



Advanced Capability Solutions

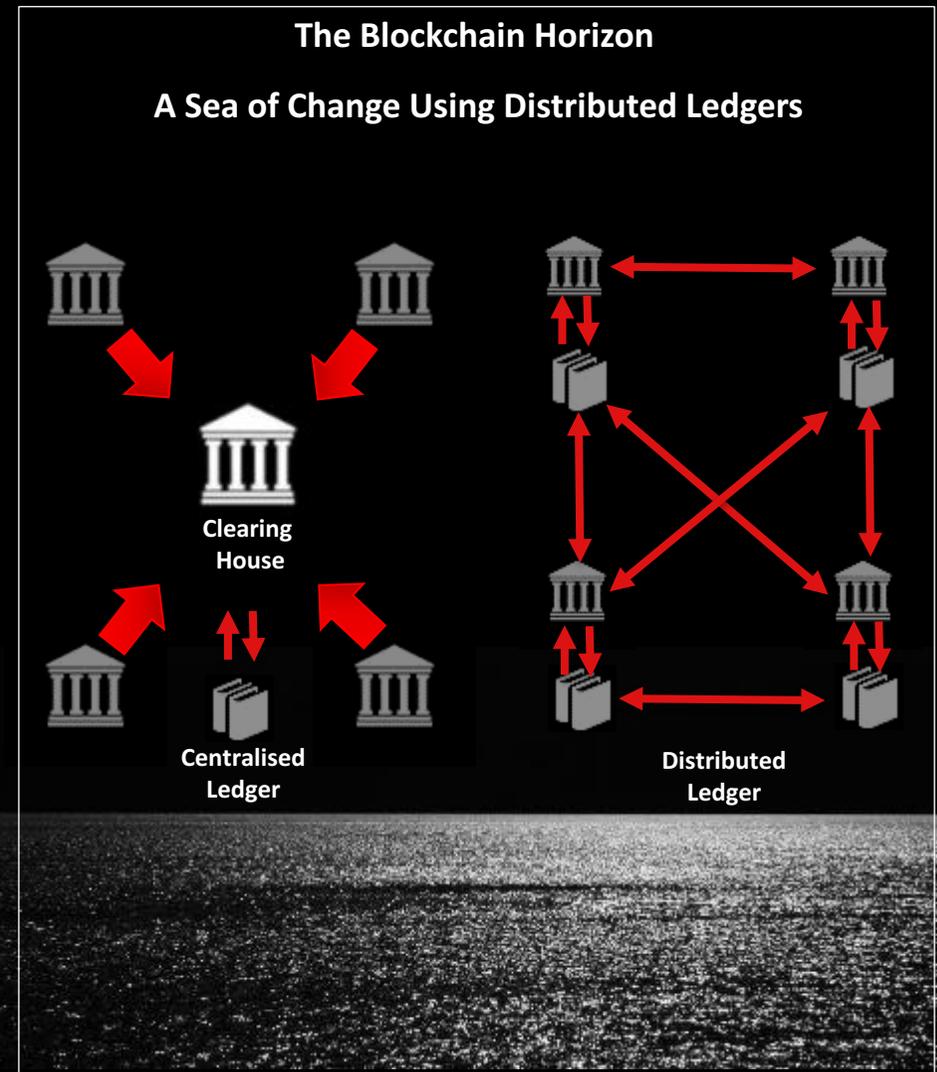
# Unleashing Blockchain

## An Introduction and Industry Applications

Blockchain Technology Practice 2018

# What is Blockchain?

- Blockchain is a self-sustaining, peer-to-peer database technology for managing and recording transactions with no central bank or clearing house involvement.
- Because Blockchain verification is handled through algorithms and consensus among multiple computers, the system is presumed immune to tampering, fraud, or political control.
- Blockchain is designed to protect against domination of the network by any single computer or group of computers.
- Participants are relatively anonymous, identified only by pseudonyms, and every transaction can be relied upon. Moreover, because every core transaction is processed just once, in one shared electronic ledger.
- Blockchain reduces the redundancy and delays that exist in today's modern financial systems.





## What is the technology ?

- Meta layer on the Internet
- A decentralized database
- Connected to decentralized computers
- Linked by a peer to peer network
- All using the same shared ledger

## What does it enable?

- The creation and real time movement of assets
- Creates rules and automated trust in transactions
- Enable time stamps, rights and proof of ownership
- Identity Ownership and representation
- Self execution of business logic
- Selective transparency and privacy

## What does it impact ? (multi sector)

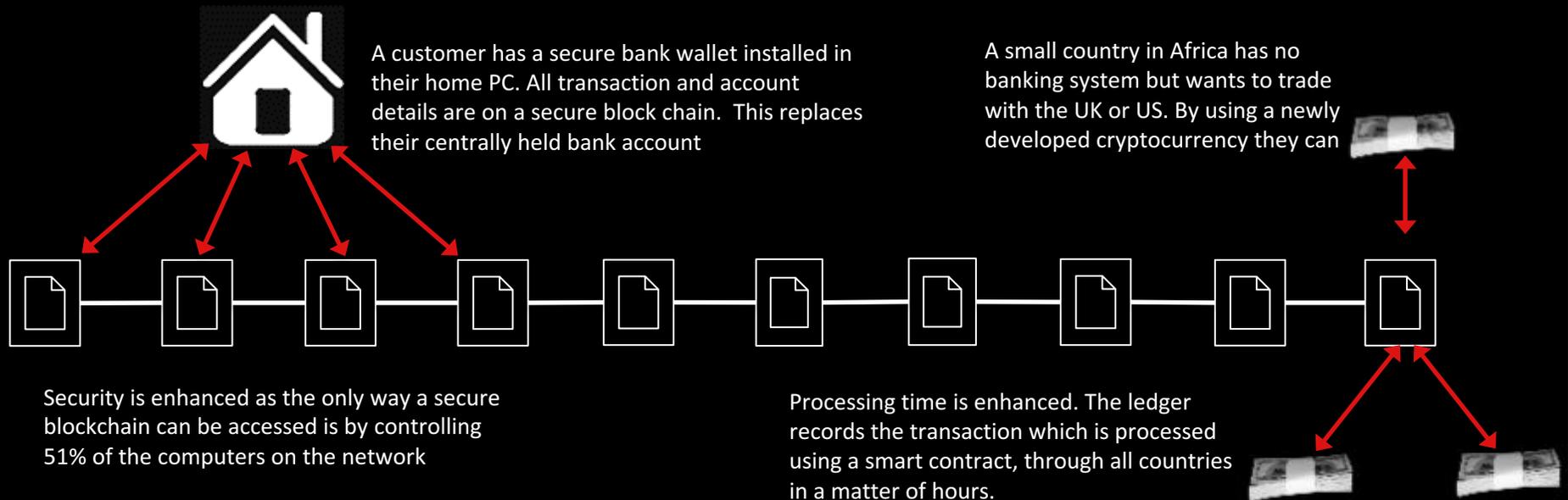
- Reengineering of processes
- Reduction in the role of intermediaries
- New flows of value (smart contracts)
- Decentralized government
- New legal and regulatory frameworks

# Example Blockchain Application: Financial Services Industry

There are currently hundreds of companies exploring the uses of Blockchain in the Financial Services Industry

- Technology firms are looking to develop the infrastructure and applications
- Security firms are looking at how they can ensure the technology is safe and not open to attack
- Consulting companies want to know how they integrate blockchain into their clients businesses
- Financial services firms want to know how this technology will enhance and grow their business.

## Examples where Blockchain may replace existing financial services



## Data Gaps

- Lack of data is a key challenge for every insurance company. There is often not enough recorded data to enable insurers to predict the likelihood of future trends and events. Blockchain will connect data points that previously did not exist. For example a prediction market built on social media, weather, news, economic and other industry analysis will start to provide a clearer estimate of the probability of a specific event occurring.
- Insurance premiums are more expensive due to the costs of collecting underwriting data and the administration of claims. Often underwriters and actuaries have to travel to collect this data which also increases premiums. By creating community based consensus systems people can populate the information required as part of a wider data collection exercise for servicing multiple industries (e.g. Traffic information for the Highways Agencies). Travel costs and associated administration can therefore be removed through Blockchain driving a more competitive insurance organisation.

## Automation of Claims

- A smart contract is a set of rules/scripts that are applied as a layer to the Blockchain. These allow pre-determined events or triggers to set off a transaction or interaction between two parties. In this example the two parties are Company and Customer. A flood occurs to a house, the house has CCTV images and internal web cam and pictures are all loaded by the customer to their personal cloud.
- The Insurance company gathers this data packaged through the smart contract. At the same time, the insurance company is able to analysis weather data and local and national news feeds. The assessment takes a few days and the insurance claim is then processed. No visit, travel of long claims process involved.



# Example Blockchain Application: Medical Industry

## Protecting Lives

- Bill runs 10 miles a week to keep fit because he has heart trouble in the past. All previous data regarding his condition and medical history over the last year have been recorded and are held in a private patient record ID. Bill is wearing a fitness band that stores this information.
- Bill runs one day and has a mild attack. An ambulance arrives. The fitness band is scanned by the ambulance staff who, based on the health chain rules, request access to 3 contacts who are known to Bill. The access is provided within seconds and they now have information about Bill's condition and history. They then apply critical support to Bill that keeps him alive. All data that is created from this procedure is instantly applied to Bill's record.
- Bill arrives at hospital where the doctor is given the healthchain information and can assess Bill for future treatment. The doctor also wants to provide local diet and exercise support. Based on Bill's data in the chain, the doctor is then able to look at other patients who have had similar treatments and the contacts / professionals they have been referred to. Bill now has a plan to aid his recovery.



# How ACS Can Help



ACS is one of the first consultancies in the UK to explore the business process changes that need to be considered when considering Blockchain technologies and principles. We are working with three of the UK's leading technology providers of Blockchain technology around the adoption and creation of value based outcomes.

In most companies, the adoption of Blockchain will generally involve 80% process change and 20% technology. Combining this with the current fear around security, regulatory impacts, consumer delivery models and all round trust and it becomes clear that Blockchain is a lot wider than simply proving if the technology works.

We have deep expertise in defining operating models, process engineering, technology delivery, change management and big data - all of the key ingredients that are required to provide all round advice and direction for Blockchain.

## ACS Blockchain Offering

### Development of Use Case

- By taking a very business and in most cases, product-centric view on analysis we are able to develop use cases which incorporate the customer, regulation, technology, data and process triggers.

### Proof of Concept (POC)

- Identification of data sources, appropriate metrics and advanced technology components required to deliver a POC that validates the questions being asked.
- Delivery of POC thereon (on ACS or client infrastructure)

### Blockchain Proposal

- By utilising the knowledge and experience that ACS has of operating models and business integration we then provide a proposal on how blockchain can be best used strategically within the clients organisation.

### Programme Delivery

- End to end programme delivery of business, data and technical architecture that underpins the blockchain capability.
- Harness the ACS Smart Shore model to reduce programme delivery costs.



**Paul Forrest**  
**Strategy &**  
**Data Solutions**

Paul has some twenty-five years experience of helping businesses to solve complex business problems, deliver their transformation goals and to achieve tangible strategic outcomes.

Paul has worked with many Global 500 businesses and major Government entities around the world including Ford Motor Company, VAG Group, BAE Systems, GSK, AkzoNobel, RBS, HBOS, Diageo, Bacardi, Wal-Mart, BA, Virgin Galactic, BT. He has recently been nominated one of the most influential people in Big Data (Data IQ 2015).



**Simon Farrell**  
**Strategic Solutions**

With over 16 years' experience within the investment banking and financial services industry, Simon has proven programme delivery experience and has worked on multiple large scale integration and separation projects across the UK financial services industry.

Simon has also been involved more recently with the design and creation of a new high street challenger bank so has in depth knowledge of target and business operating models.



**Steve Miles**  
**Data / Technology Solutions**

Steve has 25 years of experience managing and delivering complex Information Delivery systems and running international Professional Services operations.

Steve bridges the gap between the business and technology functions ensuring that expected outcomes are delivered. Steve specialises in Risk Management solutions, MI, Big Data and Systems Integration and has the background to ensure organisations receive the solutions they require to maintain their competitive advantage.

# Our Key Differentiators – Redefining Commercial Success

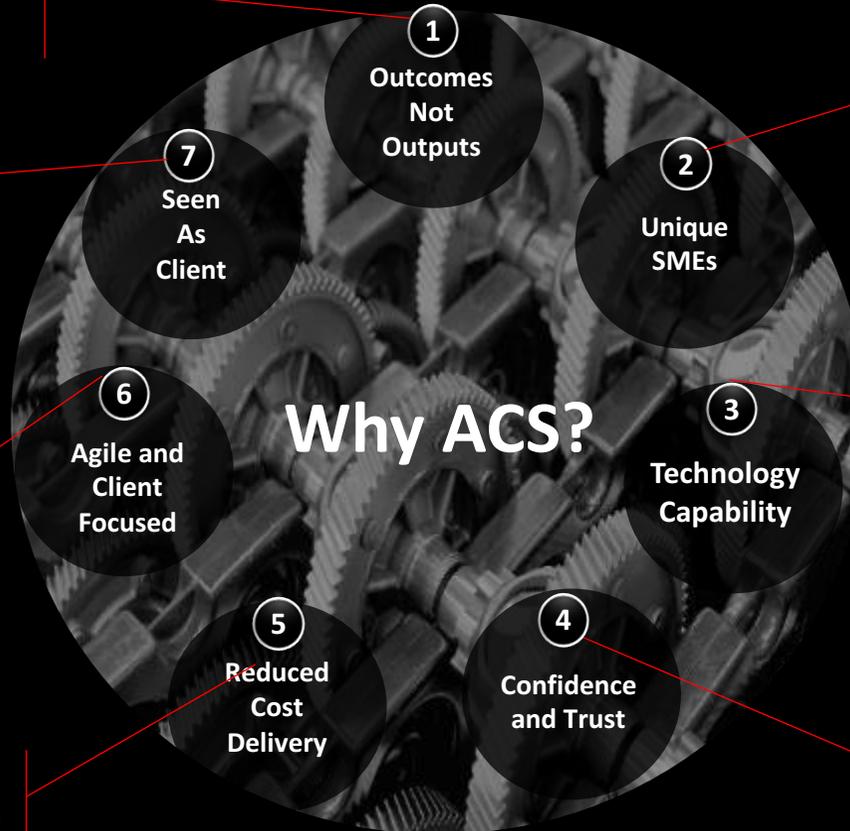


Our commercial model is different. We can tie our success (fees) to your success.

We don't behave as an external, we act like you and act in your best interests.

We focus on doing the right thing at the right time to ensure quality and timely delivery.

We operate a successful Smart Source delivery solution, proven to be delivering 'right first time' for global financial institutions.



Our team will impress you. We think differently and we do not deploy inexperience onsite.

Our technology delivery centre is at the forefront of state-of-the-art Blockchain delivery

We provide confidence and instil trust, through our people, their history, knowledge and repeatability.

# How to Contact Us

A large, soft spotlight effect originates from the top left, illuminating the contact information boxes below.

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