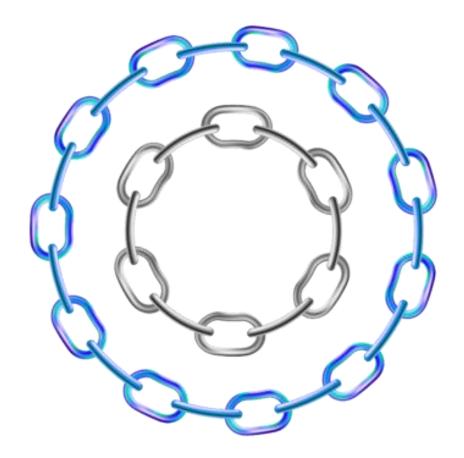
Deloitte.



MAY 18TH, 2018

SAI Annual Convention

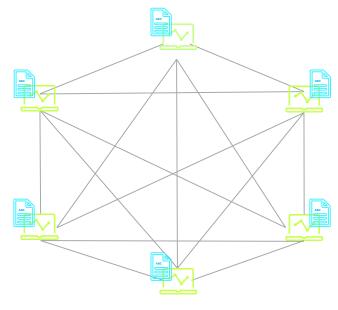
Digital Finance- Blockchain beyond the hype

Describe blockchain....



What is blockchain?

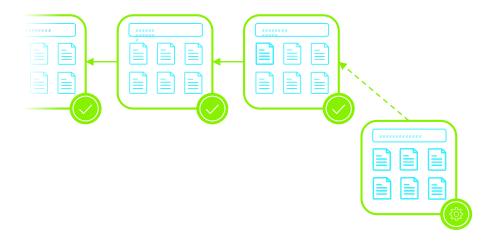
A decentralized, distributed ledger that provides a way for information to be recorded, shared and maintained by a community.



A **network of computers**, connected via the Internet, in which users at any one computer can receive or send peer to peer:





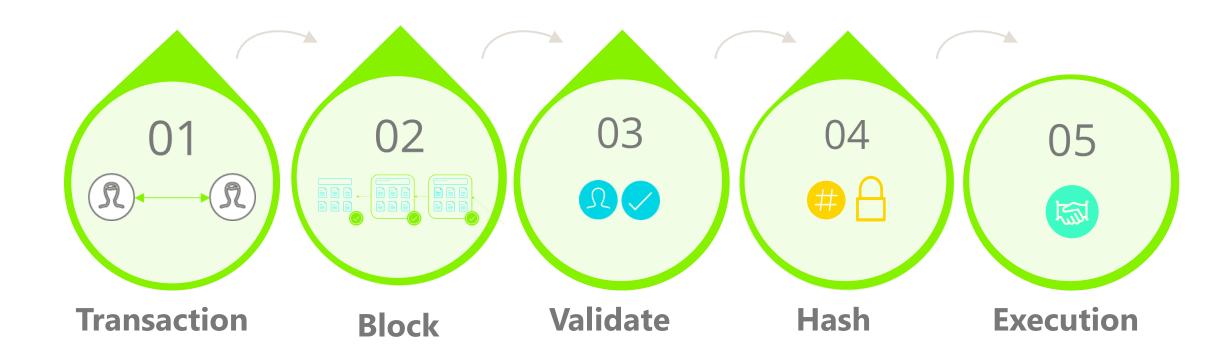


Each block can contain transactions, **data** and a **reference** to the previous blockchain (creating the chain)

Transactions recorded **chronologically** and **cannot be changed** once added to the chain

For **blocks to be added** to the blockchain, it must be achieved through **Consensus**

How blockchain works.



Blockchain characteristics.

Blockchain technology have particular characteristics that set it apart from other technologies.



Value Transfer



Immutability & Audit Trail



Smart Contracts



Data Storage

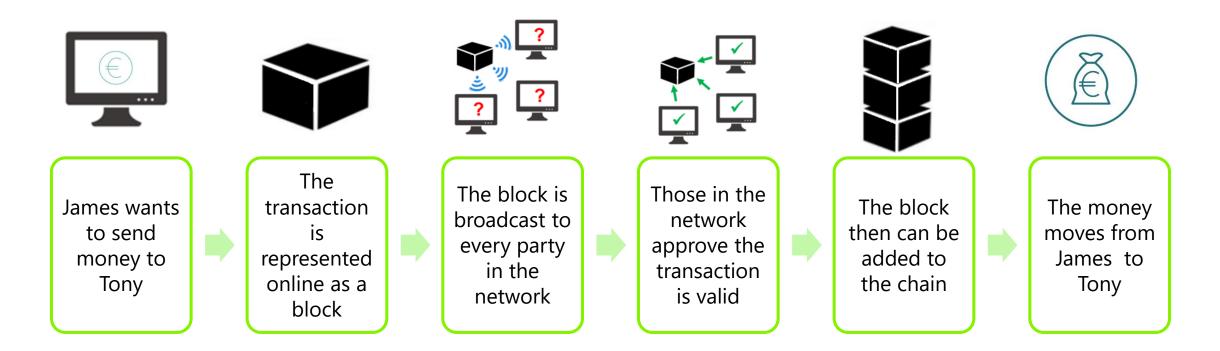


Disintermediation



Decentralised

Blockchain Simple Example



What we do know is.

In its technology evolution, blockchain technology remains nascent and immature

MISCONCEPTIONS



Enterprise grade technology



Not just cryptocurrency



Traditional technology is not redundant or obsolete



Public blockchains



It's not real-time

CHALLENGES



Standards need to be formalised



Not all regulators are on board



Does it scale?



Collaboration is hard



Talent shortage

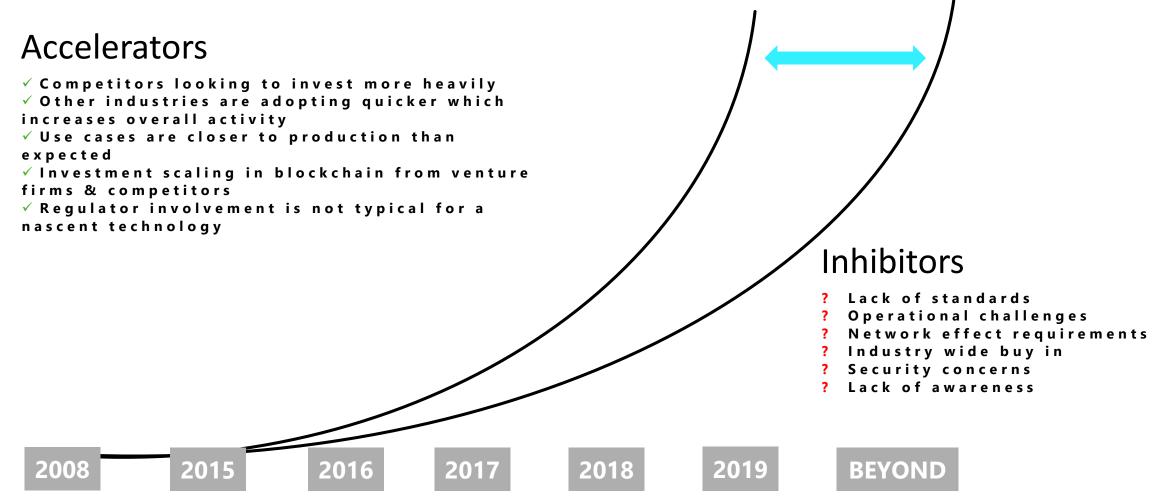






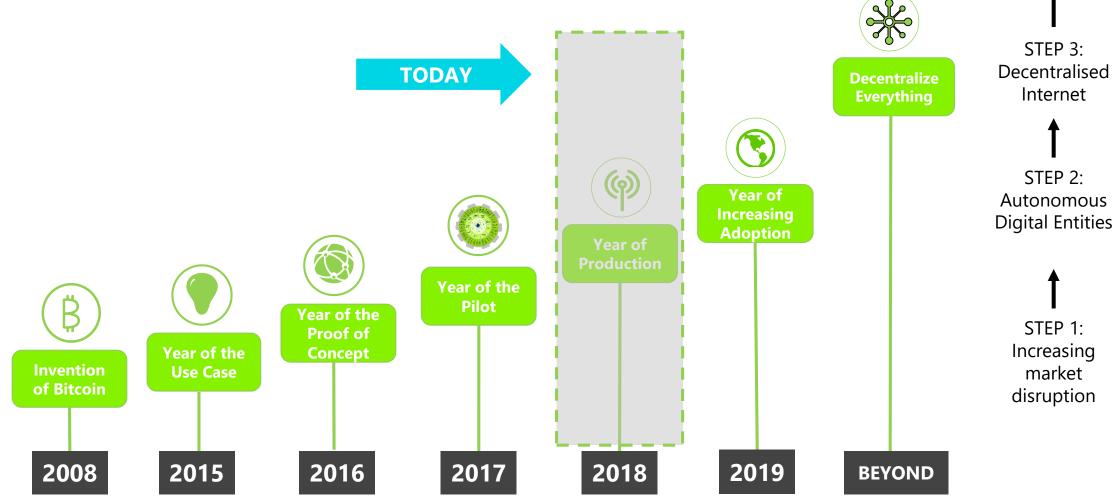
Factors effecting blockchain adoption.

There are some factors which are accelerating blockchain growth rate, although inhibitors remain.



Blockchain growing faster than anticipated.

Many sceptics believe blockchain is far away but indications suggest the level of adoption is quickening.





Asset management is in a period of change.

MACRO TRENDS



New Buyer Demands

Individuals rather than institutions driving innovation and growth. Organic growth more likely with outsourcers & cost conscious buyers



Active to Passive

During next 5 years, 43% of net new assets will be passively managed. Remonetisation of active management expected



Disruptive Tech

A number of disruptive techs including robo-advice for direct consumer engagement and analytics / Al for more effective segmentation & prediction



Fiduciary Based Regulation

Investor regulation being strengthened across the globe. MiFIDII & DOL are increasing the risk of sanctions and new pricing schemes may emerge as a result

BOLD RESPONSES

Optimise Resource Allocation

Digitise Distribution Differentiate Investments

AM VALUE CHAIN

Streamline Operations Build a unique customer oriented brand

FUNCTIONS

ACTIVITIES

Client Interaction

Investment Objectives
Investment Advice / Proposition

Onboarding *

Document Management

Front Office

Information Gathering

Asset Mix Evaluation

Investment Decision

Risk Management

Middle Office

Trade Execution

Transfer of Ownership

Trade Settlement

Asset Accounting

Back Office

Objective Check, Rebalancing

Investor Communication

MIS

Regulatory Reporting_

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Potential impact of blockchain



Low

Medium

High

Asset management is in a period of change.

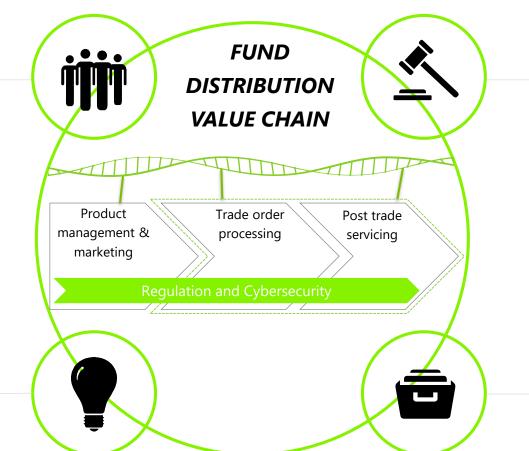
We see some megatrends powering the IM revolution.

NEW GENERATION OF INVESTORS

- Stay in control (do it yourself)
- Tailored & multi channel advice
- Peers and social networks
- Digital front-end
- Downside protection and hedging
- Yield and service of WM clients
- Social responsible investments

TECHNOLOGICAL INNOVATIONS

- Blockchain
- Digital payments
- Machine learning
- Digital investment platforms
- P2P lending
- Robo-advisor
- Robotic process automation



COMPLEX AND EVOLVING REGULATORY LANDSCAPE

Now

 AIFM, UCITS V, PRIIPS, MiFID, AMLD IV, CRD, **EMIR**

Tomorrow

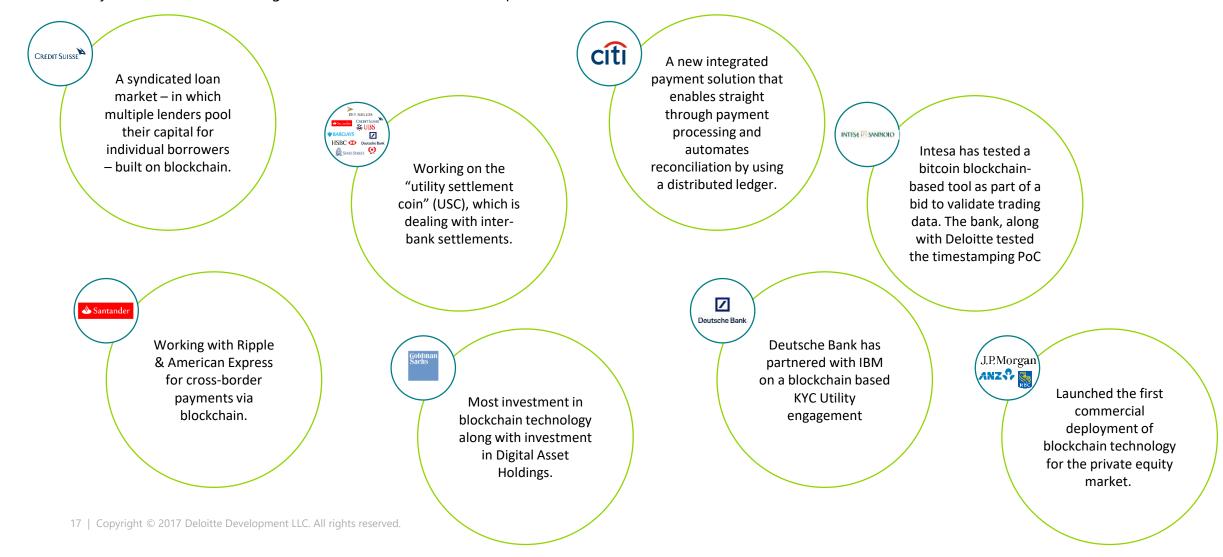
- Shared ledger
- Smart contracts
- Online payment
- Data confidentiality
- Cybersecurity

DATA SURGE

- Growing quantity of sources and data
- Need for powerful data processing
- Allow for real-time information
- Shifting mix of required analytical capabilities
 - Algorithmic
 - **Predictive**

Blockchain initiatives in banking are widespread

Many banks have been working on blockchain initiatives over the past 18-24 months

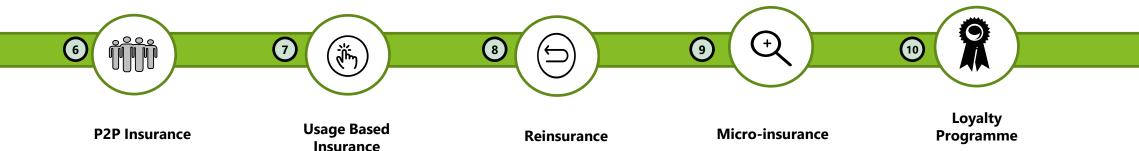




Blockchain & Insurance – the use cases

There are some key uses cases in the Insurance sector which are good blockchain use cases currently being explored





Blockchain & the Insurance Value Chain

Blockchain-driven interventions could potentially transform the whole insurance industry



Potential benefits



- Frictionless evaluation of claims
- Transparent calculation of premiums
- Automatic receipt of claims and pay outs

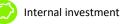


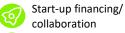
- Less resources and lower personnel cost
- Faster quoting-binding and settlement of claims **processes**
- Savings in terms of underwriting leakages

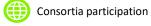


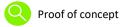
- **Digital** and **innovative vocation** of new solutions
- Capitalization of cryptocurrency security
- Enhanced on-boarding and verification of risk

Interest of EU Insurance Company









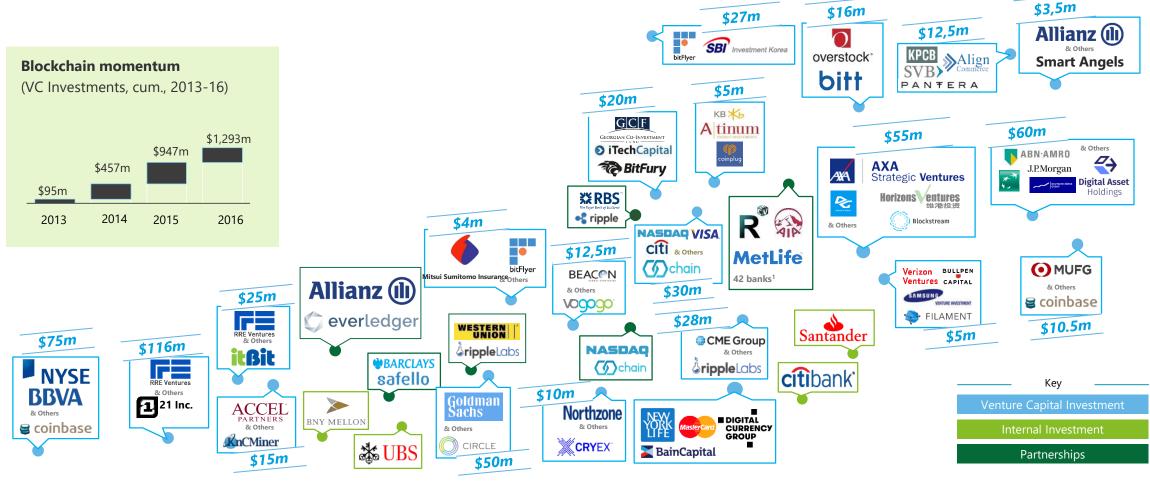


	Company	Revenues (€ bln)	Headquarter	BC interest	BC activities	
	Allianz	125.0				
AXA	AXA	98.0		(a)	(a) (a) (b) (c) (c)	
PRUDENTIAL	Prudential	86.5	#	0		
GENERALI	Generali	68.5			(A) (B) (A) (C)	
Z	Zurich	64.0			∅ ∅ ⊕ ∅ €	
	Munich Re	48.0		(4)		
A	Aegon	33.0		(A)		
	Aviva	27.6	#		0000	
(Mapfre	27.0				
Postevita	Poste vita	18.0			0000	
scor	Scor SE	13.8		(a)		
Unipol	Unipol	13.0				
	Old Mutual	12.4	#	(9)	00000	
	RSA Insurance Group	7 <mark>.1</mark>	#	(8)	0000	
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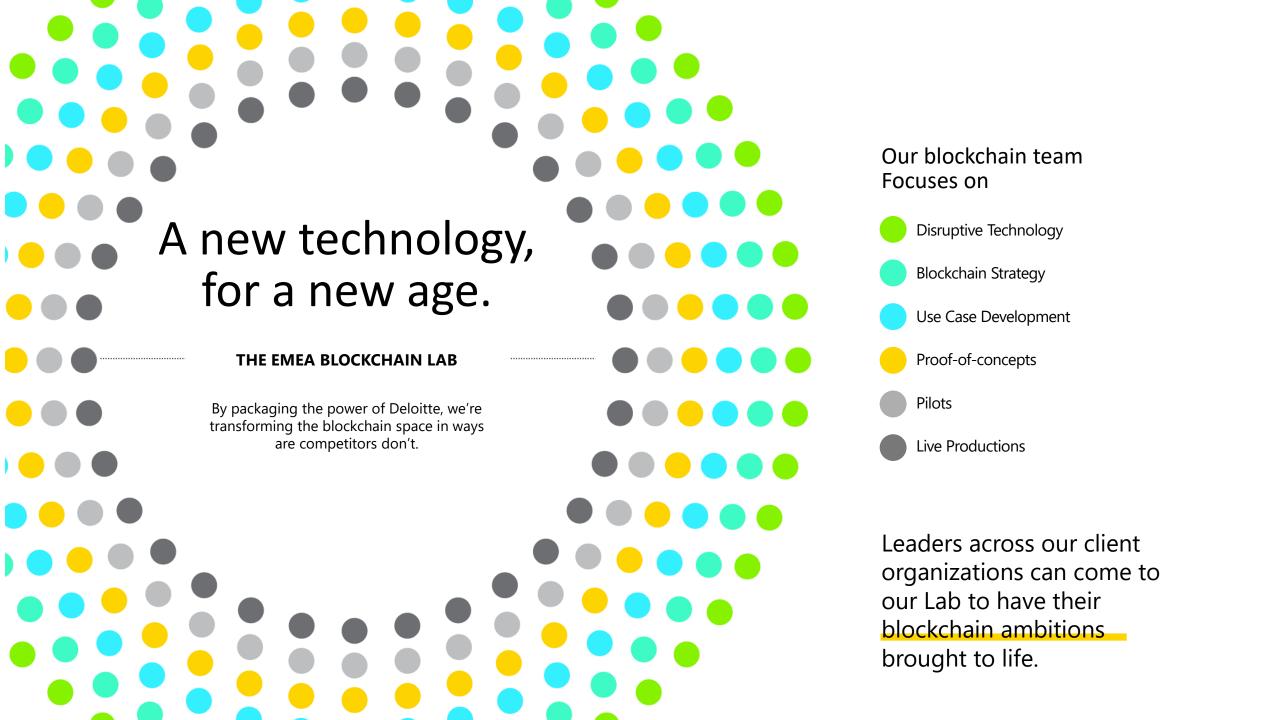
Source: Companies' Financial Statements 2017; Press clippings; Deloitte insights

Blockchain Investments in the Insurance Industry

Venture capital investments are dominated by banking institutions but insurance actors are starting to invest...







Prototype Build.

Phases Discovery Design Build Review

Discover & Vision

Scope Requirements

- Scoping workshop
- · Document ideal end-state
- Agreed statement of work

Data Gathering

- SME interview
- Data Gathering
- Process Mapping
- Time in Motion Study

Design

Use Case Identification

- Specific use cases identified and documented
- · Wireframes designed
- · Design dummy data

Technical Architecture

High Level Data Architecture defined

Review Workshop

Week 5

 High Level POC Technical Architecture defined

Build

Server Infrastructure Back-end Development

- Smart contracts developed
- API / high level testing
- Data interaction / loading

Front-end Development

UI/UX

Backend / Blockchain

Week 6-9

- UI screens and log-ins
- Develop basic functionality
 Business Case Development

Enhance Build

Enhance build based on feedback

- Update UI screens / log-ins
- Update smart contracts where necessary



Week 10

Week 11-12

V

Deployment /

Test / Stage Deployments

Feature implementation

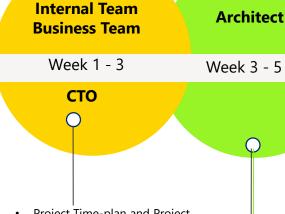
Integration testing

Issue resolution

Integration

Week 13-14 Week 15

Production



- Project Time-plan and Project Charter
- · Technical Design Document
- Detailed documentation of current process
- Updated process flows
- Final user stories documented
- Wireframes shared
- Stakeholder engagement plan produced
- Business case quantitative and qualitative analysis

Functioning interface

Blockchain based software solution

- Senior Stakeholder Session
- Feedback / input on final deliverable
- Blockchain implementation complete
- Dashboard website



 Integration testing & resolution

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Thank you.

Paula Butler

Manager, EMEA Blockchain Lab **Contact:** pabutler@deloitte.ie

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