BLOCKCHAIN: HOW TO IDENTIFY GOOD USE CASES

A step by step approach

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May 9, 2018
Blockchain

Immutable, shared, distributed ledger
Multiple parties

“It is now possible to build systems that are operated by multiple parties, none of whom fully trust each other, that nevertheless come into and remain in consensus as to the nature and evolution of a set of shared facts”*

*A Simple Explanation of Enterprise Blockchains for Cryptocurrency Experts*
All the use cases have been solved already

*Corda: an Introduction*
MULTIPLE PARTIES

- TRUSTED INTERMEDIARY
  - or
  - MULTIPLE BILATERAL AGREEMENTS + RECONCILIATION

- BACKING
  - IMmutABILITY

- PUBLIC
- PRIVATE

- CONSENSUS

- BLOCKCHAIN
When a trusted intermediary is not available

When you can improve on the existing tech

May 2017

A blueprint for a new RTGS service for the United Kingdom

BANK OF ENGLAND
When you can improve on the existing tech

CHAPS processes about 140,000 transactions a day, worth on average £277bn

On October, 20 2014 the system went down for a whole day
MULTIPLE PARTIES

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  - or

- MULTIPLE BILATERAL AGREEMENTS + RECONCILIATION

BACKING

- IMMUTABILITY

PUBLIC

PRIVATE

CONSENSUS

BLOCKCHAIN
Back

“Who stands behind the assets represented on the blockchain?”*

Remember, the Blockchain only stores a digital representation of your assets or facts!

*Avoiding the pointless blockchain project*
Backing
Land registry
Get explicit about sexual consent
Secured in the blockchain

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Sweden plans change in law to require explicit consent before sexual contact

Under proposed legislation rape could be proved if accuser had not given verbal agreement or clearly demonstrated desire to engage in sexual activity
A prenuptial agreement is a contract entered into by two people who are about to marry. A prenuptial agreement (often called a ‘prenup’ or ‘prenupt’) is used to specify how property and debts will be divided in the event of a breakup.
MULTIPLE PARTIES

TRUSTED INTERMEDIARY

or

MULTIPLE BILATERAL AGREEMENTS + RECONCILIATION

BACKING

IMMUTABILITY

PUBLIC

PRIVATE

CONSENSUS

BLOCKCHAIN
Immutability

“Is immutability a desirable property for your use case?”
Immutability
User reviews ICO

**How It Works**

User feedback on the platform will be sent to the blockchain where it remains immune to change. All reviews will be available for a request from a smart contract.

will ensure maximum organic response, providing adequate feedback from real users of its system.

When a user posts a review, they can trust the platform will not change it.
Immutability

From the New York Daily News, 2009:

Correction: It has come to the attention of the Daily News that a number of statements in this article written for the Daily News by a freelance reporter are, or may be, false. Cornell University has told us that Shante did not receive any degree from it under either her birth or stage name[...]
Immutability

“What happens if it is not?”

You now need an ancillary mechanism to change the facts and you need to secure it. It becomes the weakest link in the chain (pun intended).
MULTIPLE PARTIES

TRUSTED INTERMEDIARY

or

MULTIPLE BILATERAL AGREEMENTS + RECONCILIATION

BACKING

IMMUTABILITY

PUBLIC

PRIVATE

CONSENSUS

BLOCKCHAIN
Blockchain
Consensus

Rules and procedures that allow to maintain and update the ledger and to guarantee the trustworthiness of the records

- speed of transactions
- energy efficiency
- scalability
- censorship resistance
- tamper-proof

*Ontology of Blockchain Technologies. Principles of Identification and Classification*
## Consensus

<table>
<thead>
<tr>
<th>Main Component</th>
<th>Sub Component</th>
<th>Layout 1</th>
<th>Layout 2</th>
<th>Layout 3</th>
<th>Layout 4</th>
<th>Layout 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consensus</td>
<td>Consensus Immutability and Failure Tolerance</td>
<td>PoW</td>
<td>PoS</td>
<td>PoA</td>
<td>PoC</td>
<td>Hybrid</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Proof of Work</td>
<td>Proof of Stake</td>
<td>Proof of Authority</td>
<td>Proof of Capacity</td>
<td>Proof of Storage</td>
</tr>
</tbody>
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*Ontology of Blockchain Technologies. Principles of Identification and Classification*
MULTIPLE PARTIES

TRUSTED INTERMEDIARY or MULTIPLE BILATERAL AGREEMENTS + RECONCILIATION

BACKING

IMMUTABILITY

PUBLIC PRIVATE

CONSENSUS

BLOCKCHAIN!
Last two things to consider

1. Are we changing the business model?
2. What are we really improving?
Where Blockchain Meets Cold Chain

Australian stock exchange to move to blockchain

Technology

Someone Figured Out How to Put Tomatoes on a Blockchain

By Annie Massa
9 November 2017, 10:00 GMT
The Enterprise IT Stack in 2025?

- HYBRID CLOUD
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- MIDDLEWARE
- APPLICATIONS
- AI/ML
- IT OPERATIONS
- IDENTITY
- AUDITING /ACCOUNTING
- SMART CONTRACTS
- DISTRIBUTED LEDGER(S)
THANK YOU

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