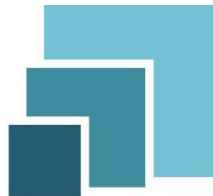# Insuring the future with Blockchain

Global Blockchain Congress
19th December 2018

Gary Nuttall
Managing Director

Distlytics
Distributed Ledger Analytics
Consultancy & Insight

Agenda

- Introductions
- Blockchain(s)
- Use Cases
- Insurance Opportunities

Introduction

- Course
- Trainer
- Audience
- Myths

Introduction

- Course
- Trainer
- Audience
- Myths

Introduction

<u>Intended Audience</u>

- Zero prior knowledge
- Designed to be business, rather than technical, focussed
- Intended for those who wish to gain an understanding of blockchain core concepts and use cases

<u>Training outcomes</u>

- Able to explain what a Distributed Ledger
- Have an appreciation of how a blockchain can be used
- Be aware of Insurance Use Cases

Introduction: Course 40 minutes

Course scope

- Core components of blockchains
- Primary use cases
- Insurance Use Cases

Out of scope

- Initial Coin Offerings
- Mining
- Wallet creation/management
- Coding
- Cryptography
- Bitcoin trading

*** Slides will be available to download post-event ***

Introduction: SMALLPRINT!

This presentation reflects my personal views and is not intended to reflect the views of past, current and prospective employers, clients or other agents.

"Prediction is very difficult, especially if it's about the future."

Nils Bohr, Nobel laureate in Physics

This is not intended to be taken as financial, taxation or legal advice

Introduction

- Course
- Trainer
- Audience
- Myths

Introduction: Me (#GPN01)

Introduction

- Course
- Trainer
- Audience
- Myths

Introduction: You

1. What do you know about Blockchain ?

2. What do you hope to learn ?

3. Tell me something that you have heard about it....

Introduction

- Course
- Trainer
- Audience
- Myths

Introduction: Mythbusters!

MYTHBUSTER TIME…

1. Bitcoin is an example of **A USE** of **A** Blockchain
2. Blockchains **are secure** – Exchanges & Wallets may not be
3. Cryptocurrency **isn't** the only use
4. It's **not** all about illicit trading and criminal money laundering
5. It's **not** going to consume all the electricity and cause global warming
6. It's **not** the answer to everything
7. It is an **immature** technology – but it's growing up quickly

8. It **really could** cure world hunger

Introduction
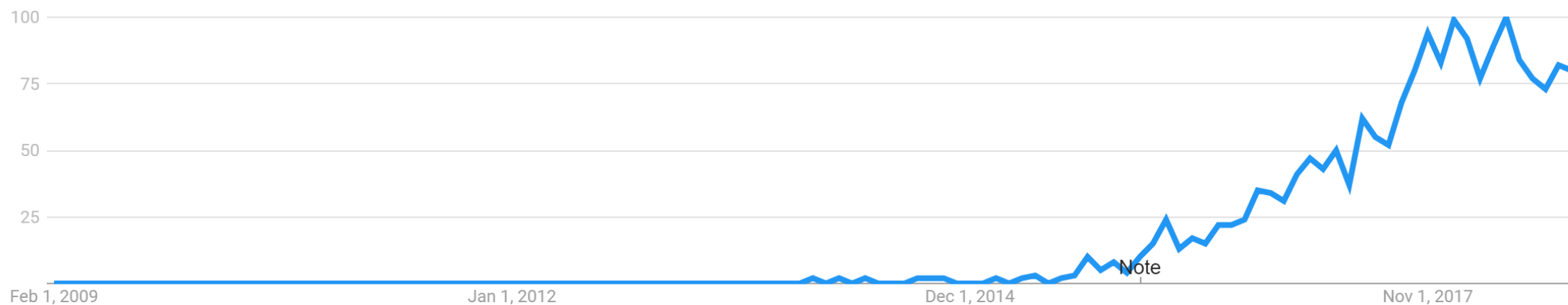
...Google searches for "Blockchain Insurance"

Agenda

- Introductions
- **Blockchain(s)**
- Use Cases
- Insurance Opportunities

Blockchain Primer

- Protocols
- Distributed Ledgers
- Blockchain

Blockchain Primer

- **Protocols**
- Distributed Ledgers
- Blockchain

Blockchain Primer

What is a protocol ?

Business, Socio/Cultural and Technical

Blockchain Primer

Protocol
TCP/IP (1980's)
HTTP (1990's)
Blockchain (2008)

Blockchain Primer

Protocol	Commonly used for
TCP/IP (1980's)	Internet
HTTP (1990's)	World Wide Web
Blockchain (2008)	Distributed Ledger

Blockchain Primer

Protocol	Commonly used for	Enables
TCP/IP (1980's)	Internet	**Data** sharing
HTTP (1990's)	World Wide Web	Displaying **information**
Blockchain (2008)	Distributed Ledger	Transfer of **value**

Blockchain Primer

(October 31, 2008 at 2:14 PM, EST) A few hundred members of an obscure cryptography group received an email from somebody calling himself Satoshi Nakamoto.

"I've been working on a new electronic cash system that's fully **peer-to-peer**, with **no trusted third party**," he bluntly stated. The email directed the readers to a nine page whitepaper hosted on Nakamoto's brand new domain, bitcoin.org. BITCOIN and a global financial revolution was born

> What is needed is an electronic payment system based on cryptographic proof instead of trust.
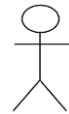>
> —Satoshi Nakamoto

ResoNova.com

Blockchain Primer

- Protocols
- **Distributed Ledgers**
- Blockchain

Blockchain Primer: Distributed Ledger

Barclays

HSBC

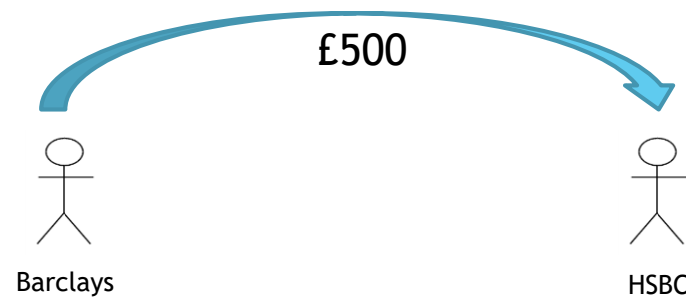# Blockchain Primer: Distributed Ledger

Transferring value

£500

Barclays

HSBC

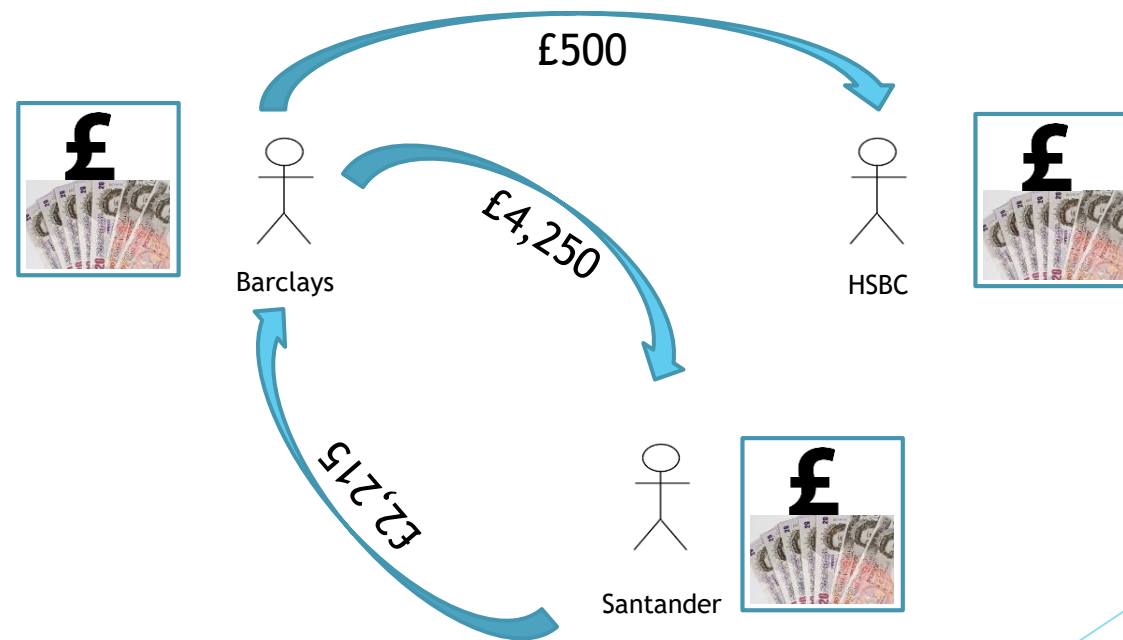# Blockchain Primer: Distributed Ledger

A **Ledger** is simply a journal of transactions

JOURNAL-ID	DATESTAMP	FROM	TO	CURRENCY	AMOUNT
1	01/01/2016 08:35	BARCLAYS	HSBC	GBP	500.00

£500

Barclays   HSBC

Blockchain Primer: Distributed Ledger

…usually lots of transactions

BARCLAYS JOURNAL					
JOURNAL-ID	DATESTAMP	FROM	TO	CURRENCY	AMOUNT
1	01/01/2016 08:35	BARCLAYS	HSBC	GBP	500.00
2	01/01/2016 09:45	BARCLAYS	SANTANDER	GBP	4,250.00
3	01/01/2016 11:35	SANTANDER	BARCLAYS	GBP	2,215.00

£500

£4,250

£2,215

Barclays

HSBC

Santander

Blockchain Primer: Distributed Ledger

Everyone has a copy of their own ledger

BARCLAYS JOURNAL

JOURNAL-ID	DATESTAMP	FROM	TO	CURRENCY	AMOUNT
1	01/01/2016 08:35	BARCLAYS	HSBC	GBP	500.00
2	01/01/2016 09:45	BARCLAYS	SANTANDER	GBP	4,250.00
3	01/01/2016 11:35	SANTANDER	BARCLAYS	GBP	2,215.00

HSBC JOURNAL

JOURNAL-ID	DATESTAMP	FROM	TO	CURRENCY	AMOUNT
1	01/01/2016 08:35	BARCLAYS	HSBC	GBP	500.00
4	01/01/2016 13:35	HSBC	SANTANDER	GBP	105.00

SANTANDER JOURNAL

JOURNAL-ID	DATESTAMP	FROM	TO	CURRENCY	AMOUNT
2	01/01/2016 09:45	BARCLAYS	SANTANDER	GBP	4,250.00
3	01/01/2016 11:35	SANTANDER	BARCLAYS	GBP	2,215.00

Blockchain Primer: Distributed Ledger

INEFFICIENT

- **RECONCILIATION – Need to check that every record of every transaction has been copied to each other's systems correctly**
- **AUDIT – Need to prove that the system works consistently**

EXPENSIVE

- **Processing overhead (needs computing power)**
- **Reconciliation systems need to be designed, developed, tested & supported**
- **Excel addicts writing macros, functions & stuff that goes wrong**
- **Auditing overhead – cost of auditors, audits, etc.**
- **Data Quality issues – End up "working around" problems**

SLOW

- **Need to wait for reconciliations to be executed and verified**
- **Audits are after the event and aren't preventative**

Blockchain Primer: Distributed Ledger

SOLUTION!

Merge all the Ledgers into one...

BARCLAYS JOURNAL

JOURNAL-ID	DATESTAMP	FROM	TO	CURRENCY	AMOUNT
1	01/01/2016 08:35	BARCLAYS	HSBC	GBP	500.00
2	01/01/2016 09:45	BARCLAYS	SANTANDER	GBP	4,250.00
3	01/01/2016 11:35	SANTANDER	BARCLAYS	GBP	2,215.00

HSBC JOURNAL

JOURNAL-ID	DATESTAMP	FROM	TO	CURRENCY	AMOUNT
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SANTANDER JOURNAL

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JOURNAL-ID	DATESTAMP	FROM	TO	CURRENCY	AMOUNT
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3	01/01/2016 11:35	SANTANDER	BARCLAYS	GBP	2,215.00
4	01/01/2016 13:35	HSBC	SANTANDER	GBP	105.00

A <u>Mutual Ledger</u>…Less reconciliation

Blockchain Primer: Distributed Ledger

Distribute a copy of the ledger to everyone

Barclays

| Block 1 | → | Block 2 | → | Block 3 |

First Direct

| Block 1 | → | Block 2 | → | Block 3 |

HSBC

| Block 1 | → | Block 2 | → | Block 3 |

Co-Op

| Block 1 | → | Block 2 | → | Block 3 |

Santander

| Block 1 | → | Block 2 | → | Block 3 |
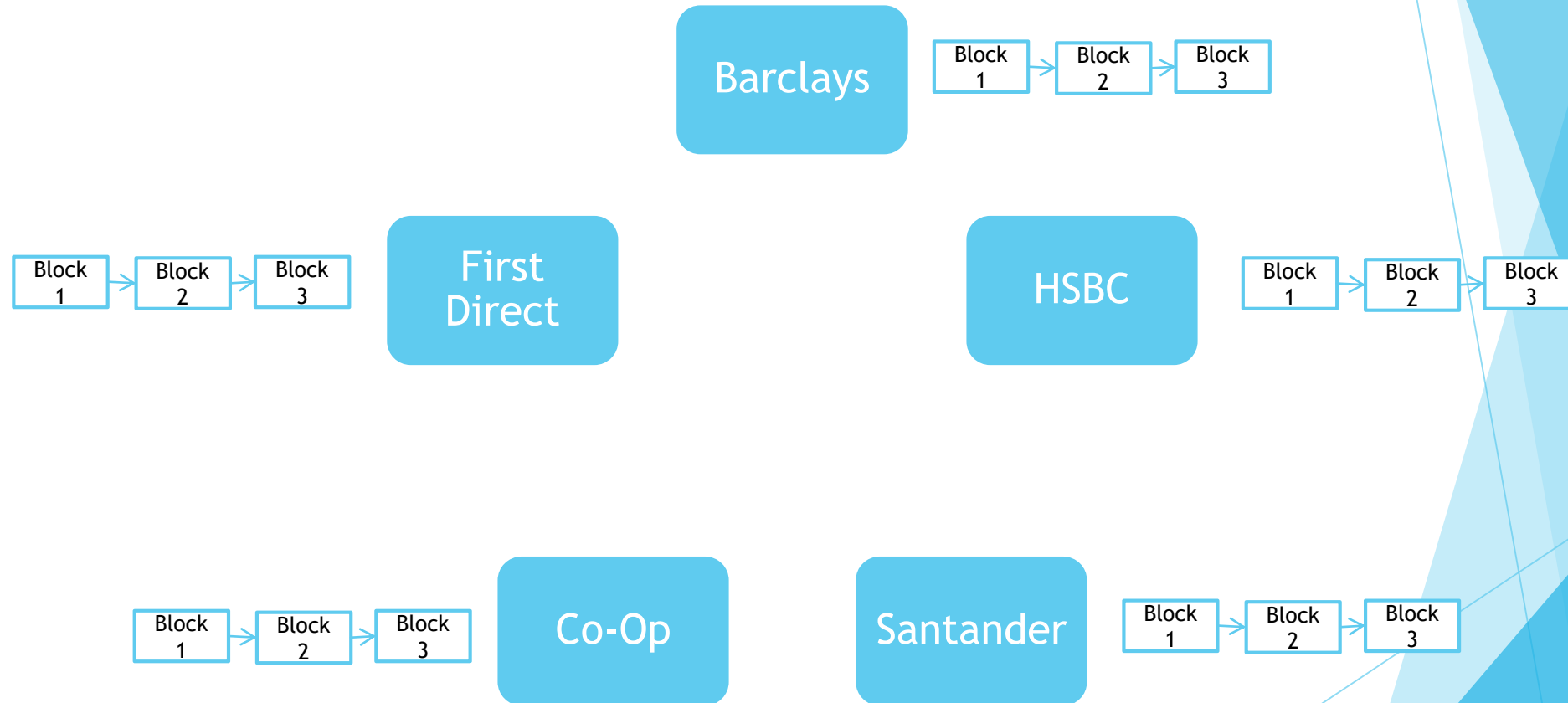
…And you have a **Mutual Distributed Ledger**

Blockchain Primer: Distributed Ledger

Put crypto-security onto the Ledger

Cryptography

Cryptography or cryptology is the practice and study of techniques for secure communication in the presence of third parties called adversaries. More generally, cryptography is about constructing and analyzing protocols that prevent third parties or the public from reading private messages; various aspects in information security such as data confidentiality, data integrity, authentication, and non-repudiation are central to modern cryptography. Modern cryptography exists at the intersection of the disciplines of mathematics, computer science, and electrical engineering. Applications of cryptography include ATM cards, computer passwords, and electronic commerce.

Cryptography - Wikipedia
https://en.wikipedia.org/wiki/Cryptography

See more about Cryptography ⌄

Blockchain Primer: Distributed Ledger

Put crypto-security onto the Ledger

JOURNAL-ID	DATESTAMP	FROM	TO	CURRENCY	AMOUNT	HASH	BLOCK	BLOCK HASH	START BLOCK	START HASH
1	01/01/2016 08:35	BARCLAYS	HSBC	GBP	500.00	1111			0	110111
2	01/01/2016 09:45	BARCLAYS	SANTANDER	GBP	4,250.00	101				
3	01/01/2016 11:35	SANTANDER	BARCLAYS	GBP	2,215.00	100011				
4	01/01/2016 13:35	HSBC	SANTANDER	GBP	105.00	101101	1	1111000		

```
IF FROM = %USER%
OR TO = %USER%
THEN DISPLAY LINE
```
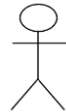
Barclays

HSBC

JOURNAL-ID	DATESTAMP	FROM	TO	CURRENCY	AMOUNT
1	01/01/2016 08:35	**BARCLAYS**	HSBC	GBP	500.00
2	01/01/2016 09:45	**BARCLAYS**	SANTANDER	GBP	4,250.00
3	01/01/2016 11:35	SANTANDER	**BARCLAYS**	GBP	2,215.00

JOURNAL-ID	DATESTAMP	FROM	TO	CURRENCY	AMOUNT
1	01/01/2016 08:35	BARCLAYS	**HSBC**	GBP	500.00
4	01/01/2016 13:35	**HSBC**	SANTANDER	GBP	105.00

…now users can only access their own data

Which decreases Security Auditing overhead

Blockchain Primer: Blockchain

You can restrict access only to members…
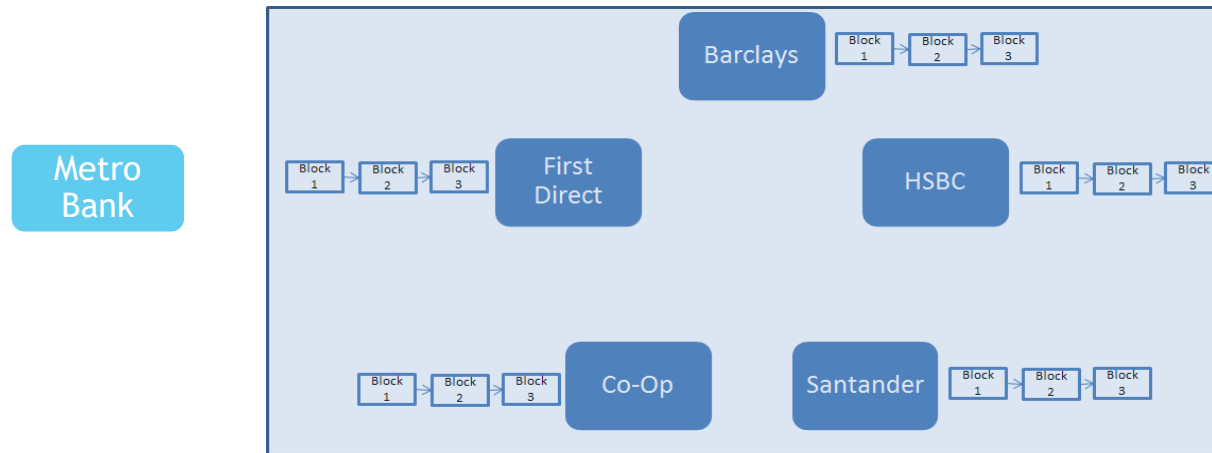
…Giving a Private, Permissioned Ledger

Blockchain Primer: Blockchain

You can provide open access to everybody…
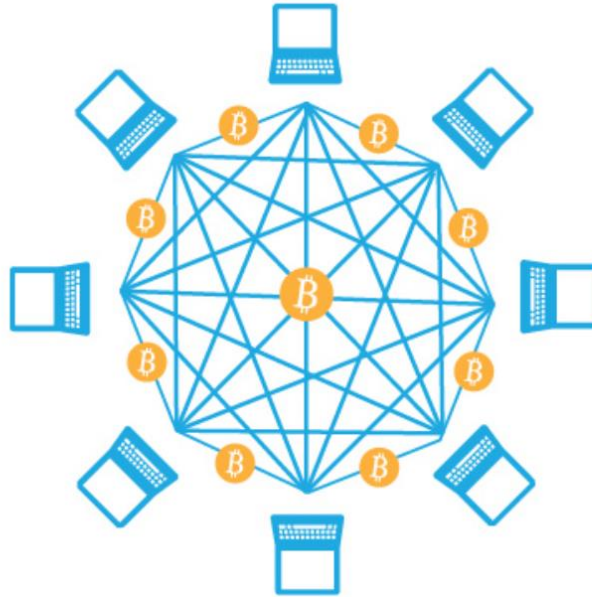
… but machine-to-machine payment using the Bitcoin
protocol could allow for direct payment between
individuals, as well as support micropayments.

Graphic: Deloitte University Press | DUPress.com

…Giving a Public, Unpermissioned Ledger

Blockchain Primer: SMART CONTRACTS

Computer program of business logic. Often linked with data sources ("ORACLES"), providing evidence of trigger events…

Weather conditions (Temperature, precipitation), Flight Delays, location (via IoT)

WARNING: Smart Contracts are neither Smart nor Contracts!

Journal ID	Datestamp	FROM	TO	UNIT	IDENTIFIER
1	01/01/2016 11:45:00	ATRIUM	LUFTHANSA	EUR	POLICY123
2	01/01/2016 11:45:01	BEAZLEY	FARMER MCGREGOR	GBP	POLICY234

POLICY123	IF (POLICY_IS_ACTIVE AND PREMIUM_PAID AND CLAIM_CONDITION_MET THEN PAY_CLAIM	POLICY234	IF (POLICY_IS_ACTIVE AND PREMIUM_PAID AND CLAIM_CONDITION_MET THEN PAY_CLAIM

Blockchain Primer

- Protocols
- Distributed Ledgers
- **Blockchain**

A **cryptographic hash** function is a **hash** function which takes an input (or 'message') and returns a fixed-size alphanumeric string. The string is called the '**hash** value', 'message digest', 'digital fingerprint', 'digest' or 'checksum'.
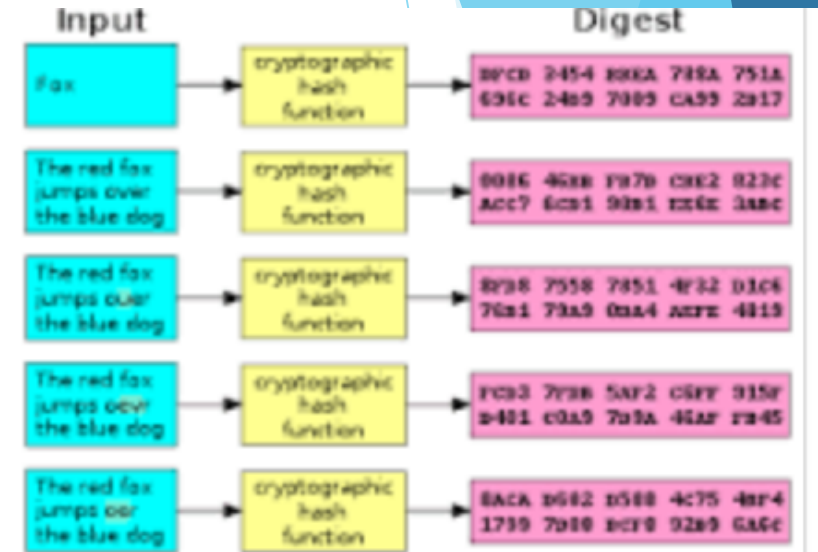
Cryptographic hash function - Simple English Wikipedia, the free ...

https://simple.wikipedia.org/wiki/Cryptographic_hash_function

`

Imagine a physical ledger, with pages in it

BLOCK 0					PREVIOUS HASH =	
RECORD	DATETIME	FROM	TO	VALUE	UNITOFMEASURE	
1	01/01/2018 10:23	GARY	JANE	100	GBP	
2	04/01/2018 14:22	JOHN	PAUL	7	USD	
3	04/01/2018 15:36	CLARE	ALAN	125	GBP	
4	05/01/2018 10:16	GARY	PAUL	9	BTC	
5	06/01/2018 18:18	PETER	CLARE	83	USD	
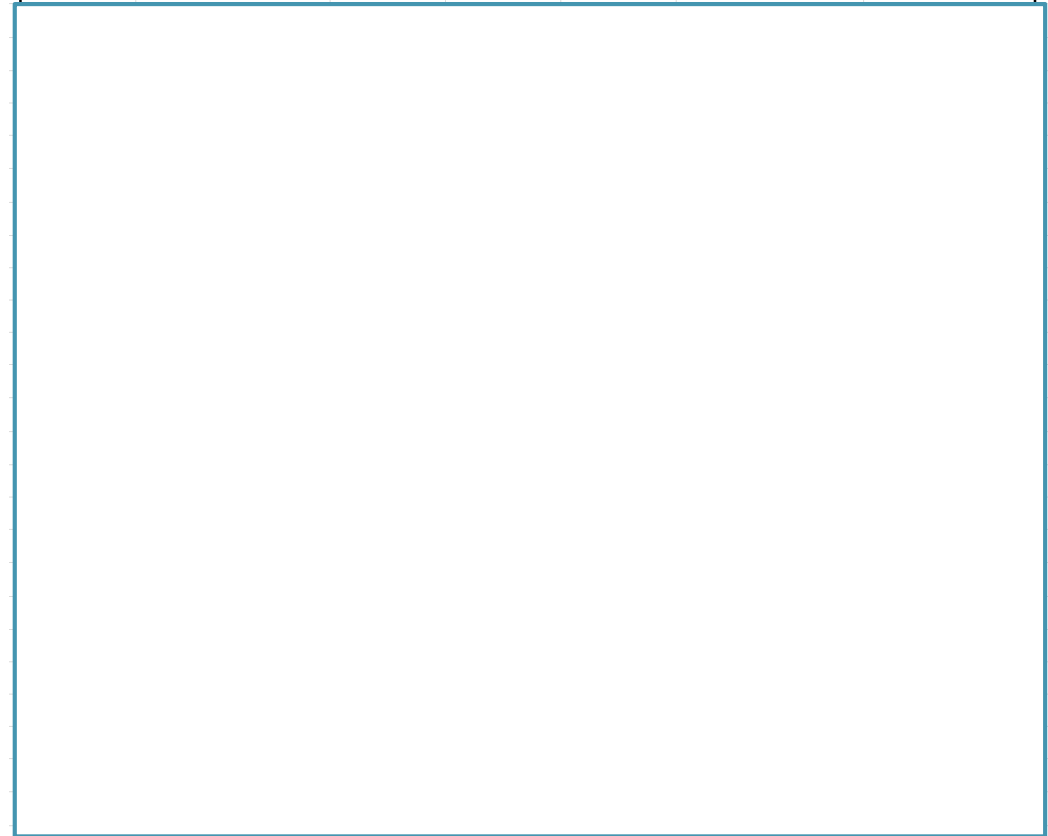
Blockchain Primer: Blockchain

Imagine a physical ledger, with pages in it

At the bottom of the page you enter the hash for that page

BLOCK 0					PREVIOUS HASH =	
RECORD	DATETIME	FROM	TO	VALUE	UNITOFMEASURE	
1	01/01/2018 10:23	GARY	JANE	100	GBP	
2	04/01/2018 14:22	JOHN	PAUL	7	USD	
3	04/01/2018 15:36	CLARE	ALAN	125	GBP	
4	05/01/2018 10:16	GARY	PAUL	9	BTC	
5	06/01/2018 18:18	PETER	CLARE	83	USD	
				CALCULATED HASH =		00bf124aa001

Blockchain Primer: Blockchain

Imagine a physical ledger, with pages in it

At the bottom of the page you enter the hash for that page

At the top of the next page, you start with the hash from the previous page

BLOCK 0					PREVIOUS HASH =	
RECORD	DATETIME	FROM	TO	VALUE	UNITOFMEASURE	
1	01/01/2018 10:23	GARY	JANE	100	GBP	
2	04/01/2018 14:22	JOHN	PAUL	7	USD	
3	04/01/2018 15:36	CLARE	ALAN	125	GBP	
4	05/01/2018 10:16	GARY	PAUL	9	BTC	
5	06/01/2018 18:18	PETER	CLARE	83	USD	
					CALCULATED HASH =	00bf124aa001

BLOCK 1					PREVIOUS HASH =	00bf124aa001
RECORD	DATETIME	FROM	TO	VALUE	UNITOFMEASURE	
1	01/01/2018 10:23	GARY	JANE	100	GBP	
2	04/01/2018 14:22	JOHN	PAUL	7	USD	
3	04/01/2018 15:36	CLARE	ALAN	125	GBP	
4	05/01/2018 10:16	GARY	PAUL	9	BTC	
5	06/01/2018 18:18	PETER	CLARE	83	USD	
					CALCULATED HASH =	00dea123123

Blockchain Primer: Blockchain

Imagine a physical ledger, with pages in it

At the bottom of the page you enter the hash for that page

At the top of the next page, you start with the hash from the previous page

So, the data is held in **BLOCKS** which are **CHAIN**ed together

BLOCK 0   PREVIOUS HASH =

RECORD	DATETIME	FROM	TO	VALUE	UNITOFMEASURE
1	01/01/2018 10:23	GARY	JANE	100	GBP
2	04/01/2018 14:22	JOHN	PAUL	7	USD
3	04/01/2018 15:36	CLARE	ALAN	125	GBP
4	05/01/2018 10:16	GARY	PAUL	9	BTC
5	06/01/2018 18:18	PETER	CLARE	83	USD

CALCULATED HASH = 00bf124aa001

BLOCK 1   PREVIOUS HASH = 00bf124aa001

RECORD	DATETIME	FROM	TO	VALUE	UNITOFMEASURE
1	01/01/2018 10:23	GARY	JANE	100	GBP
2	04/01/2018 14:22	JOHN	PAUL	7	USD
3	04/01/2018 15:36	CLARE	ALAN	125	GBP
4	05/01/2018 10:16	GARY	PAUL	9	BTC
5	06/01/2018 18:18	PETER	CLARE	83	USD

CALCULATED HASH = 00dea123123

BLOCK 2   PREVIOUS HASH = 00dea123123

RECORD	DATETIME	FROM	TO	VALUE	UNITOFMEASURE
1	01/01/2018 10:23	GARY	JANE	100	GBP
2	04/01/2018 14:22	JOHN	PAUL	7	USD
3	04/01/2018 15:36	CLARE	ALAN	125	GBP
4	05/01/2018 10:16	GARY	PAUL	9	BTC
5	06/01/2018 18:18	PETER	CLARE	83	USD

CALCULATED HASH = 009a1aa1121

Imagine a physical ledger, with pages in it

At the bottom of the page you enter the hash for that page

At the top of the next page, you start with the hash from the previous page

So, the data is held in BLOCKS which are CHAINed together

Now VERY difficult to change an earlier entry as all of the hashes on all pages would need to be recalculated

BLOCK 0 — **PREVIOUS HASH =**

RECORD	DATETIME	FROM	TO	VALUE	UNITOFMEASURE
1	01/01/2018 10:23	GARY	JANE	100	GBP
2	04/01/2018 14:22	JOHN	PAUL	7	USD
3	04/01/2018 15:36	CLARE	ALAN	125	GBP
4	05/01/2018 10:16	GARY	PAUL	9	BTC
5	06/01/2018 18:18	PETER	CLARE	83	USD

CALCULATED HASH = 00bf124aa001

BLOCK 1 — **PREVIOUS HASH =** 00bf124aa001

RECORD	DATETIME	FROM	TO	VALUE	UNITOFMEASURE
1	01/01/2018 10:23	GARY	JANE	100	GBP
2	04/01/2018 14:22	JOHN	PAUL	7	USD
3	04/01/2018 15:36	CLARE	ALAN	125	GBP
4	05/01/2018 10:16	GARY	PAUL	9	BTC
5	06/01/2018 18:18	PETER	CLARE	83	USD

CALCULATED HASH = 00dea123123

BLOCK 2 — **PREVIOUS HASH =** 00dea123123

RECORD	DATETIME	FROM	TO	VALUE	UNITOFMEASURE
1	01/01/2018 10:23	GARY	JANE	100	GBP
2	04/01/2018 14:22	JOHN	PAUL	7	USD
3	04/01/2018 15:36	CLARE	ALAN	125	GBP
4	05/01/2018 10:16	GARY	PAUL	9	BTC
5	06/01/2018 18:18	PETER	CLARE	83	USD

CALCULATED HASH = 009a1aa1121

Blockchain Primer: Blockchain

Other things could go onto a ledger…such as assets
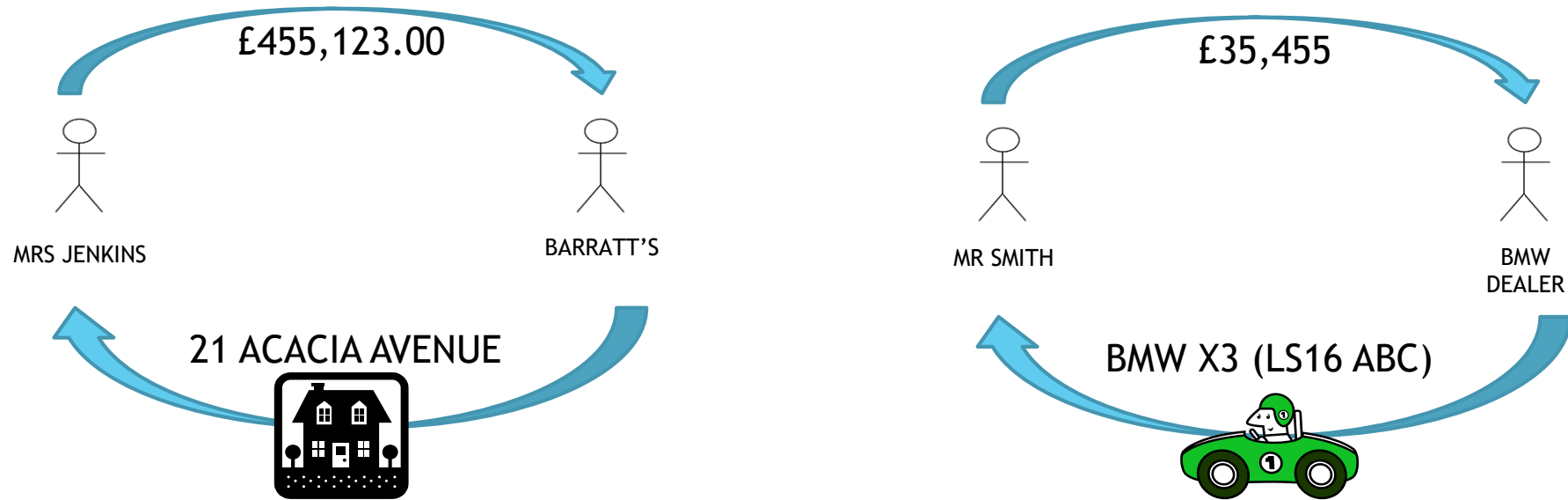
Journal ID	Datestamp	FROM	TO	UNIT	IDENTIFIER
1	01/01/2016 11:45:00	MRS JENKINS	BARRATT'S	GBP	455,123.00
2	01/01/2016 11:45:01	BARRATT'S	MRS JENKINS	HOUSE	21 ACACIA AVENUE
3	02/01/2016 10:35:00	MR SMITH	BMW DEALER	GBP	35,455.00
4	02/01/2016 10:35:01	BMW DEALER	MR SMITH	CAR	BMW X3 (LS16 ABC)

Blockchain Primer: Blockchain

Links to other things….such as documents
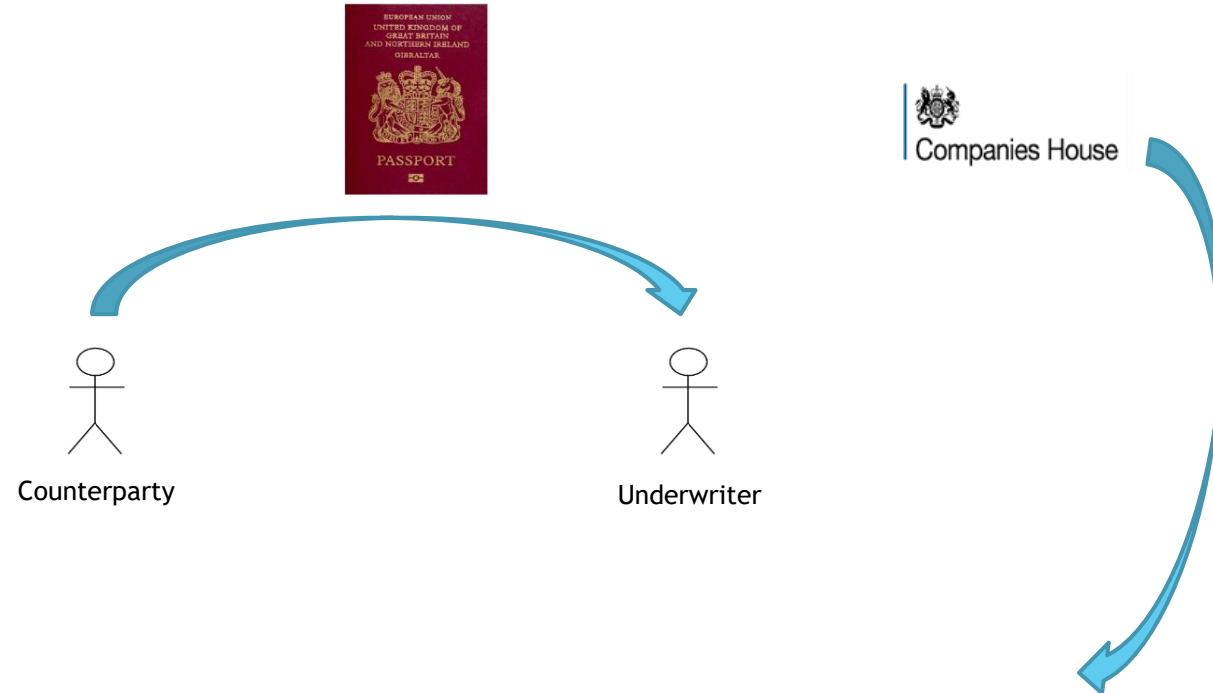
Journal ID	Datestamp	TYPE	REFERENCE	CLASS	IDENTIFIER
1	01/01/2016 11:45:00	KYC	PASSPORT	PDF	ABC123
2	01/01/2016 11:45:01	KYC	DIR CHECK	PDF	ABC124
3	02/01/2016 10:35:00	CLAIM	FNOL	EMAIL	DEF124
4	02/01/2016 10:35:01	CLAIM	ASSESS	WORD	DOC121

Blockchain Primer: Blockchain

So, back to the definition....

It's a <u>write-only</u> database
That <u>everyone</u> has an identical copy of

With all entries <u>timestamped</u>
And the data is cryptographically <u>secured</u>

Blockchain Primer: Blockchain

Different flavours…..

Protocol	Focus
Bitcoin	Crypto payments
Ethereum	Programmability
NEO	Programmability
Quorum	Programmability
Hyperledger	Programmability
Corda	Crypto transactions
Monax	Ecosystem
Ripple	Crypto transactions
Symbiont	Ledger

Blockchain DApp Platforms Comparison
Issue: December 2018
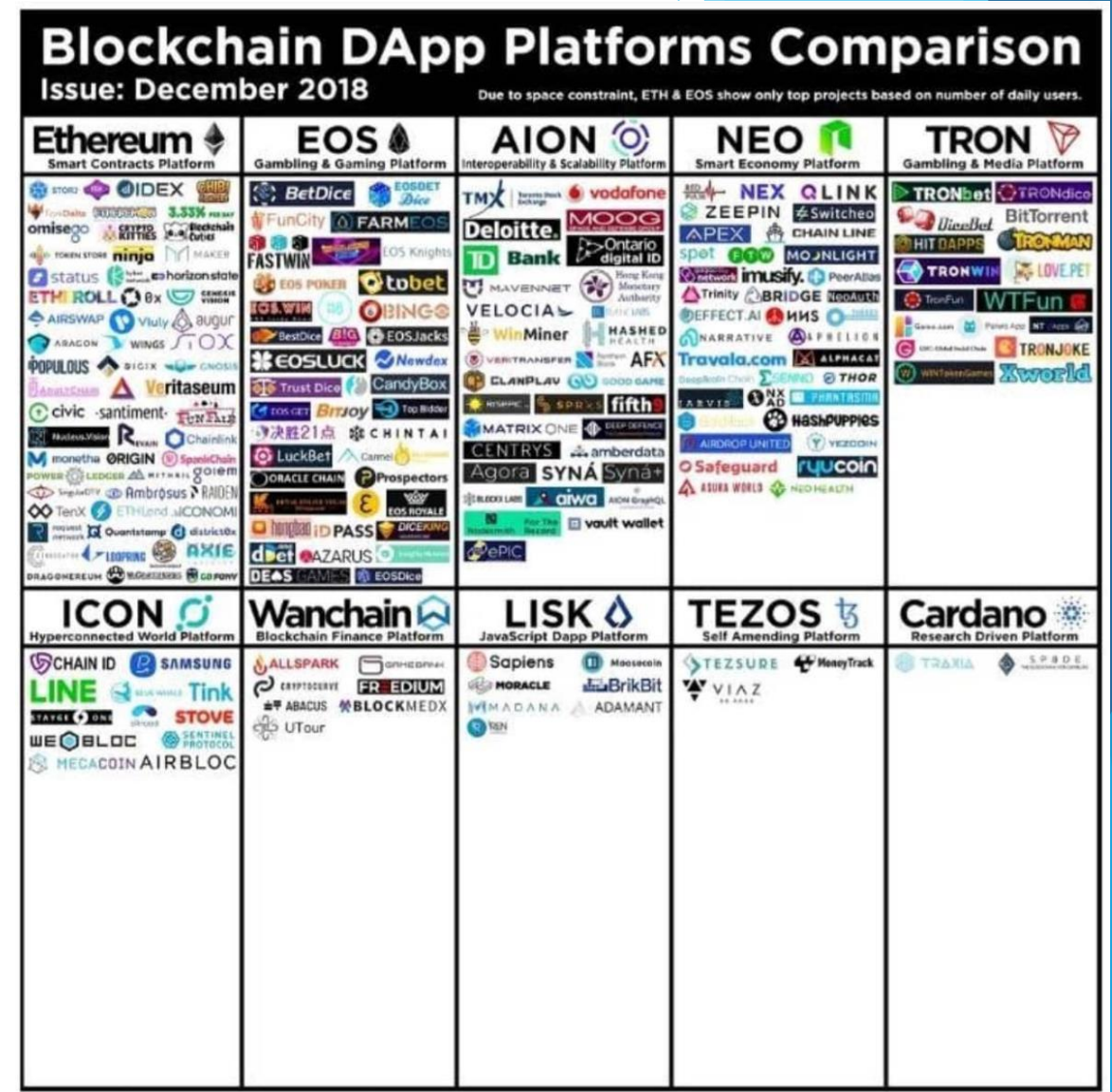
Blockchain Primer: So what?

Features

- Immutable – complete, timestamped, audit trail
- Distributed - Cyber resilient – still functional if nodes removed
- Crypto secured – can't be easily hacked or ransomed
- Programmable - Smart Contracts can be created
- (Pseudo)anonymous

Benefits

- Reconciliation significantly reduced as now single source
- Removal of need for trusted third party
- Decentralised – doesn't need to be owned by anyone (!)

Agenda

- Introductions
- Blockchain(s)
- **Use Cases**
- Insurance Opportunities

Blockchain Use Cases

Hype Cycle for Blockchain Business, 2018

NB: These are mainly industries

Blockchain **MEGA** Cases

1. As an Immutable Ledger
2. As a Cryptocurrency platform
3. To provide Digital Identity
4. Trusted Programmability
5. Tokenization of assets

Blockchain Mega Cases

- As an Immutable Ledger
- As a Cryptocurrency platform
- To provide Digital Identity
- Trusted Programmability
- Tokenization of assets

- ## As an Immutable Ledger

DIAMONDS

Driving greater transparency and next generation standards for Diamonds

We are pioneers in protecting the value of diamonds through provenance tracking

Diamond supply chains are often complex, unconnected as well as fragmented by their own nature resulting in a lack of transparency and trust amongst stakeholders.

EVErLEDGER
diamonds

https://www.everledger.io/industry-applications

IBM. | MAERSK

Transforming supply chains using **blockchain** technology

#ibmblockchain

FAIRFOOD

Proof of fair payment on the blockchain

Provenance technology supports fair trading in the digital age. Working in an international coconut supply chain, our software was extended to create a system that proves the exact living wage payment for product batches.

- ## As a Cryptocurrency platform

Ripple and Swift slug it out over cross-border payments

More than 100 banks have signed up with the blockchain-based challenger but the incumbent is fighting back

Ripple effect: Santander is one of more than 100 financial institutions that have registered to use the Californian company's blockchain-based messaging system

Martin Arnold JUNE 6, 2018

💬 50 🖨

https://www.ft.com/content/631af8cc-47cc-11e8-8c77-ff51caedcde6

Blockchain Mega Cases

- ## As a Cryptocurrency platform

Blockchain Mega Cases

- ## As a Cryptocurrency platform

Percentage of Total Market Capitalization (Dominance)
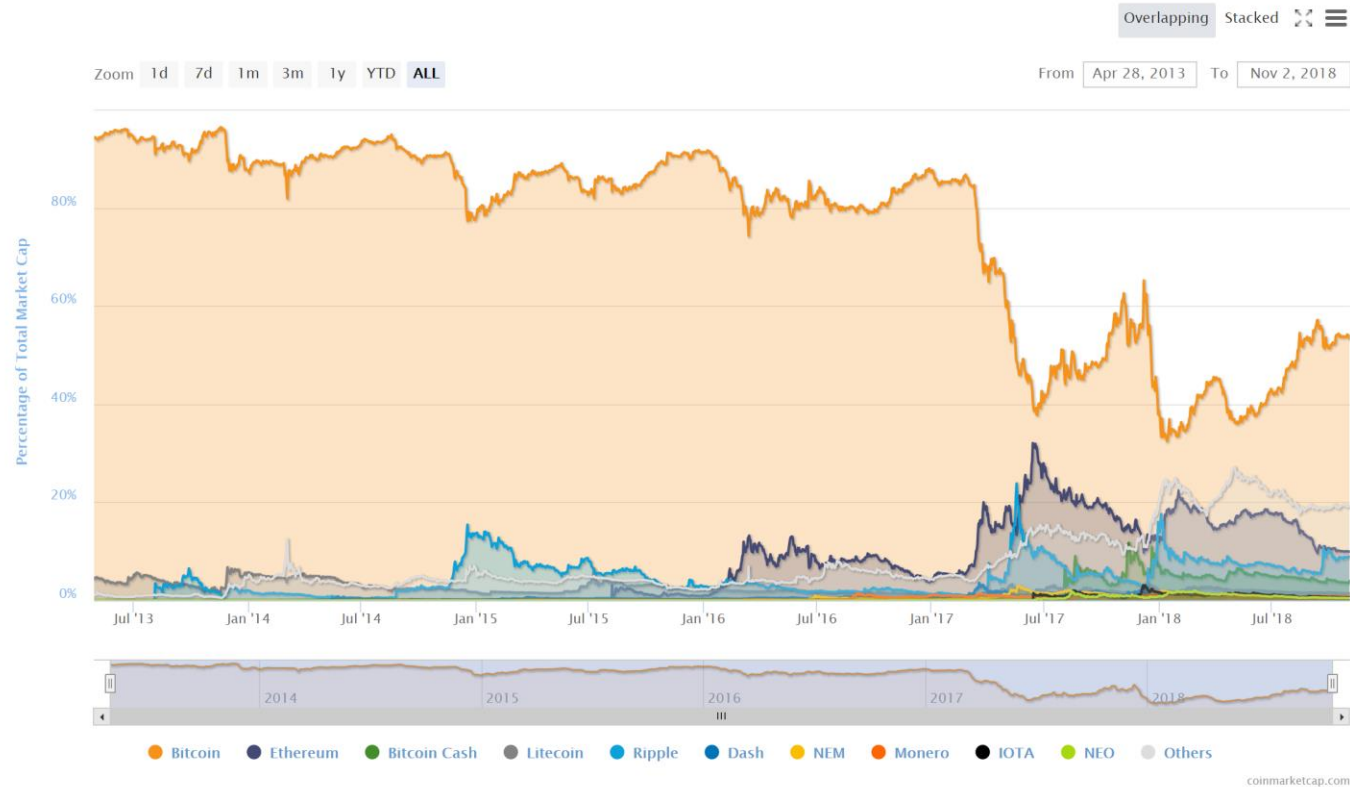
Blockchain Mega Cases

- ## To provide Digital Identity

22 Companies Leveraging BlockChain for Identity Management and Authentication

https://gomedici.com/22-companies-leveraging-blockchain-for-identity-management-and-authentication/
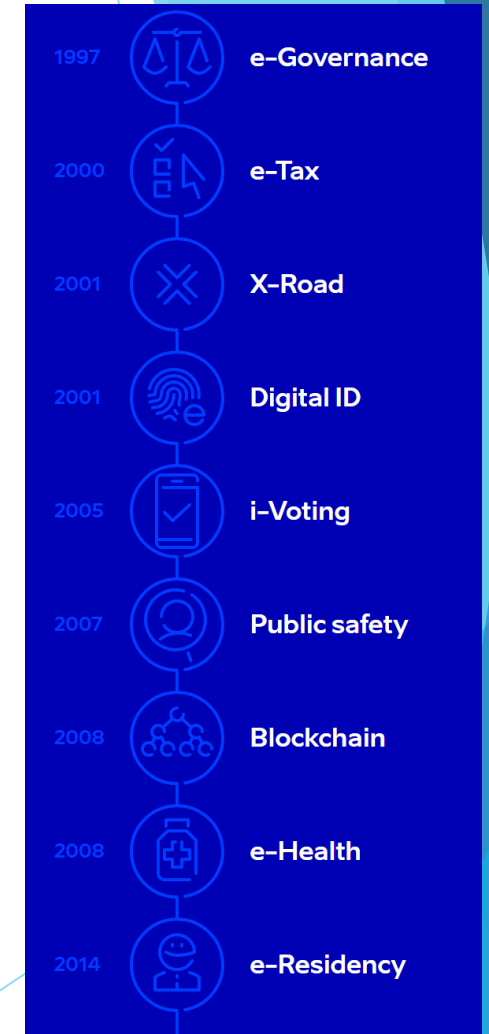
Blockchain Mega Cases

- ## Trusted Programmability

Flight Delay Insurance

First decentralized insurance. Payouts are automatic and almost instant. Now fully licensed.

▶ **Demo video**

Licensed

Hurricane Protection

Designed for low-income individuals and small business owners. Instant payouts are triggered by wind speed registered by weather-stations within 30 mile radius from insured's permanent location.

Designed
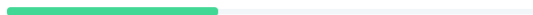
Crypto Wallet Insurance

Protection against risk of theft and attacks of hackers on wallet smart contracts. Target coverage - up to $1M.

Designed
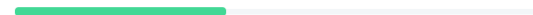
https://etherisc.com/#products

- Tokenization of assets

Blockchain Mega Cases

Category	Emerging themes	Example
1 Ledger	Asset **Register**	Honduran Land Register
	Provenance	Everledger, Provenance.org
2 Cryptocurrency	Financial **Transactions**	Bitcoin, BTL, Cashaa
	Value transfer	ICO's/TGE's
3 Identity	**Identity** Management	Estonia eRegister, Cygnetise
	Public Services	UK Benefits
4 Programmability	**Smart** Contracts	TheDAO, Etherisc
	Voting System	Follow My Vote
	Decentralized Markets	Open Bazaar, slock.it
5 Tokenization	**Loyalty points**	Simple Token
	Assets	LAToken, BITProperty

Current State - Consortia

Type	Domain	Consortia
Industry	Insurance	B3i*, RiskBlock Alliance, R3/Acord
	Financial Services	R3, DAH, FundChain, Shenzen (Sino Safe Insurance)
	Construction	Construction Blockchain Consortia
	Healthcare	HashedHealth, BlockRx
Technical	Cross-industry	Hyperledger, Ethereum, MultiChain
Process	Supply Chain	WeTrust, Sweetbridge, Dutch Logisitics
Standards	ISO	ISO TC307, ISITC
As a Service	Cross-industry	IBM/Fabric, Microsoft/Azure/Coco, Pwc/Vulcan, Deloitte/Rubix

Agenda

- Introductions
- Blockchain(s)
- Use Cases
- **Insurance Opportunities**

As-Is

To-Be

Blockchain Use Cases – INSURANCE

Current State: Use Cases - INSURANCE

Category	Line of Business	Example
Policy Admin +	End to End Insurance	Blocksure* (due disclosure), Chain-B, Zhong An (Non-Life P&C)
Operations	Accounting & Settlement	ChainThat, R3, Surematics, Consensys/I-Chassis
Marketplace	P2p + matching Insurance	Fidentiax, Wekeep, TeamBrella, LenderBot, Nexus Mutual, Akinova, Ixledger (GenRe), Shanghai Insurance Exchange
Alternate risk	Prediction Market	Gnosis, Augur
IoT	Trade Finance	EY/Maersk/IBM (MS-Amlin, XL-Catlin, Willis), Bancassurance (AIA), AIGang
Smart Contract	Flight Delay	InsurEth, Etherisc/Atlas Insurance (Malta), Fizzy (Axa)
	Crop Protection	Achmea, AoN/Etherisc/Oxfam
Reinsurance	Retrocession	B3i (Property Cat XOL), XLRAS
Parametric	Cat Bond, Weather	Allianz, Rainvow
Captive	Prof Indemnity & property	Allianz
General	Motor	Travel Ezee (Allianz)
	Unemployment	DynamisApp
	Marine	Microsoft/R3/Maersk Insurwave
	P&C	Riskblock Alliance
	Life	LIMRA/BAC
	Surety Bond	Zurich/Accenture
	Industry Loss Warranty	Cognizant/CordaInsur

Live Insurance Platforms – Press Releases 2018

Insurance firm + [technology provider]	Product	Date & Link
A.P. Moller - Maersk, ACORD, **MS Amlin, Willis Towers Watson** and **XL Catlin**. [EY/Microsoft]	Marine Hull	25 May 2018 - http://www2.laufer.com/first-marine-insurance-blockchain-platform-live.html
Covea Insurance and Commercial & General [Blocksure/Corda]	GI + some Life & Health	31 July 2018 - https://coverager.com/blocksure-goes-live-with-covea-insurance-and-commercial-and-general/
Zurich Insurance [Accenture]	Surety Bond (Benelux)	16 Oct 2018 - https://newsroom.accenture.com/news/accenture-and-zurich-benelux-apply-blockchain-technology-to-help-streamline-customer-experience-and-improve-transparency.htm
Aon [Etherisc/Ethereum]	Crop Protection	29 Oct 2018 - http://aon.mediaroom.com/news-releases?item=137772
Huatai P&C Insurance [Qingsongchou]	Critical Illness	31 Oct 2018 - https://www.prnewswire.com/news-releases/qingsongchou-launched-the-first-full-industrial-chain-blockchain-insurance-in-cooperation-with-a-renowned-insurance-company-300741336.html
Marsh [Evident]	Gig Proof of Insurance	31 Oct 2018 - https://www.insurancebusinessmag.com/us/people/marsh-were-in-the-beginning-stages-of-a-massive-blockchain-revolution-115101.aspx

Current State: Use Cases - INSURANCE

Realtime Policy Bordereau
As of 10:32:48 AM

Policy ID	Issue Date	Policy Holder	Broker
23d28e05-7e46-4£	Jul 12, 2018 1:40 PM	🔍 0x2525fbc7def0f3	TestBroker
a64ee749-bc84-4c	Jul 12, 2018 1:20 PM	🔍 0x2525fbc7def0f3	TestBroker
d2e25a30-467e-4£	Jul 12, 2018 10:51 A...	🔍 0xa63466c48e2b4	TestBroker
1b27b7d9-280c-41	Jul 11, 2018 1:50 PM	🔍 0xa63466c48e2b4	TestBroker
3c717ac4-9861-4d	Jul 10, 2018 12:25 PM	🔍 0x8668fdfd891b4(	TestBroker
beefb7b5-504f-4e(	Jul 6, 2018 11:52 AM	🔍 0xa63466c48e2b4	TestBroker
0ab3f56e-886f-40(	Jul 4, 2018 12:50 PM	🔍 0x0a4d35f59c555	TestBroker
efdbeba0-83b2-47	Jul 4, 2018 9:41 AM	🔍 0xc7c236ab9a7fd!	TestBroker
46d273d3-4b64-49	Jul 4, 2018 9:40 AM	🔍 0x60f7c4c52c9a9(	TestBroker
44c852c6-523e-46	Jul 3, 2018 9:37 AM	🔍 0x60f7c4c52c9a9(	TestBroker
c220b64b-c8f7-48.	Jul 3, 2018 9:36 AM	🔍 0x60f7c4c52c9a9(	TestBroker
27e6b4ec-342e-46	Jul 3, 2018 9:31 AM	🔍 0x60f7c4c52c9a9(	TestBroker
ea1c860c-d559-43	Jul 3, 2018 9:29 AM	🔍 0xb4a5549f59203	TestBroker
01e74ada-ed41-4f	Jun 28, 2018 12:23 ...	🔍 0x34d1ec615ba88	TestBroker
dd3e97a3-7572-4c	Jun 28, 2018 11:36 ...	🔍 0x34d1ec615ba88	TestBroker
eb744837-f924-4b	Jun 28, 2018 11:31 ...	🔍 0xbc9fe90ecebf6d	TestBroker
316713dc-b97c-44	Jun 28, 2018 11:30 ...	🔍 0xf34e5f5ff423d2	TestBroker

Blocksure OS Goes Live with Covéa Insurance and Commercial and General

Blocksure launches a new blockchain platform for the insurance industry. The first product is underwritten by insurance group Covéa Insurance and in partnership with broker Commercial and General.

Blocksure OS is the first British blockchain platform for mainstream insurance to go live with an insurer and broker.

The platform has been through rigorous UAT testing to ensure functional and commercial viability and the first product is being launched officially on 30th July 2018.

The platform will be applicable to all lines of business in general insurance and some life and health segments.

It will be available in some overseas markets late in Q4 2018.

Current State: Use Cases - INSURANCE
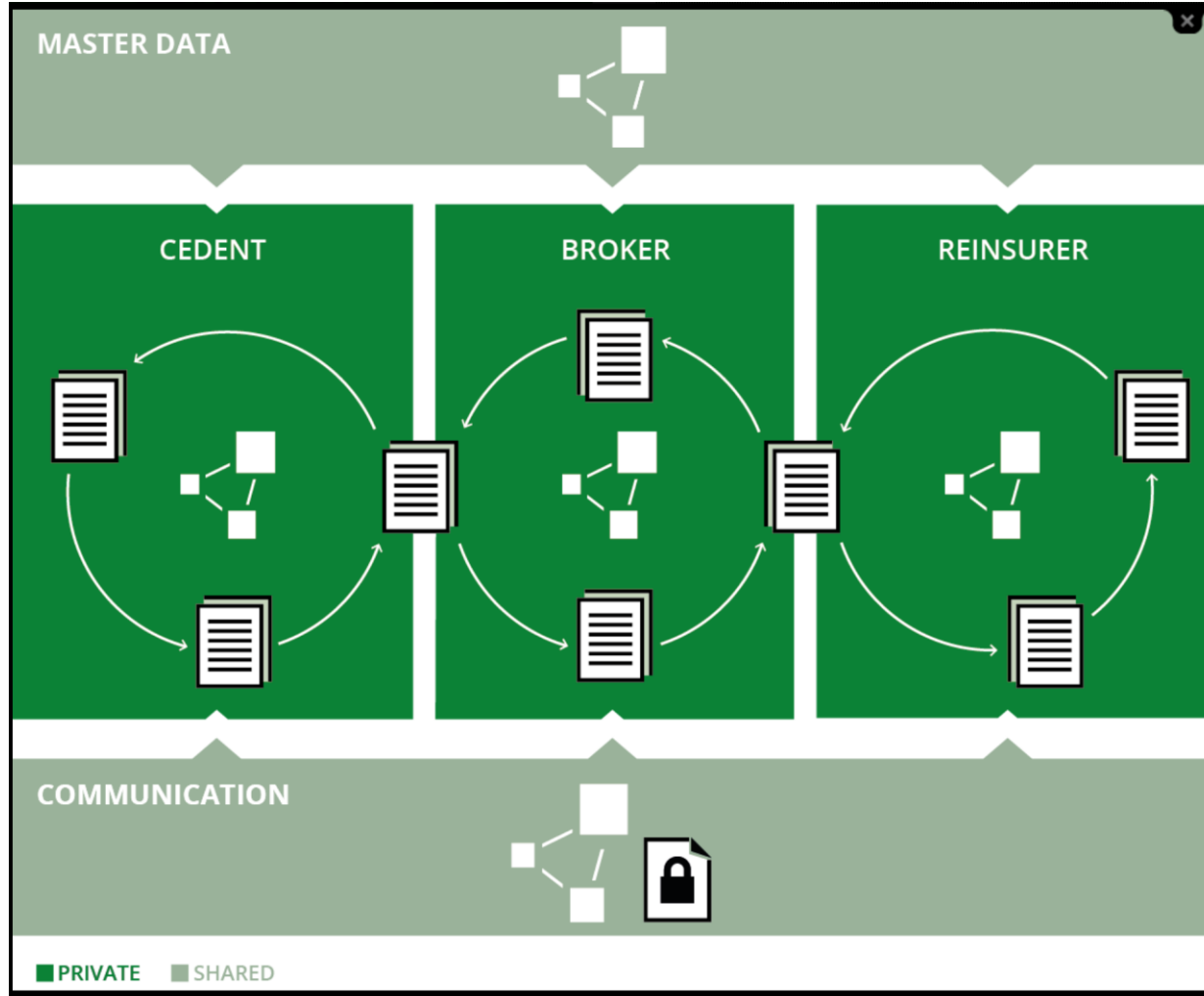
Completed testing of this prototype in October 2017 through a collaborative market wide network of 38 insurers, brokers, and reinsurers.

The product will continue to be developed during 2018 with the first live trades on the platform anticipated by the end of the year.

Looking further forward, we will gradually expand applications across the industry value chain. New projects in the future will focus on reinsurance and commercial (B2B) propositions.

https://b3i.tech/our-product.html

Insurance Opportunities

What needs insuring ?

- Wallet insurance (loss & theft)
- Key Management
- Professional Indemnity/D&O Cover
- Exchange protection
- Counterparty (Trade) Risk
- Mutualisation/p2p
- Custodial Services
- Ransomware/Cyber

Any questions ?

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Distlytics provides education, training, consultancy and advisory services.

Technology domains include blockchain/DLT, Artificial Intelligence, Big Data and Analytics.

Industry expertise includes Insurance, Life & Pensions, Legal, Healthcare, Distribution and much more.

Specific services are dependent upon client needs and existing methodologies. Previous engagements have included:

- Initial team training
- Value chain analysis
- Feasibility study
- Options analysis
- Requirements elicitation
- Workshop planning & execution
- Project filtering & shortlisting
- Vendor selection
- Project Management
- Board papers
- Post-project review & recommendation

If you need help, advice, training or guidance around Blockchain/DLT, then contact gnuttall@distlytics.com to see how we can help.