# Embracing blockchain technology as a competitive advantage

Dr Diane Bugeja 8 November 2018



## The basics

A blockchain is a record, or ledger, of digital events which is "distributed" or shared between many different parties. It can only be updated by consensus of a majority of the participants in the system.

Once entered, information can never be erased.

The blockchain contains a certain and verifiable record of every single transaction ever made.

The result is a more connected ecosystem that ensures confidence in the security and accuracy of the data.



## Why should the insurance sector care?

Competitiveness Consumer choice Interconnectedness Regulatory Customers' oversight The role of financial expectations are Traditional business institutions is evolving shifting as competitors models are being as trust becomes more set higher standard, disrupted **Business model** decentralised including faster delivery timeframes viability Data ownership Conduct of business Capital requirements



## Benefits are well-known to the industry ...

Blockchain technology has the potential to drive simplicity and efficiency through the establishment of new financial services infrastructure and processes – it is therefore rapidly gathering momentum within the insurance sector and is high on the agenda of global insurers.

Nearly 46% of insurers expect to integrate blockchain within the next 2 years

84% say blockchain-based ledgers and smart contracts are reinventing the way they engage with new partners

Accenture survey, July 2018



## Improvement on traditional models

Current nuisances in traditional insurance models	Benefits that blockchain technology can bring to the industry
Inefficient exchange of information, use of intermediaries and fragmented data sources	<ul> <li>Enable trusted and verifiable provenance of information as well as a shared interface with trusted third-party providers</li> <li>Enable capture of immutable, trusted, and verifiable information based on digital cryptography</li> </ul>
Limited underwriting accuracy and complex liability assessments	<ul> <li>Provide transparency on existing or past insurance policies</li> <li>Improved accuracy of pricing through improved risk profiling</li> <li>Provide digital smart contracts to capture obligations and terms binding on the parties</li> </ul>
Fraud-prone	<ul> <li>Lessen fraud and identity theft by:</li> <li>providing access to validated external data through trusted sources</li> <li>enabling automated determination of loss liability</li> <li>enabling automated assessment of loss coverage for syndicates / reinsurance</li> <li>enabling programmable escalation to human decision making in case of complex risks</li> </ul>
Manual claims review and processing	<ul> <li>Simplified, automated claim-submission process which enhances customers' experience, through automated data processing and smart contracts</li> <li>Reduce human intervention thus minimising the probability of errors</li> </ul>

## Other benefits of blockchain technology

#### Security

• Through its use of public ledger, blockchain can potentially eliminate suspicious and duplicate transactions by logging each transaction. Through its decentralized digital repository, it can verify the authenticity of customers, policies and transactions by providing historical records.

#### Big data

• Blockchain can properly manage, share and monetize large amounts of data. The benefit is that the technology can store static records and/or data without central coordination and the data can be viewed by all parties. Streamlined data can also make risk assessment timelier and more accurate.

#### Reinsurance

 Within the reinsurance sector, blockchain can provide accurate reserve calculations based on current contracts. This helps, for example, property and casualty insurers who need to know how much money is available as they pay claims. Blockchain can ensure that they are rebalancing their exposures against specific risks.

#### **AML/CFT**

• A variety of checking processes are available to insurers falling within the scope of AML/CFT laws. These include checks around KYC, sanctions screening and transaction monitoring, as well as the determination of beneficial ownership.

## A role throughout the insurance value chain

#### **On-boarding**

- KYC checks
- Minimise fraud

#### Distribution

•P2P insurance

## Claims handling

- •Shorter processing times
- Automatic claims handling













#### **Underwriting**

- •Reduce paperwork
- Collation of information

## Innovative products

- Smart contracts
- Automated insurance

#### Reinsurance

- Reduce manual records
- Simplify data sharing

## What are the risks?

Indemnity risk

Operational and IT risk

Strategic risk

Contractual risk

Reputational risk

Regulatory risk

Information security risk

Business continuity risk

Third party risk

## Uncertainty and challenges

#### **Technological limitations**

- Governance
- Identity and access management
- Security
- Reliability
- Legacy IT systems

### Regulatory limitations

- GDPR and data privacy issues
- Cyber security and outsourcing
- Lack of legal expertise
- Different regulatory approaches across different jurisdictions
- No one authority to take responsibility

### EIOPA's view

"Arguably, supervisory oversight is less necessary in regards private blockchains ... In public blockchains, supervisors may need to focus on a range of different issues, such as the role of miners and nodes, or security and privacy challenges".

InsurTech roundtable, 2017

"There are also some risks arising from digitalisation that supervisory authorities need to examine very carefully. This is for instance the case with possible price discrimination issues or with vulnerable consumers' access to insurance. Digitalisation could also lead to an increasingly fragmented insurance value chain, raising challenges from a supervisory perspective, similar to the increasing exposure of undertakings to cyber risks ... This includes automation of financial advice, blockchain, artificial intelligence, and peer-to-peer insurance. While it is still early days for some of these financial innovations, EIOPA will closely monitor them in view of their potential impact and take action as relevant."

Response to EC's public consultation on 'Fintech: A more competitive and innovative European Financial Sector' 2017

## Where to start

Choose narrow scope projects to address internal business gaps in the short-term. This will equip you with the right insights and strategies to appropriately address the larger opportunities and business issues down the road.

The integration of blockchain deployments with hardware and software components that allow for communication among devices and transmission of external data streams is the most compelling long-term value proposition of blockchain.

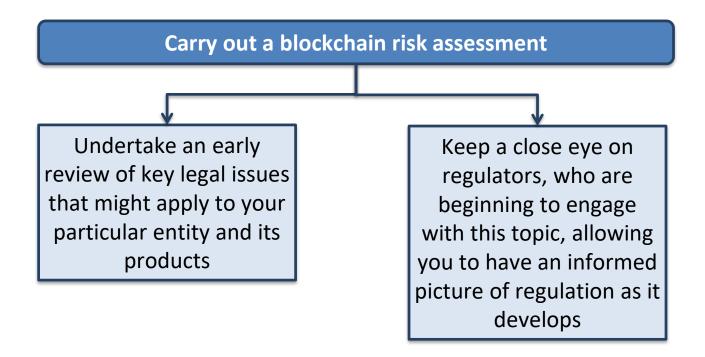
Internal proofs of concept

Identify highimpact areas for blockchain Customer-facing and distribution networks are candidates for blockchain deployments once the viability and functionality of internally-deployed solutions is verified. This must be supported by the requisite legal, regulatory and tax frameworks.

IoT enablement

Customerfacing processes

### Where to start



Insurance is a highly regulated sector, and any entity that is proposing to use blockchain would need to comply with its existing regulatory obligations as well as liaise with regulators.



## Key takeaways

# Integration with other systems

 Insurers will need to rethink their architecture to be able to infuse blockchain throughout their organisations from front-end to back-end

## Not a one-sizefits-all

 Actual implementation will depend on an insurer's maturity and standards, and each insurer should be looking at it and the role it can play within their business

## Importance of risk assessment

 There are still many hard-earned lessons to be learned and making assumptions with respect to key risks and security associated with specific solutions could expose insurers to significant risk

## We're not quite there yet

Despite all of this activity, the future of blockchain and the speed at which it progresses within the insurance industry will depend on a number of unanswered questions and issues ...

Concepts such as data selfsovereignty and the tokenization of assets will require defined industry standards and safeguards. There is still an issue around the insurability of blockchains & the associated crypto ecosystem. Some elements (e.g. business interruption, currency risks, & third-party risks) will be familiar, while others around encryption, security & the value of cryptocurrency will not.

There are many variables that still must be understood and worked out around adapting the current regulatory rulebook to the use of blockchain technology.

Blockchain may become a reality for small risks sooner than we think, but for more complex risks, many challenges need to be overcome. In the meantime, insurers should work expediently to become proficient!

## Thank you



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