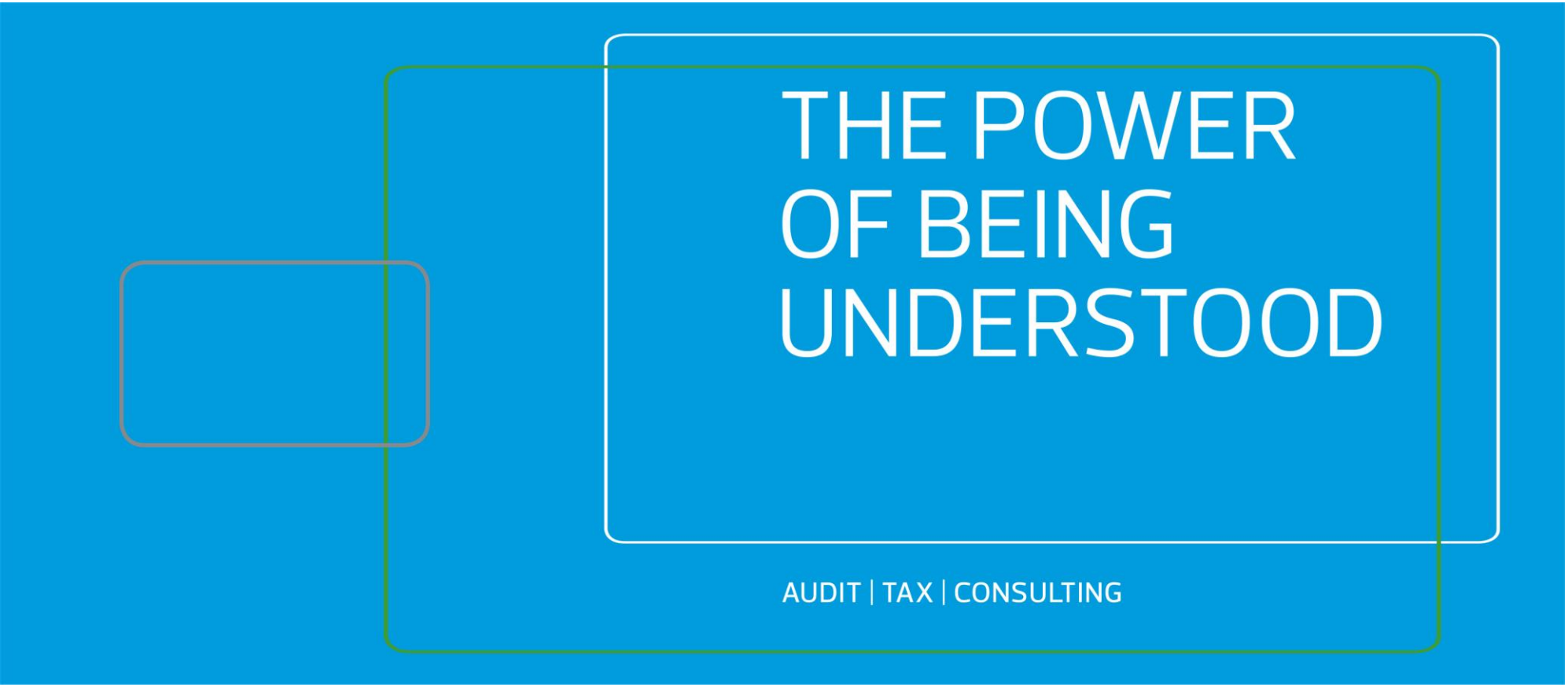

BLOCKCHAIN IN DEAL-MAKING

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March 2018

RSM

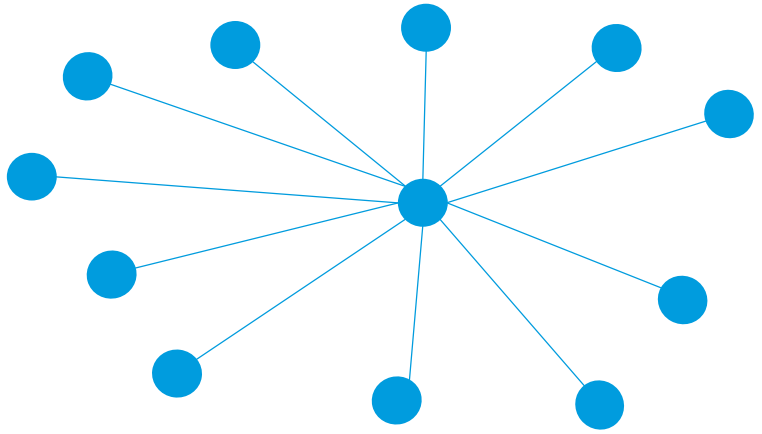
INTRODUCTION

Modern-day society

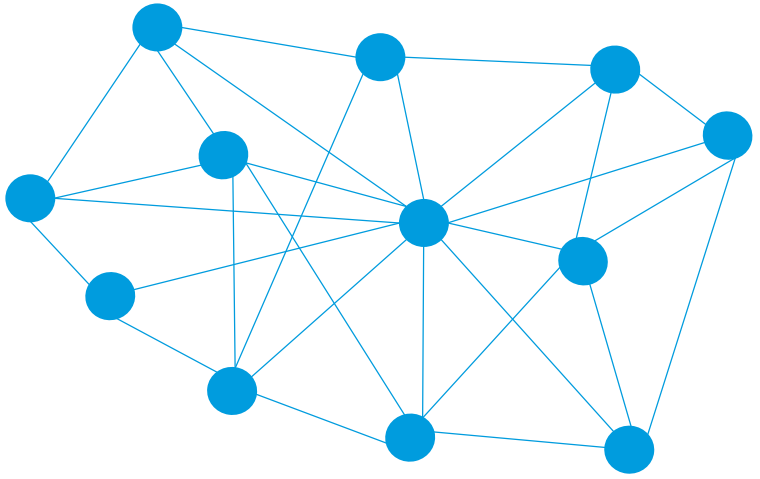
The ability to enforce contracts or transactions is one of the pillars of the modern-day society. The records of these contracts or transactions govern interactions among nations, organizations and individuals. With the diminished counter-party risk, merchants are able to trade more, over longer distances and even, cross-border. One can easily recognize the importance of this critical tool, however, this gives rise to the question why the recording of the contracts or the transactions has not kept up with the global digital transformation (Iansiti & Lakhani, 2017). A possible explanation could be that due to the nature of centralized systems information might not be completely protected and therefore not trustworthy.

With the introduction of a decentralized system or a so-called *'distributed ledger'*, the enforcement of contracts and recording of transactions has been brought up to speed with the digital transformation. In 2009, someone named Satoshi Nakamoto released the first version of a distributed ledger to enable P2P (Peer-to-Peer) transactions of the cryptocurrency bitcoin (Davis, 2011). The underlying technology is called blockchain and, besides cryptocurrencies, the tech community is now finding other potential uses.

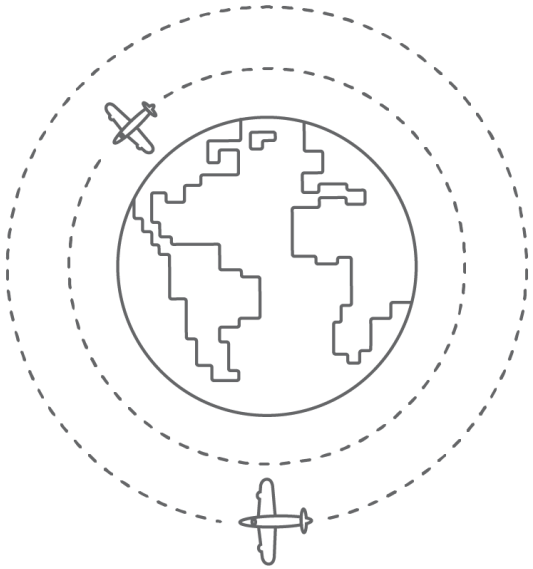
Centralised



Distributed



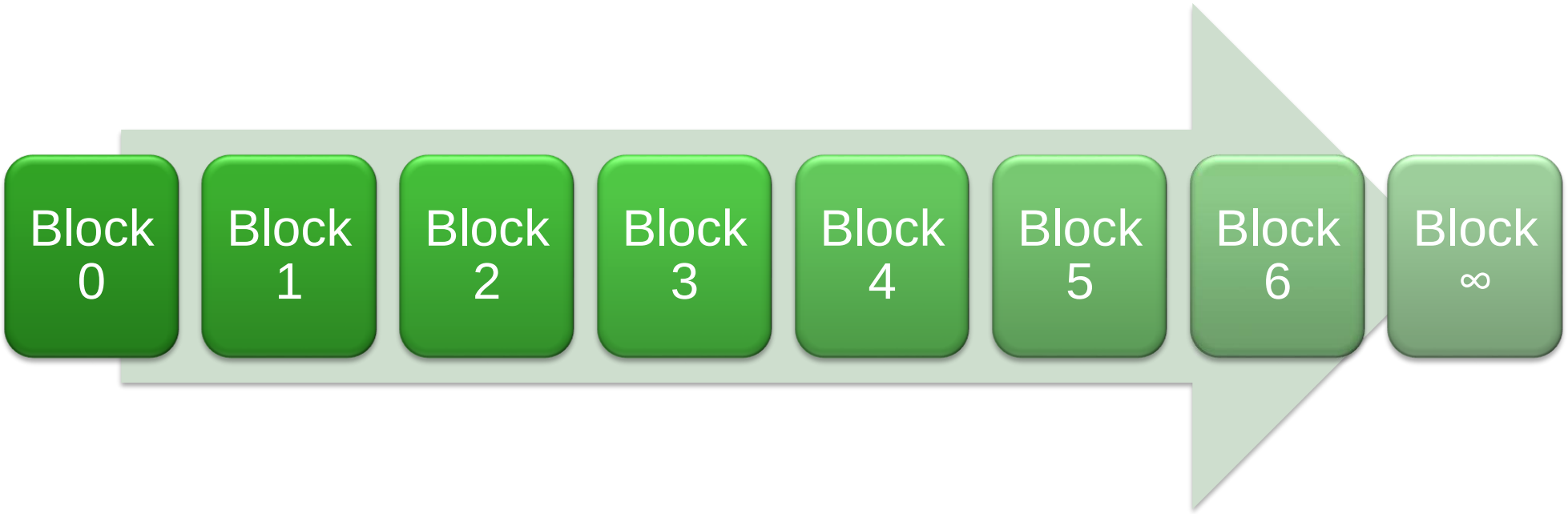
TECHNOLOGY



Blockchain technology

A blockchain, is a continuously growing list of records, called *blocks*, which are linked and secured using cryptography ("The great chain of being sure about things," 2015). To provide a bit more understanding of this new technology.

Picture the blockchain as a spreadsheet which is duplicated thousands of times on a global network of computers and this spreadsheet is coded to update itself regularly. Now, you will have a simple understanding of the blockchain technology.

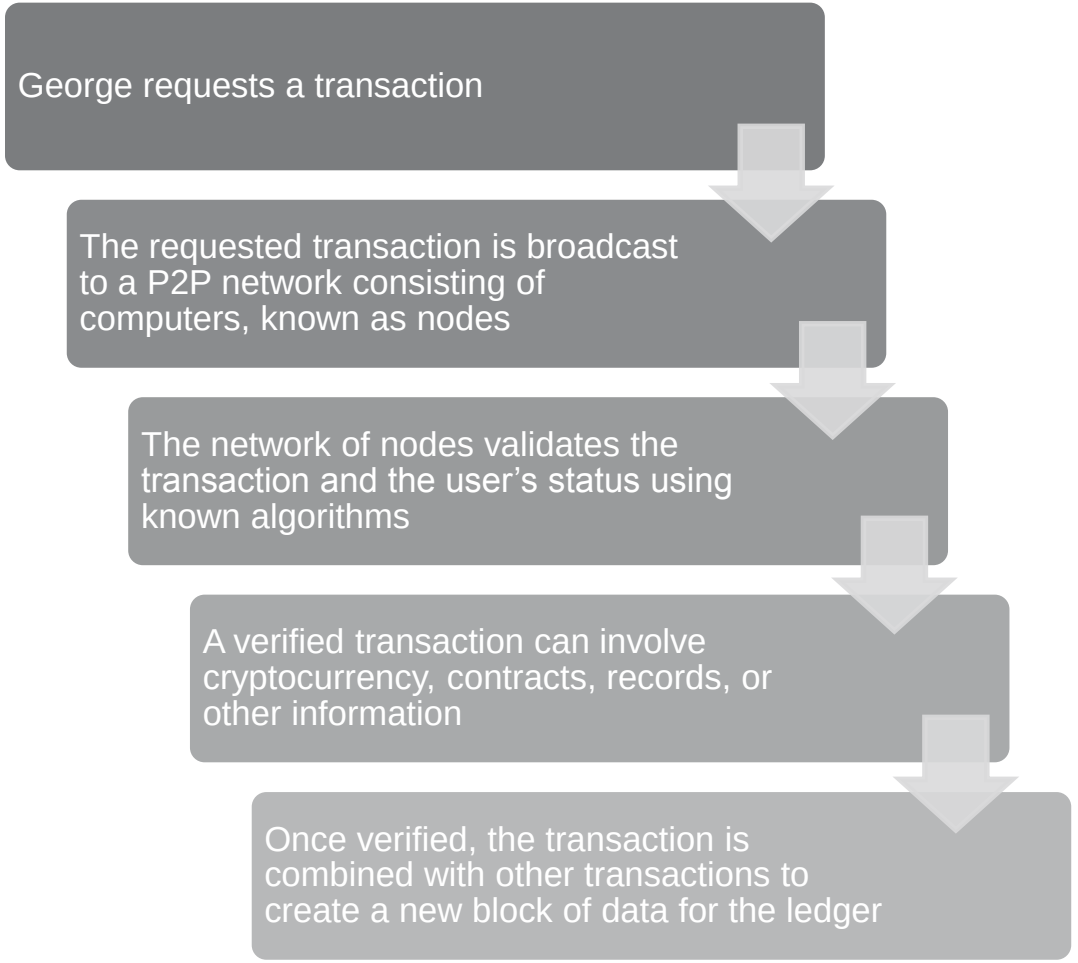


AN EXAMPLE

George requests a transaction

Let us say that George wants to purchase an item from Sue. Both have ‘wallets’ on the cryptocurrency blockchain. George requests a transaction and broadcasts it to the P2P network of computers known as nodes. These nodes individually validate the transaction with a consensus mechanism based on a mixture of mathematical intricacy and brute force computation power (Rosic, 2017). If George’s transaction is verified it will be bundled with other transactions to form a new block. This block consists out of a number of transactions, data to connect it to the previous block and data to link it to the successive block. The new block is then added to the existing blockchain, in a way that is permanent and unalterable. The transaction is complete and George’s wallet will be a little emptier and Sue’s wallet a bit fuller (Rosic, 2017).

The process



USE CASES

Potential uses

The use case for blockchain ranges from auditing via commodities trading to voting and everything in between. In the case of audit, blockchain offers an easy-to-follow paper trail of permanent records of transactions. The accuracy guarantee created due to the distributed ledger provides an unprecedented level of accuracy in the auditing process. It solves the hassle/issue of combining multiple, frequently disparate, data sources with the reported transactions (Boillet, 2017).

Another application for blockchain can be quality assurance. Consumers nowadays are more aware of health hazards originating from poor food production or poor living conditions of livestock. When the different aspects of the supply chain are linked together, it offers a definitive answer in the case of an immediate health threat. Consumers are able to track their product from the supermarket back to the farm or processing plant it came from (Uzialko, 2017).

Besides the benefits for consumers, producers can track goods and materials within an organisation throughout the supply chain. A business owner has a more complete overview of the business process and its customers are provided with more transparency. Therefore they are better able to align interests with each other, such as delivery time or product quality.

Securities and commodities trading could also benefit from the usage of blockchain technology. Instead of waiting on the stock exchange to confirm orders, the blockchain can greatly enhance transaction speed and pricing (Uzialko, 2017).

OVERVIEW

Pros	Cons
Fast	**Start-up phase**
Blockchain technology increases transaction speeds significantly. Particularly in the case of cross-border transactions (Epstein, 2017).	Uses for blockchain besides cryptocurrencies are in the start-up phase. It is predicted that blockchain for audit, supply chain and commodity trading will take five to ten years to be fully functional (Uzialko, 2017).
Secure	**High energy costs**
Due to the nature of the distributed ledger technology, no organisation, person or institution can control the content of the blockchain.	Blockchain technology uses significant amounts of energy to power all nodes of the network. For example, one bitcoin transaction uses five times as much energy as 100,000 VISA transactions (Digiconomist, 2018).
Transparency	**Data overflow**
Since every node in the network verifies all the blocks, every version of the ledger is identical. Therefor everyone can view the transactions in the blockchain.	Data is only useful if a business is able to extract the right insights from it. A correlated relationship can be easily found, however it may not be causation.

IMPLICATIONS

Deal-making

As previously discussed, the blockchain technology can have a serious impact in all types of industries. It can prove to be valuable in the deal-making industry as well. From a transaction support perspective, blockchain could make the life of a M&A consultant more easy. The stream of reliable data extracted from the blockchain provides the analyst with a dataset sufficient enough to perform a sturdy due-diligence. Nowadays, the responsibility of the correctness of the data lies with the acquirer and the target and is usually extensively discussed in the letter of intent. The LOI includes a repercussion-clause in case the supplied dataset is incorrect, however, the blockchain technology would make this clause irrelevant. As a result of more reliable data, less resources are required to be spend on a thorough due-diligence investigation.

Since roughly 25% to 40% of the transaction costs consist out of due diligence expenses a decrease in those expense could significantly lower overall transaction costs. Therefore, blockchain could potentially decrease overall transaction costs. This decrease in transaction costs enables more companies to engage in mergers and acquisitions. The use of blockchain might give a boost to the M&A market.

XBRL

XBRL is an open standard to exchange business information via internet between business systems. Its primary use is the exchange of metadata set out in taxonomies, some early users include the U.S. Federal Deposit Insurance Corporation and Committee of European Banking Supervisors (CEBS). However, in December 2017, research states that there is a 10.2% chance that an XBRL-based public company financial report has errors such as irregularities in the use of definitions. (Hoffman, 2017). As previously discussed, due to the structure of blockchain technology it can be regarded superior compared to XBRL. Blockchain can be considered a good replacement.

To conclude, blockchain has the potential to boost the M&A market and provide more reliable data than XBRL.

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