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Using blockchain to get ahead of the game

Creating trust and driving
operational excellence as
a digital broker



Since the origins of insurance as a paper trail of agreements established in Edward Lloyd's Coffee House in the 17th century¹, the principles of commercial insurance broking, and the role that trust plays in shaping the industry, have not drastically changed.

Despite the industry experiencing technological progress in recent years, what we see today is fundamentally a digital representation of the same 17th century business model.

Nevertheless, a new generation of ever-evolving customers, coupled with technological innovations and unprecedented volumes of data, make the industry ripe for transformation. Amongst numerous other technologies,

blockchain, the enabler of mutually distributed ledgers, could be a game changer for brokers. The hype around blockchain is amplifying, and shifting from being "another fad" to "as important as the internet". In this report we address how blockchain can create trust and drive operational excellence, and we assess its wider implications for commercial insurance brokers.

What's it all about?

Blockchain is most commonly recognized as the enabling technology for cryptocurrencies such as Bitcoin, and decentralized platforms such as Ethereum. It is a secure transaction-ledger database, shared by all parties participating in a collective network that is updated through an infinite number of "blocks". Using contemporary cryptographic logic it verifies, and then stores, every transaction that occurs between networks of counterparties. While blockchain technology can create a secure yet open means of conducting business transactions, what is more exciting, especially in a broking context, is the potential combination with other innovative technologies such as smart contracts. These automated contracts enable the programmable exchange and execution of transactions in a controlled and secure way. When combined, the result is a blockchain-enabled smart contract which can securely compute and record

transactions in a distributed ledger, allowing for automatic verification and collective agreement between parties.

As the insuretech revolution has gained momentum, so too have blockchain-enabled products and services. Key players across all industries, from financial services to resources, are moving quickly to collaborate and establish partnerships to develop blockchain-enabled opportunities. As of Q1 2016, total venture capital investment in bitcoin and blockchain start-ups exceeded \$1.1 billion². For example, the R3 Consortium is a group of 42 corporates committed to conducting research into the use of blockchain technology. Headed by the former CEO of ICAP, it has attracted huge interest from financial services firms, including Goldman Sachs, MetLife and Ping An Group, the second-largest insurance company in China³.

Replacing faith with provable trust



Many of the centuries-old processes that underpin the insurance industry are the result of an absence of mutual trust between affected parties and a lack of end-to-end transaction transparency. These processes have evolved as a proxy for trust, with the attendant friction and cost. At the heart of this proxy is the broker, whose fundamental role is to create trust, and bridge the gap between insurers, re-insurers and consumers. In today's insurance market, trust is established using the "handshake" model, and is supplemented by the regulatory framework. However, a consistent mechanism for embedding this trust into a transaction does not formally exist.

Blockchain technology works on a consensus-driven approach that requires more than one party in a chain to verify the authenticity of a set of transactions (a block) before a new block can be added to the existing chain. This approach essentially removes the need for two participants in a transaction to have history, or even to have known one another, as trust is embedded through the verification process.

Blockchain also provides the means for transaction participants continuously to store, amend and share verified data in a transparent and immutable manner. Parties in a transaction work with, and have real-time visibility of a "golden source". This single set of data negates the need for parties to manually manage and synchronize multiple ledgers in order to obtain an end-to-end view of a transaction. Without blockchain, this process can be costly and subject to human error which can result in further loss of trust between entities.

Insurance start-up Everledger is using blockchain technology to make this notion of provable trust a reality. Everledger is a permanent ledger for

diamond certification and the related transaction histories⁴. It ascertains the provenance of a diamond to ensure that it is actually what it is purported to be, and that it hasn't been tampered with along the supply chain. The value of the blockchain is both in the tracking and the tamper-proof "seal of approval" that ensure that something is genuinely what it says on the tin. It provides a "certified delivery", without the need for a prior relationship or trust.

Market-leading companies invest billions in resilience-focused initiatives and could lose approximately \$2 trillion⁵ to cyber-related crime by 2019. This supports the notion that those companies that fail to prioritize security will lose out in the digital economy. Blockchain, by its very nature, is resilient. Unlike legacy systems and paper-based alternatives, blockchain is immutable*, secure and considered un-hackable. The cryptographic technology that underpins blockchain ensures that only permitted parties have access to the relevant content, and any attempt to tamper with a block is flagged and rejected. It also reduces concerns around identification and fraud as blockchain provides a "digital fingerprint" which creates confidence that all parties are indeed who they say they are. Unlike traditional ledgers, blockchain technology does not require centralized infrastructure or governing third parties such as a central bureau which, in themselves, can present resilience-related challenges around single-service providers and points of failure.

Blockchain has the potential to provide a secure, transparent and verifiable mechanism to execute transactions in a manner that replaces the traditional notion of utmost good faith with provable trust.

* While this immutability is a key attribute of blockchain, it does make it unsuitable for use cases where coding or transaction errors may occur or where regulations require data to be removed after a period of time. Accenture is working on solutions that allow blockchains on permissioned networks to be edited, with strict oversight and controls.

Operational excellence – outcome certainty at a lower cost

From Henry Ford's shake-up of automobile production and the associated development of assembly lines, to electronic trading in the global equity markets in the '80s and '90s, technology has always sought to drive speed, efficiency and scale. The insurance industry spends billions of dollars a year seeking to enhance and streamline back-office processes. Blockchain-enabled smart contracts can play a pivotal role in achieving this, as has been seen more widely in capital markets. NASDAQ announced at the end of 2015 that it had used its Linq blockchain ledger technology to execute and record a private securities transaction which significantly reduced settlement time and eliminated the need for paper stock certificates⁶. Blockchain-enabled smart contracts are more than just a key enabler of operational excellence; they go one step further in that they fundamentally reshape parts of the traditional broking value chain, providing the ability to significantly lower transaction costs.

The digital broker can use blockchain-enabled smart contracts to simplify and streamline many existing back-office processes, removing much of the associated friction in the form of required touchpoints. This has obvious implications for operating expense, as efficiency is greatly increased through the elimination of many of the labor-heavy processes required to "crank the

back-office handle". Blockchain paves the way for a cost efficient, streamlined back office that transforms a cumbersome multiple-touch entity into a low-touch seamless-transaction processor. This supports a key trend⁷ in the industry: the effort to standardize and automate commodity-based activity in order to allow for a greater focus on value-adding tasks.

From a value-chain perspective, blockchain-enabled smart contracts are more than an automation technology. They bridge the disconnect between organizations, removing the need to synchronize systems used to manage the lifecycle of an insurance transaction. Specifically, they can reduce the need for reconciliation, as parties to a transaction work from a golden source of data. This in turn increases the speed of settlement, which is expedited by the automation of associated decisions governed by predefined conditions embedded in smart contracts. In the same way, renewals can evolve from an expensive convoluted process into an automated one. From a regulatory perspective, blockchain-enabled smart contracts are able to significantly reduce compliance complexity across the lifecycle of a contract through the automated, immutable traceability of data.



What's new?

Industries have been transformed by the rapid rise of digitally-enabled business models. Market-leading organizations such as Uber, Airbnb and Alibaba have leveraged cutting edge technological trends to gain competitive advantage through digital ecosystems, and will continue to push boundaries. The knock-on effect of this is trickling into the world of insurance, with companies like Friendsure and Uvamo coming to fruition.

The fundamentals of blockchain – trust, transparency and immutability, together with automation enabled by smart contracts – create a unique foundation for utilizing emerging

technologies. The Internet of Things (IoT), new productivity platforms, application programming interfaces (APIs), smart advisors and advanced analytics (Figure 1⁸) are all contributing to the creation of digital ecosystems in which insurance players can virtually interact and operate.

For instance, configured on blockchain, an exchange could be created that provides a digital platform for brokers to submit risks for quote by insurers with whom they have no previous arrangement. The exchange would have secure encrypted user identifications acting as a decryption key, while smart contracts would orchestrate the quote-to-bind process.

Figure 1. Commercial broker technologies – the S-curve

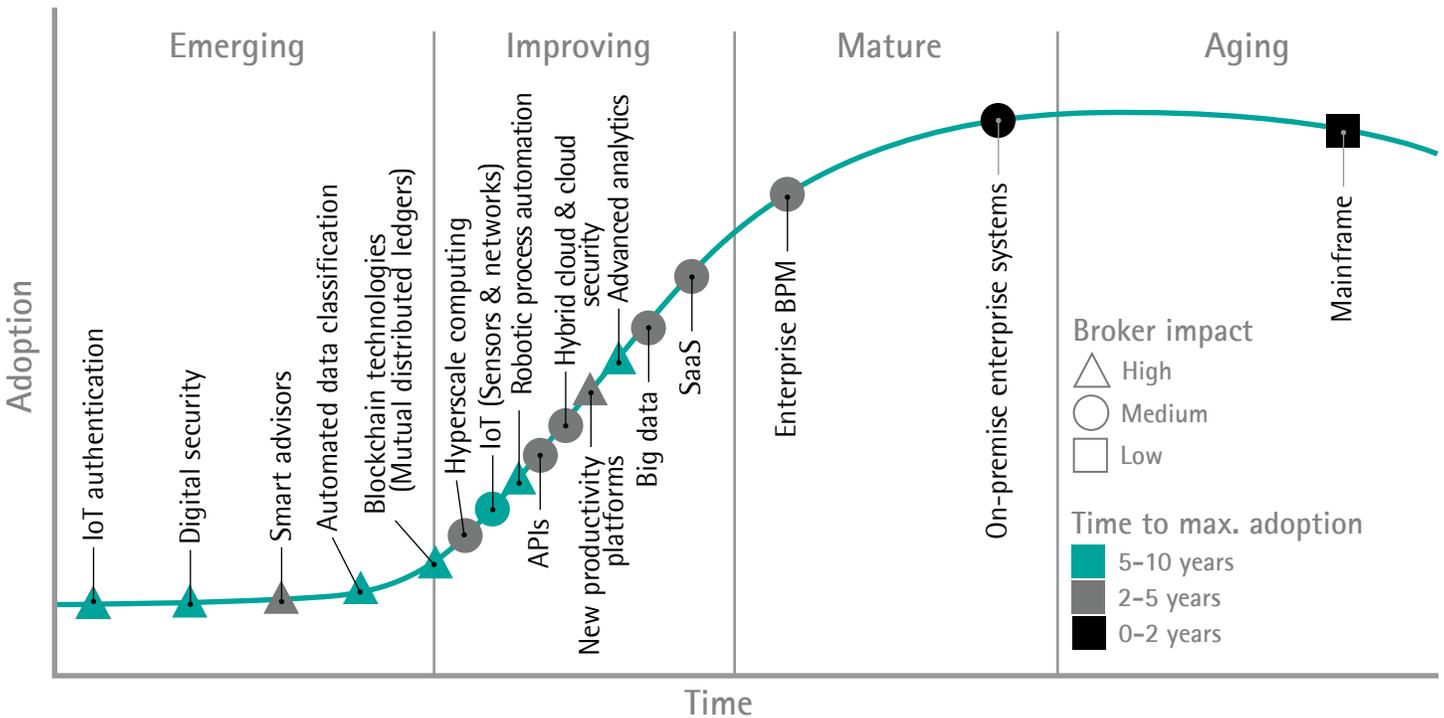


Figure 1 – Observations

In the face of disruption, brokers' adoption of combinations of selected technologies holds the potential to protect and transform their businesses.

Considering the time to adoption in the commercial broker industry, as well as the potential value created, brokers must evaluate their investment choices.

The exchange's proposition would be to:

- At speed and at scale, unite counterparties based on the specific risk and pricing parameters informed by the demands defined in a smart contract. This "best-fit" approach, underpinned by access to real-time data, has the potential to redefine the existing approach to placing business and creating contracts.
- Provide access to an increased volume of real-time trusted data to be used for on-demand analytics services such as risk intelligence, which could offer broking insight based on live actual data, rather than stagnant, modelled alternatives.

Brokers must assess the use of blockchain technology as a foundation to embrace the next big thing – and get ahead of the game.

How to get started?

To unlock the potential of blockchain-enabled smart contracts, leading brokers must consider the technology as part of their wider digital strategy and vision. Specifically, brokers should define a plausible business case which explores the key considerations, remembering that blockchain is not a "silver bullet":

Delivery

Smart contracts are cutting edge and, to date, have not been mated with blockchain on an industrial scale for insurance. The holistic impact of blockchain must be worked through internally to understand the impact on delivery models, ways of working (e.g., Agile and DevOps) and skill sets (e.g. data and analytics, and cloud).

Investment

Despite leveraging open source technology, blockchain comes at a price. Research and development funding will be required to upskill and revolutionize existing capabilities.

Buy-In

Blockchain-enabled products and services must be sponsored and championed at an executive level to ensure they are not seen as just another fad.

Governance

Robust yet flexible governance and change management must pave the way for a "fail fast" culture that can quickly develop innovative products and services.

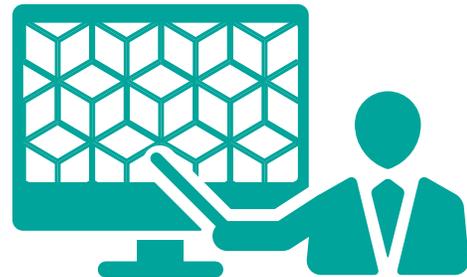
Brokers must also decide on the nature of the use cases that will drive the greatest business value. A key distinction to make is between internally and externally focused solutions. As discussed, blockchain can be used to aid internal operational efficiencies to drive cost reduction within the constraints of an organization, or it can be used as part of a wider ecosystem (e.g., the exchange) of business partners that provide mutually complementary benefits. Internal and external use cases can be complementary and developed in a modular fashion, or can be mutually exclusive.

External use cases will require a "coalition of the willing", as brokers will need to look beyond their organizational boundaries in order to:

- Gain a clear perspective on how to monetize blockchain-enabled smart contracts in the wider ecosystem – identify where the value is – and share, distribute and measure created value in a way that generates mutual benefit to facilitate the continual growth of the ecosystem;
- Acquire and harness the digital know-how (e.g., APIs, big data etc.) required to create and engage in newly defined ecosystems;
- Identify and engage with like-minded industry players that have complementary capability and share a blockchain-enabled vision. Partnerships are often the quickest way to build a new capability.

Once the brokers are clear on their blockchain strategy and vision they should seek to bring it to life and explore the selected use cases in a real-world environment. A proof of concept (PoC) provides a "fail fast" way to investigate the feasibility and value of a solution in a controlled and focused manner. If proven successful, the PoC can move into a "productionize" phase which allows the broker to iterate and scale the solution beyond its original scope.

To conclude, the blockchain space will continue to evolve at a rapid pace over the coming years. It has the potential to confer significant business and cost advantages over legacy operating and business models to companies that are willing and able to create targeted partnerships with vendors and business partners for speedy capability acquisition and deployment across the value chain.



Accenture has leading-edge capabilities in blockchain technology, it has established partnerships and ventures with leading blockchain organizations, and has invested in technology labs that are focused on testing and proving blockchain capabilities. To find out more, contact our Insurance Strategy blockchain team (overleaf).

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