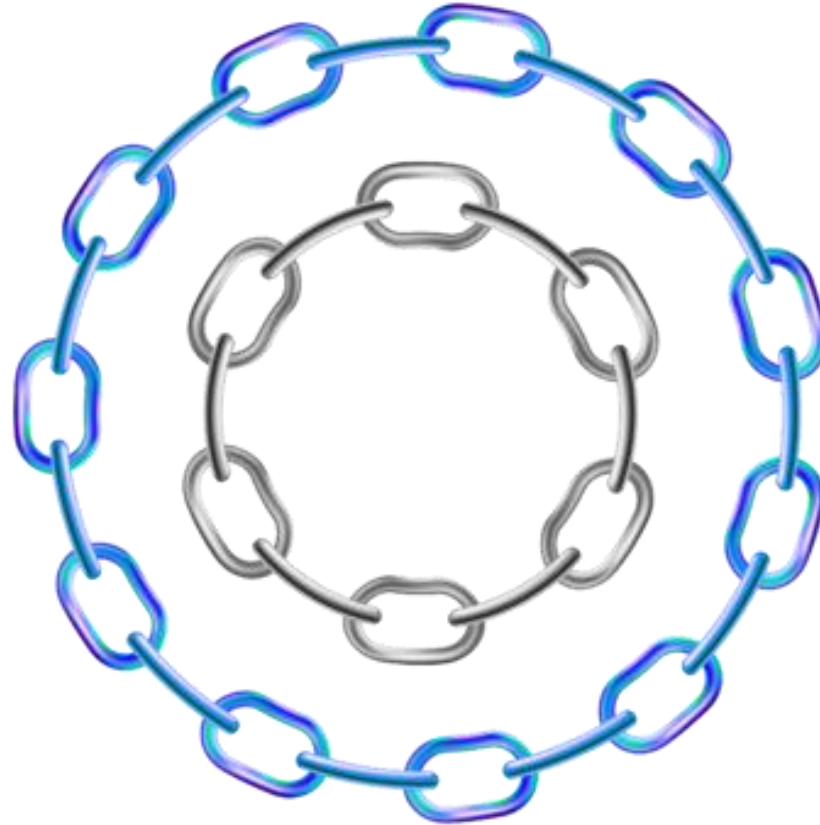


Deloitte.



MAY 18TH, 2018

SAI Annual Convention

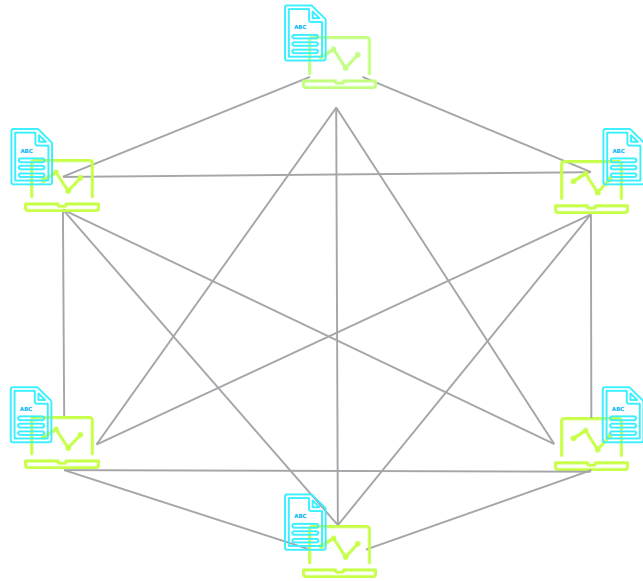
Digital Finance- Blockchain beyond the hype

Describe blockchain....

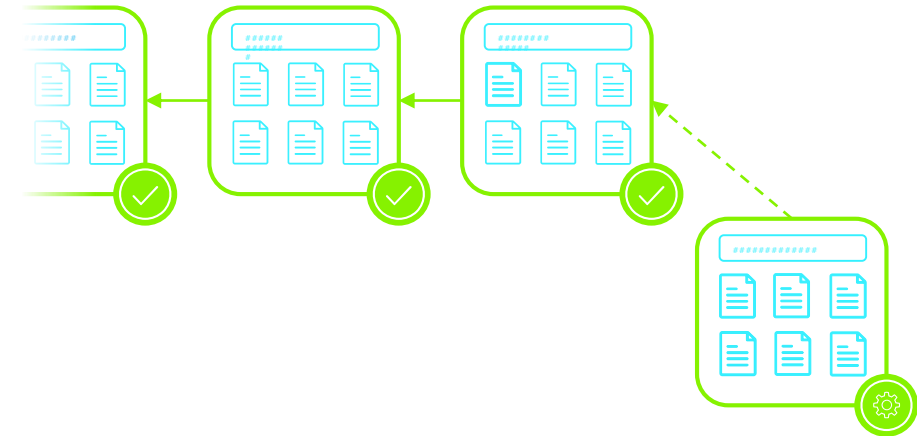


What is blockchain?

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:



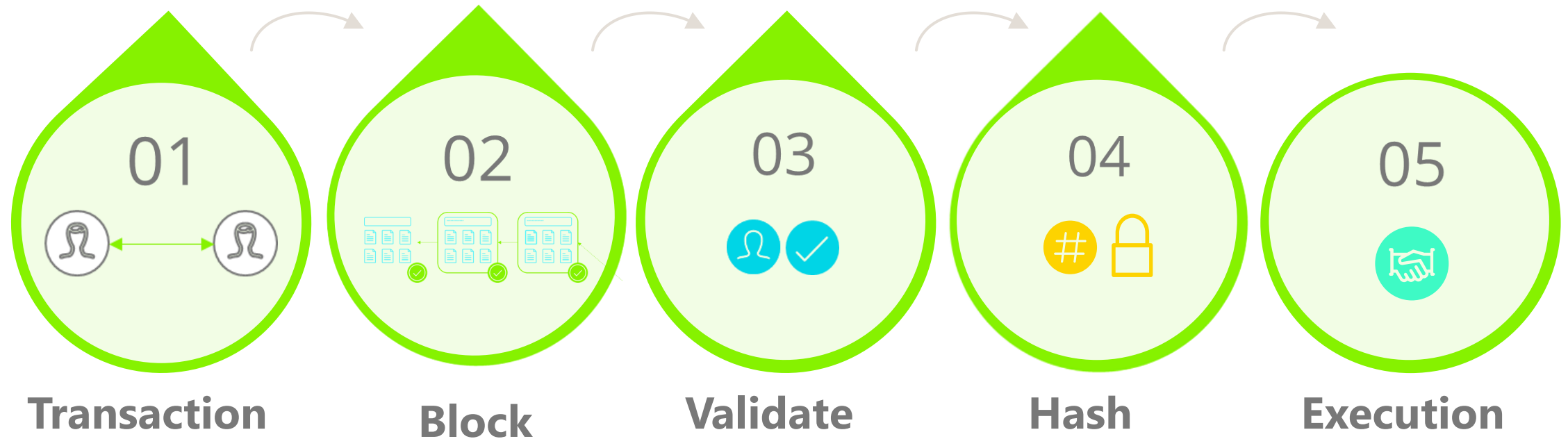
Each block can contain transactions, **data** and a **reference** to the previous blockchain (creating the chain)

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

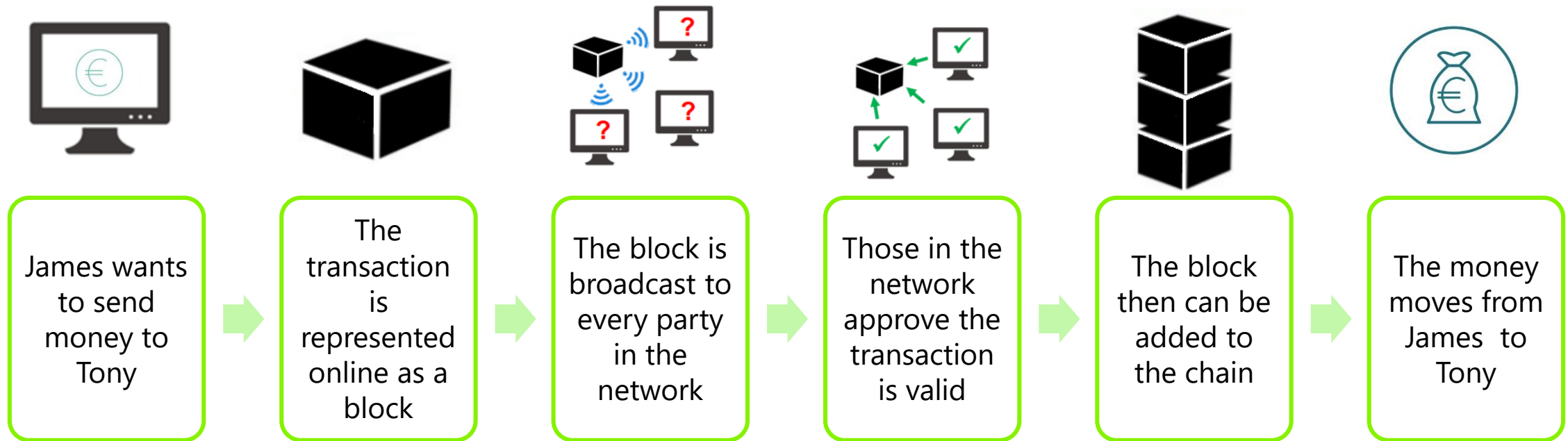


Disintermediation



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

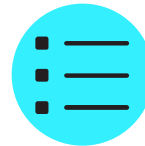


Public blockchains



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







Blockchain Trends.

Factors effecting blockchain adoption.

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

Accelerators

- ✓ Competitors looking to invest more heavily
- ✓ Other industries are adopting quicker which increases overall activity
- ✓ Use cases are closer to production than expected
- ✓ Investment scaling in blockchain from venture firms & competitors
- ✓ Regulator involvement is not typical for a nascent technology



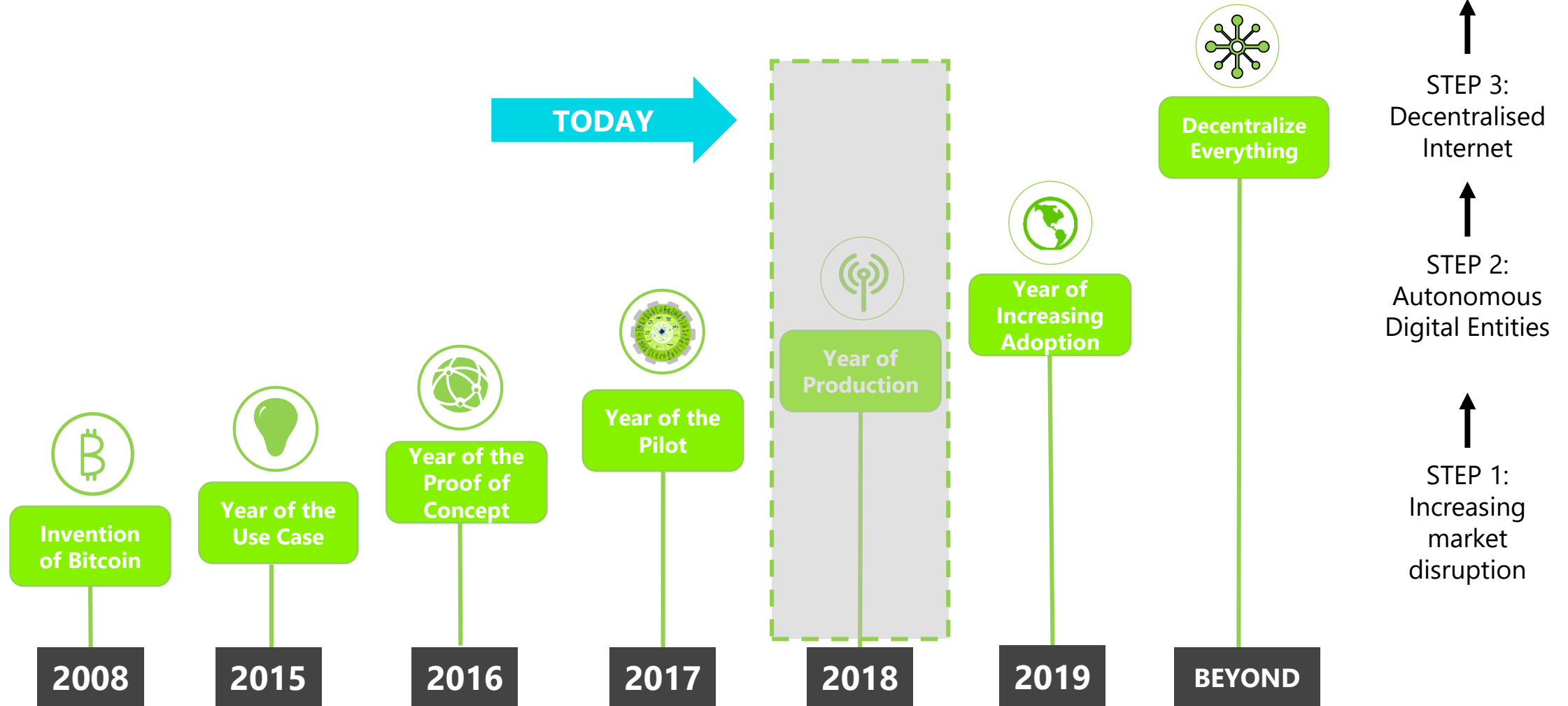
Inhibitors

- ? Lack of standards
- ? Operational challenges
- ? Network effect requirements
- ? Industry wide buy in
- ? Security concerns
- ? Lack of awareness



Blockchain growing faster than anticipated.

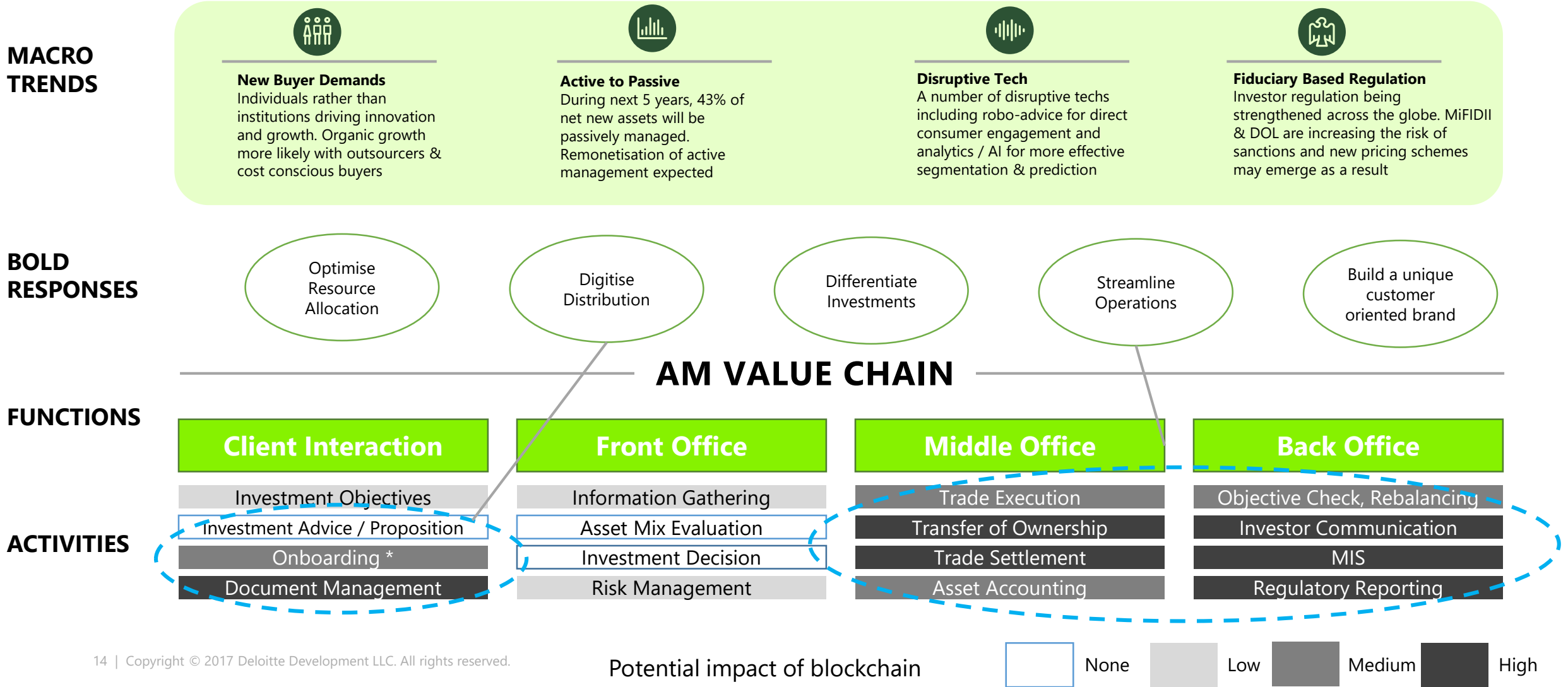
Many sceptics believe blockchain is far away but indications suggest the level of adoption is quickening.



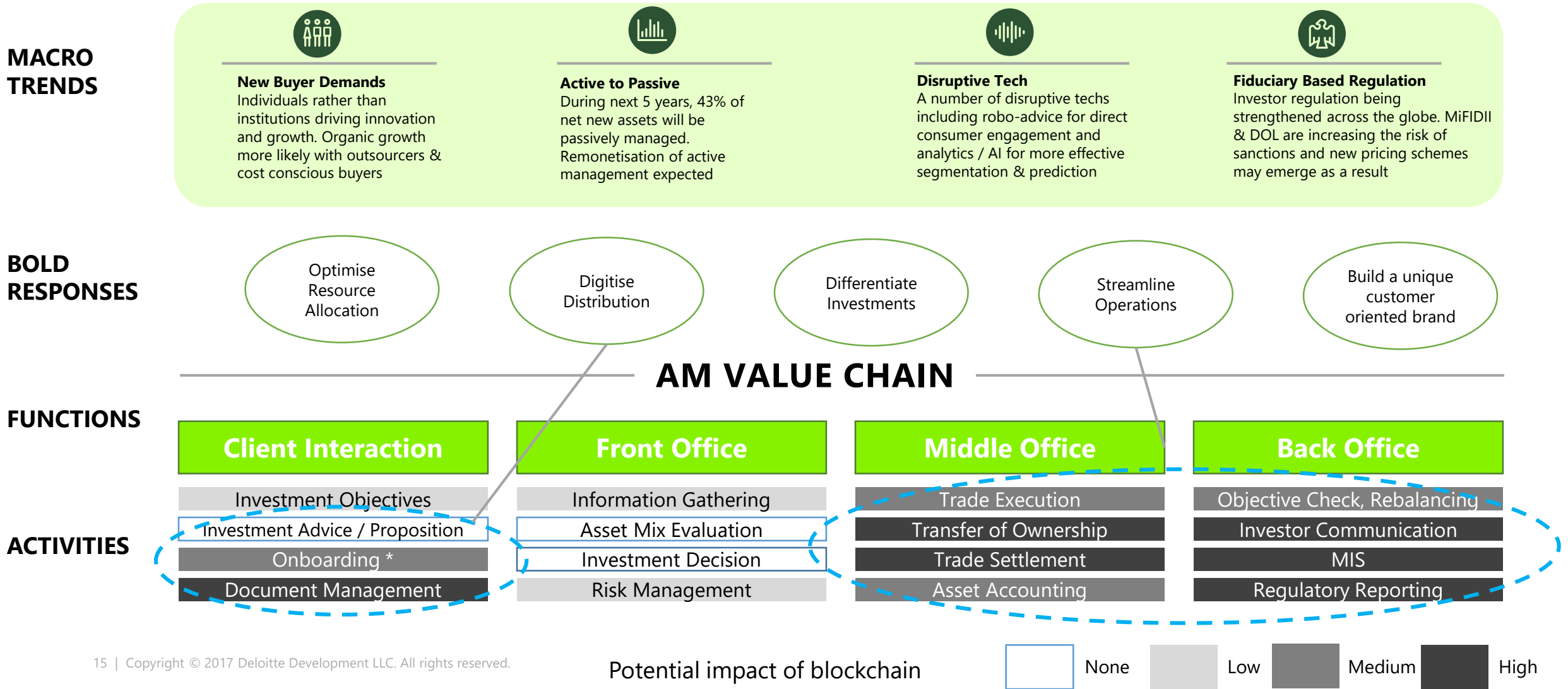


Blockchain in Asset Management

Asset management is in a period of change.

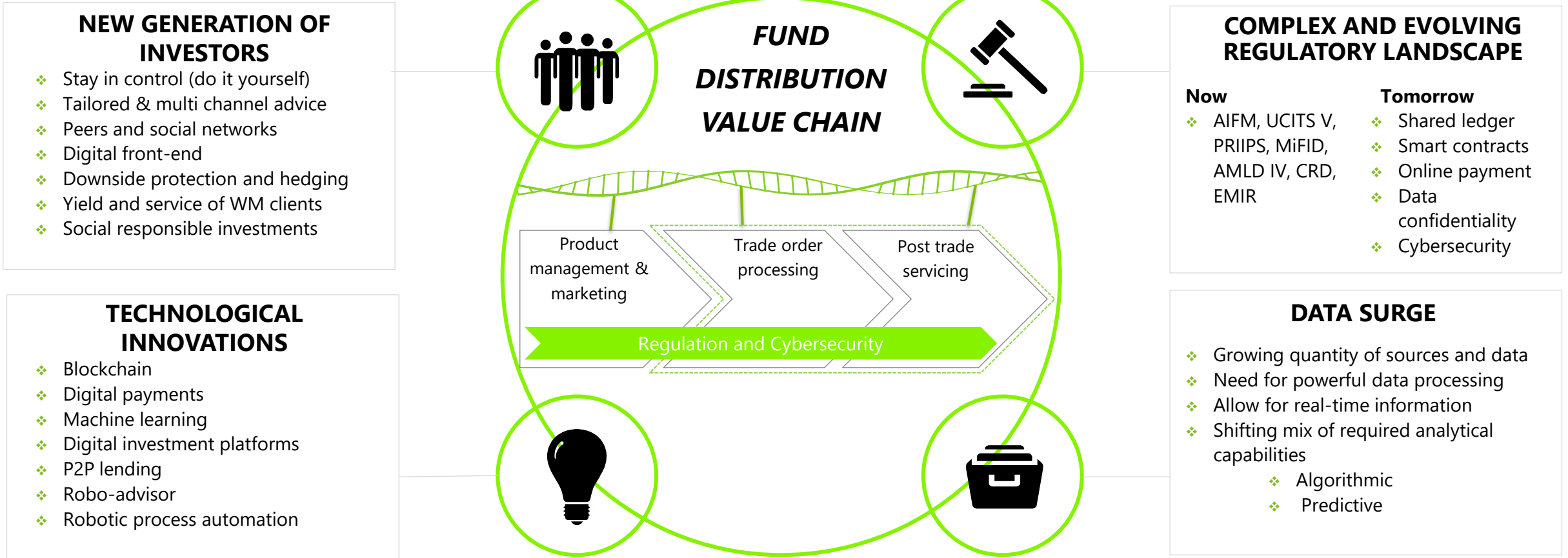


Asset management is in a period of change.



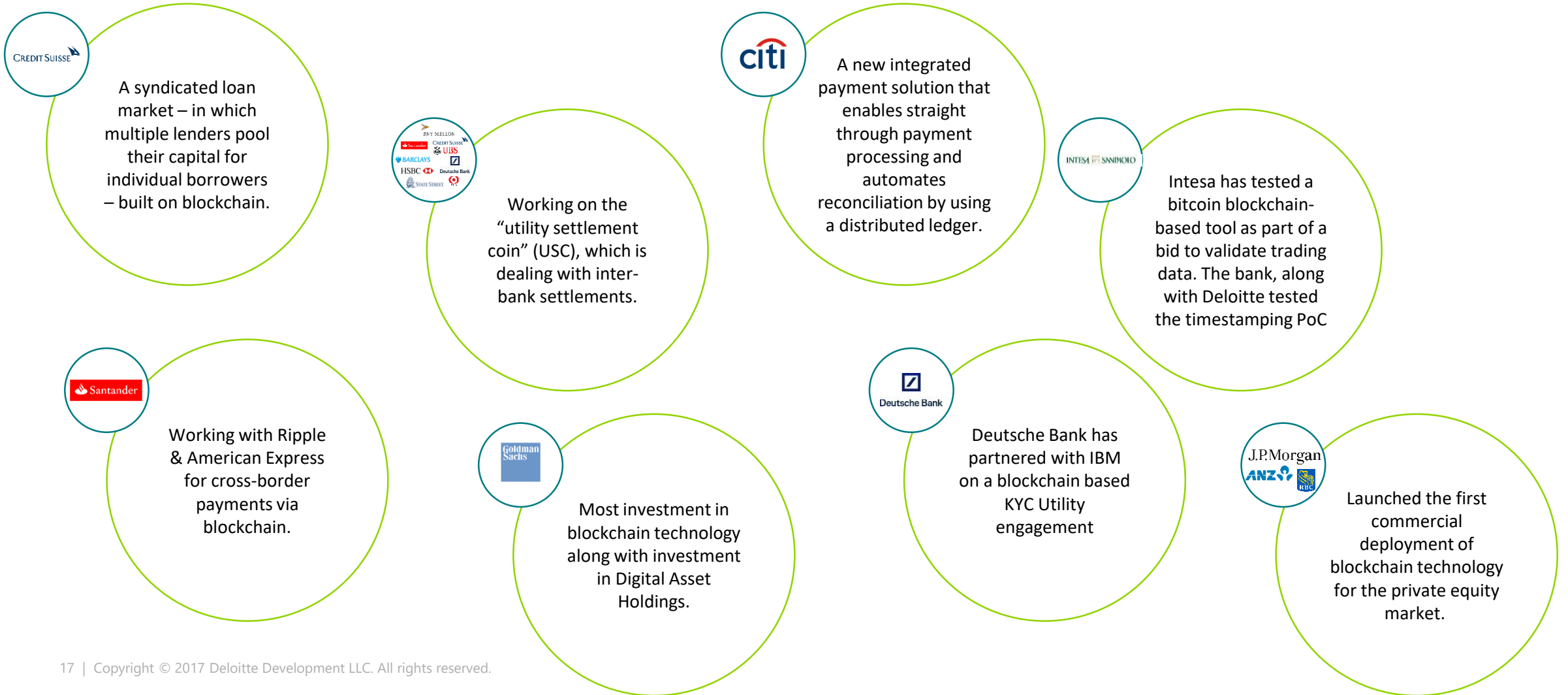
Asset management is in a period of change.

We see some megatrends powering the IM revolution.



Blockchain initiatives in banking are widespread

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

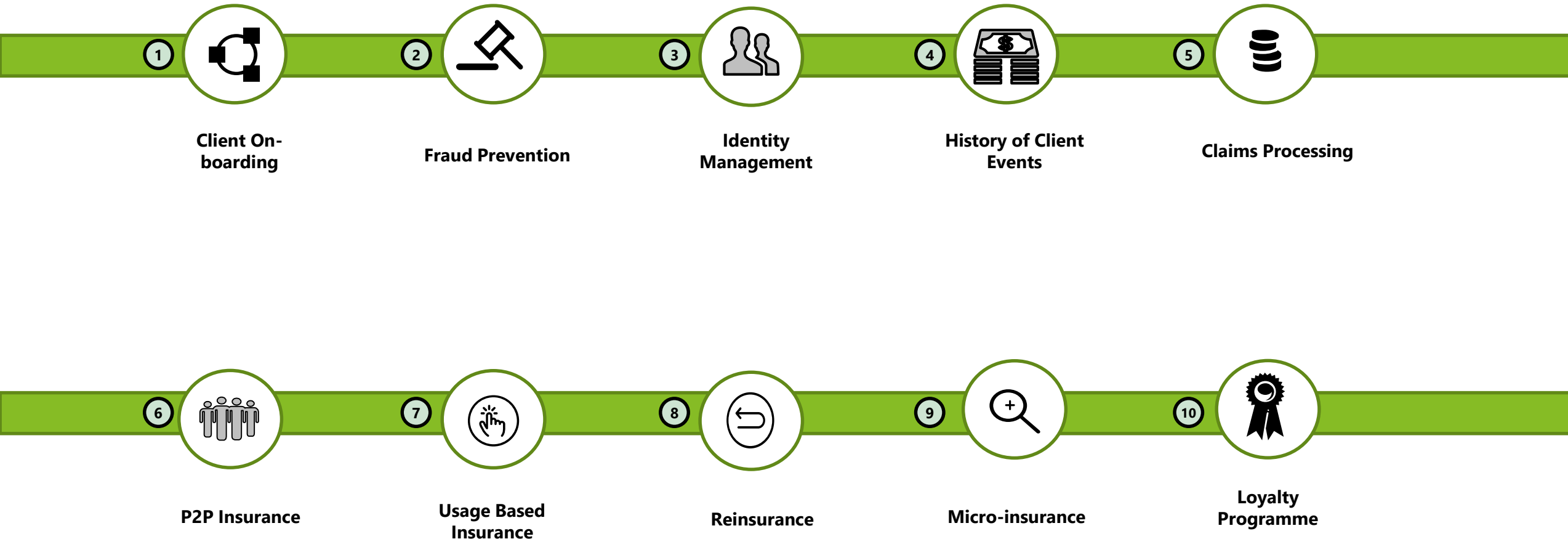




Blockchain in the Insurance Industry

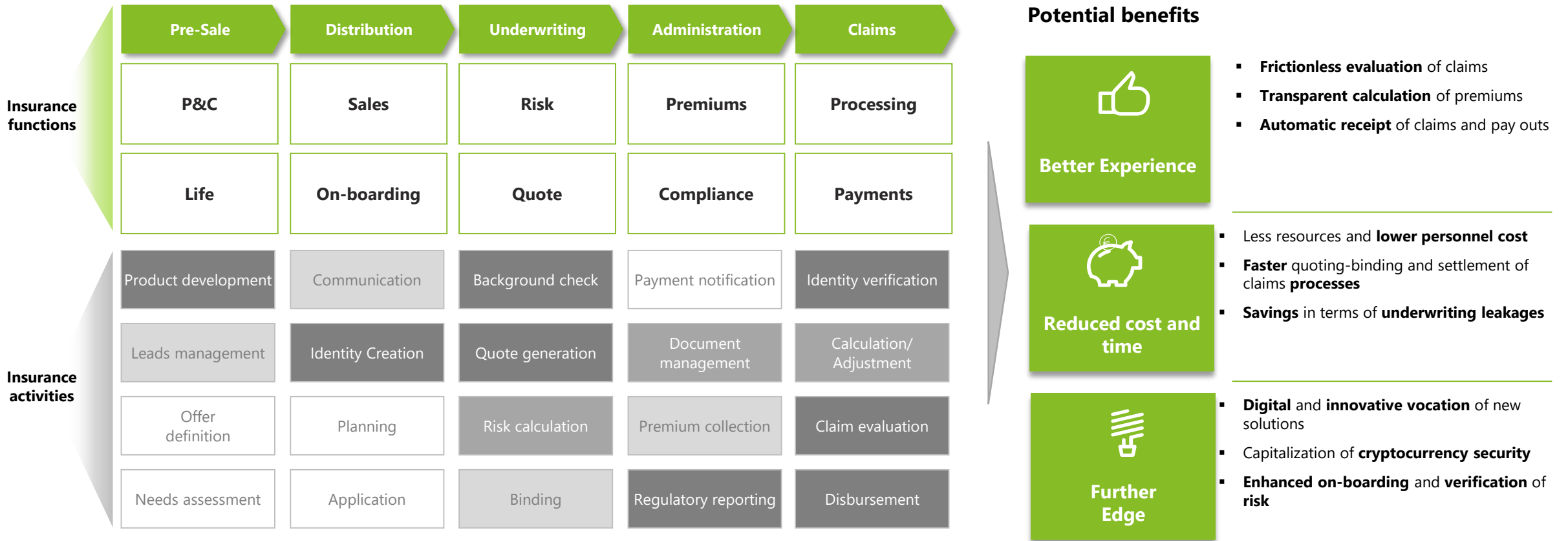
Blockchain & Insurance – the use cases

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 impact from blockchain

None
 Low
 Medium
 High

-  Internal investment
-  Start-up financing/collaboration
-  Consortia participation
-  Proof of concept
-  Live Solution

Interest of EU Insurance Company

Company	Revenues (€ bln)	Headquarter	BC interest	BC activities
 Allianz	125.0			
 AXA	98.0			
 Prudential	86.5			
 Generali	68.5			
 Zurich	64.0			
 Munich Re	48.0			
 Aegon	33.0			
 Aviva	27.6			
 Mapfre	27.0			
 Poste vita	18.0			
 Scor SE	13.8			
 Unipol	13.0			
 Old Mutual	12.4			
 RSA Insurance Group	7.1			
 Reale Mutua	4.0			
 Cattolica	1.0			

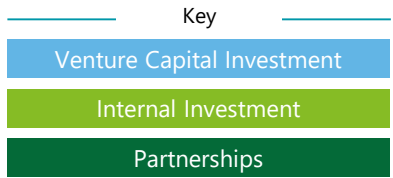
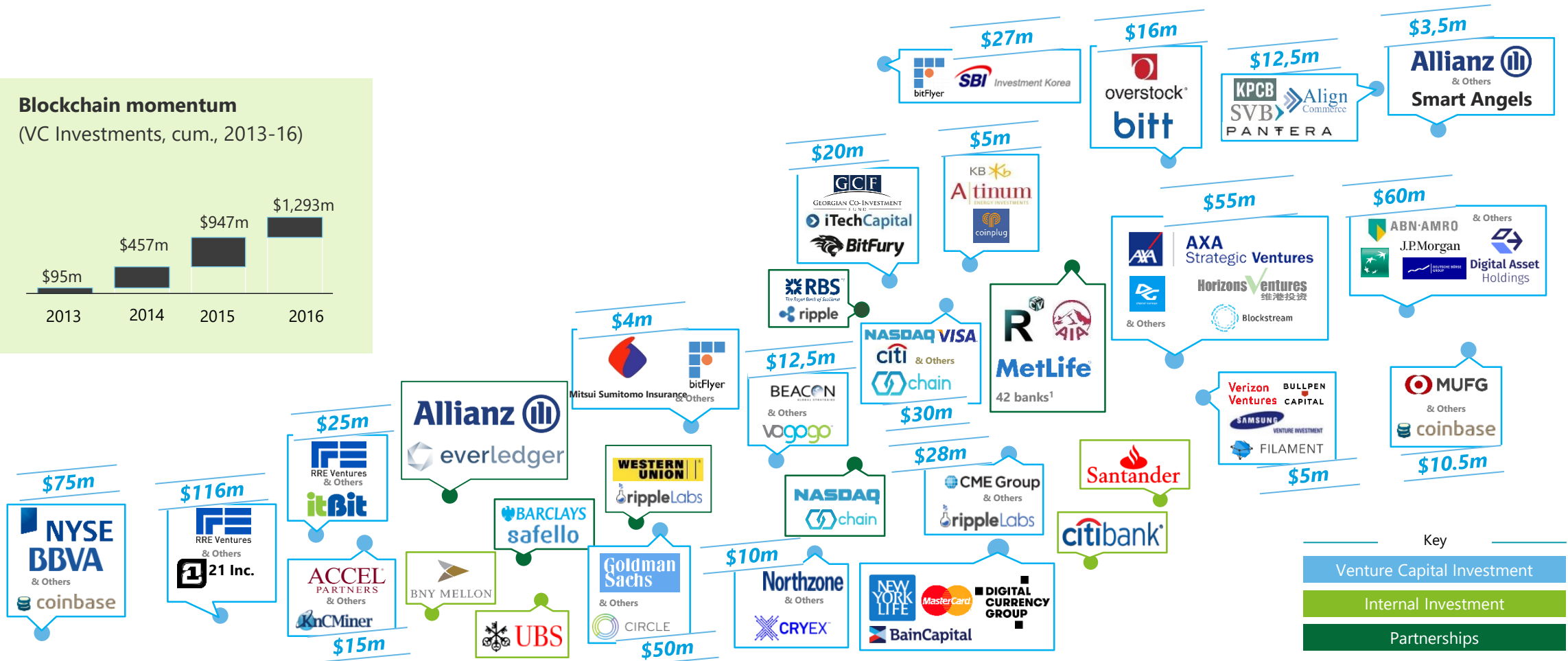
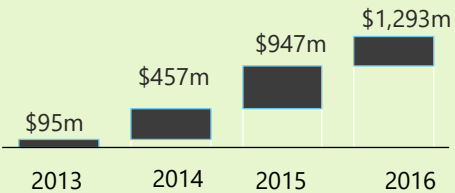
Source: Companies' Financial Statements 2017; Press clippings; Deloitte insights

Blockchain Investments in the Insurance Industry

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

Blockchain momentum

(VC Investments, cum., 2013-16)



A blue-tinted photograph of several computer cooling fans in a server rack. The fans are arranged in a row, and their blades are visible. The background is slightly blurred, showing more of the server rack and some cables. A white text box is overlaid on the bottom left of the image.

**How to Engage
with Blockchain?**



A new technology, for a new age.

THE EMEA BLOCKCHAIN LAB

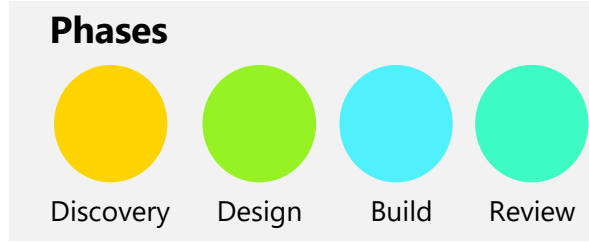
By packaging the power of Deloitte, we're transforming the blockchain space in ways are competitors don't.

Our blockchain team
Focuses on

-  Disruptive Technology
-  Blockchain Strategy
-  Use Case Development
-  Proof-of-concepts
-  Pilots
-  Live Productions

Leaders across our client organizations can come to our Lab to have their blockchain ambitions brought to life.

Prototype Build.



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
- High Level POC Technical Architecture defined

Build

Server Infrastructure

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

Front-end Development

- 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

Deployment / Integration

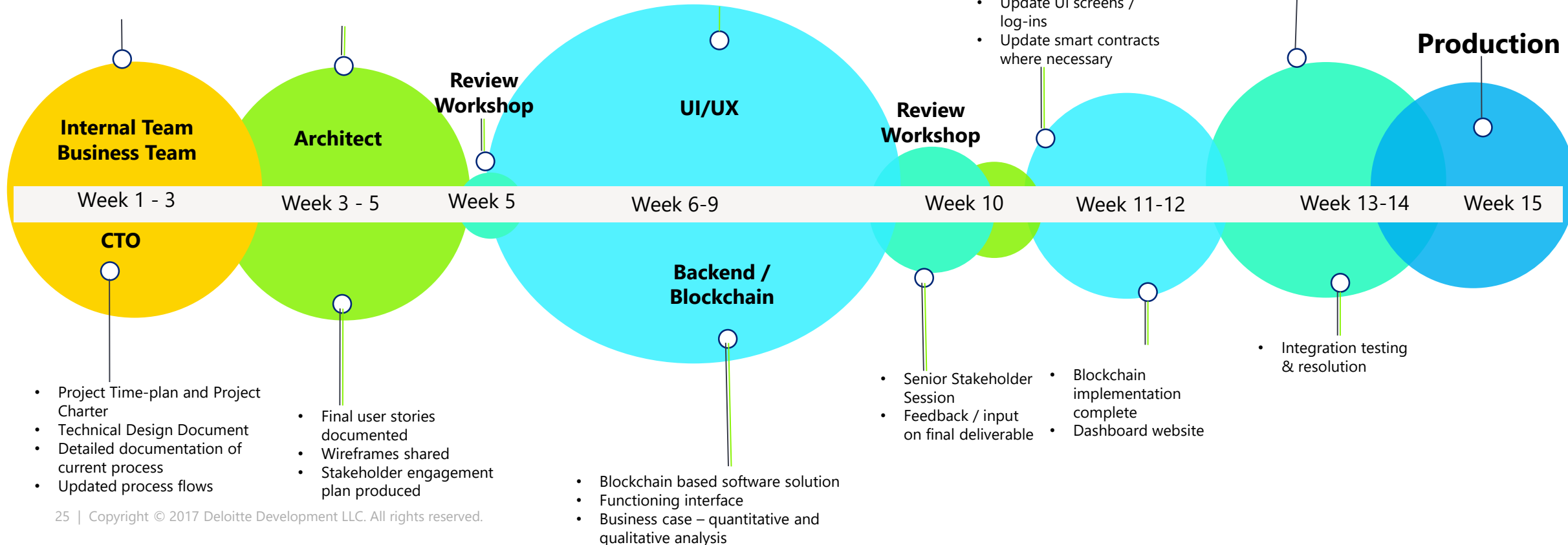
Test / Stage Deployments

- Integration testing
- Issue resolution
- Feature implementation

Production

ACTIVITIES

OUTCOMES





Thank you.

Paula Butler

Manager, EMEA Blockchain Lab

Contact: pabutler@deloitte.ie

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