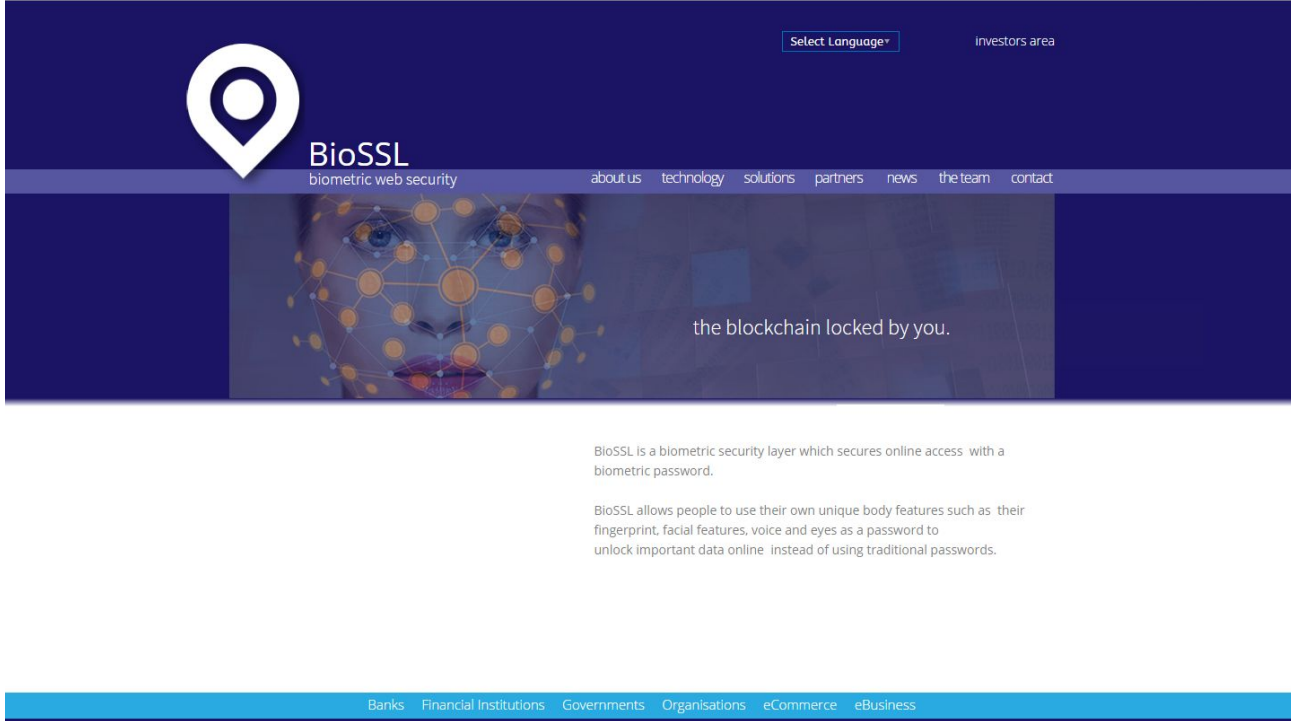## COMING SOON

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Save & borrow without the bank

Just you, your friends & family

| Email Address | JOIN WAITING LIST |

Join Waiting List

https://www.youtube.com/watch?v=J2Kr6p9phD8&feature=youtu.be

Thanks!
follow me @jamie247