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# Using Blockchain Smart Contracts to Drive Service Excellence in Insurance Sector



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The biggest challenge that is being faced by the insurance industry is to engage new customers i.e. shifting their target audience from traditional customers to newer segments. The millennials or the generation Y happen to be one of the most desired segments and the best way to capture this segment is by incorporating mobile and digital technologies. Insurance companies have realised that to entice this segment their focus should be on driving service excellence by incorporating newer technologies that are capable of providing faster and flawless service to the customers. The blockchain technology is one such medium which is capable of performing wide variety of operations. Its application in the public crypto currencies has shown the world that

it is not only very secure but also has the ability to provide efficient and intangible technological benefits. Its application is not just limited to public crypto currencies rather it can be used to perform a wide variety of other complex operations. This is how the concept of smart contracts has emerged. Smart contracts are computer programs where the terms of the contract are computer coded and have the ability to self-execute and enforce itself when an encoded condition is satisfied. The entire process is automated and can work as a substitute for conventional legal contracts. The smart contract operates on the concept of If- Then, whereby the terms of the smart contract are recorded in a computer language as a set of instructions. Such a concept

will reduce the need of an intermediary while doing business. According to a report by (Goldman & Sachs, 2016) it has been estimated that consistent use of blockchain in KYC/AML checks alone could save \$2.5bn of the estimated \$10bn global processing costs in the sector. Apart from that a report published by (Mainelli & Manson, July 2016) they could identify the key segments where the concept of smart contract can find practical use. According to the report the key performance areas are:

- Placement and contract lifecycle: documentation.
- Claims management.
- KYC/AML.

The objective of this paper is to explore in detail how smart contracts can be incorporated to improve the performance in the above mentioned areas.

### Literature Review

(Mainelli & Manson, July 2016) In their paper titled Chain Reaction: How Blockchain technology might transform the wholesale insurance market, talked about how blockchain enabled solutions can be helpful in providing efficient and secured services to the customers. The paper also touched upon the various use cases whereby the blockchain technology can be utilised. The biggest issues highlighted in the paper were KYC/AML, problems in claim processing and proper documentation. It could be understood that these problems had direct impact on the TAT (Turn Around Time) of the process and the companies had to bear extra expenses also. In the following paper we are going to explore some of the use cases which can directly impact

the customer satisfaction levels and see how blockchain technology can be utilised to improve the overall process thereby improving customer satisfaction.

### Defining Blockchain

Before starting to explain the applications of the blockchain let us first understand what blockchain technology is? It is basically a Mutually Distributed Ledger and technically speaking is a computer data structure capable of storing large chunk of data in a secured way. Blockchain has the following capabilities:

- Block-chain is shared across many organizations. However no single organisation owns it.
- Blockchain data is not restricted to one single location as it a multi-locational data structure. Thus users can store copies locally which provide greater robustness and security.
- Once a transactional detail is entered into the block-chain it cannot be erased moreover the availability of local copies across several locations helps in proving the integrity of the ledger.

Based on the following capabilities we can see that blockchain in an organization will be very useful to create a successful audit trail that is tamperproof and which can be reviewed externally. Apart from that the success of public crypto-currencies has shown that blockchain technology can be highly secured and well equipped to handle huge chunks of data quite efficiently. Thus for an insurance company which is entirely data driven it becomes very important to leverage the power of blockchain technology.

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Blockchain smart contract is one of the ways by which the amazing power of blockchain can be leveraged. Smart contracts are basically computer programs where the terms of the contract are encoded as triggers. The contract gets executed when one of the conditions is triggered. The entire process is automated and the contracts are self-executing in nature.

**Key Areas where Blockchain Smart Contract can be Used**

**1. To Properly Document Placement and Contract Lifecycle**

In order to obtain a quote from an underwriter a broker must submit a “head of terms” of the overall contract along with some supplementary documents that is submitted in both paper and electronic format. These documents describe the risk of the insured and thus are highly detailed. The issue with the Insurance Contracts is that it comprises of large number of files both in electronic and paper format. Moreover new files get added to the original file throughout the lifetime of the contract. The problem is that there is a heavy processing overhead as many personals can check these files at various stages of the contracts lifecycle. Apart from that there is operational inefficiency that is associated with preparation of any paper document; even files in electronic format fall short when it comes to create a tamperproof and accurate audit report which shows the exact documents and versions that are included. Moreover the presence of multiple personals that have access to the files also increases the chance of the file getting corrupted or changed.

Blockchain smart contracts can be very helpful to solve this problem as by storing all the important documents in a distributed ledger we can ensure

that the documents can be accessed by multiple participants and as the blockchain system is very secure hence there is no fear of damage to the files due to accidental change or corruption. The added advantage of this concept is that the files stored in blockchain can be accessed by the regulators and Tax authorities, which will greatly simplify the overall process of reporting and checking the documents.

**2. Claims Management**

Whenever a claim is made on a policy the underwriters, insured, insurer and all the concerned parties generally want to be kept abreast of the proceedings. There might be multiple underwriters who are busy pursuing their own process and this might generate extra overhead expense.

Blockchain technology can be used here to create a chain of all the documents created in the claim process and which is available to all the underwriters apart from client broker and claims brokers. This will reduce the administrative cost and fasten the overall process.

**3. Know Your Customer (KYC)/ Anti-Money Laundering (AML)**

Brokers, insurers as well as reinsurers have to perform KYC/AML on all the parties which can be legal entities or individual. More than often one broker can be associated with multiple underwriters and a single

transaction might involve a great many participants. In such cases performing KYC/AML on multiple partners becomes a cumbersome task. It is expensive as well as time consuming activity which is responsible for the delay of the overall process.

One solution is to use an external agency which is specifically entrusted with the task of KYC/AML. Such an agency can utilize blockchain to store the information of all the clients and as blockchain is immutable hence data once entered cannot be changed. Thus there is no need for validation of the client over and over again. This will save precious time and effort on the part of companies and thus will help in servicing the client faster.

**Conclusion**

The need of the hour is to drive customer satisfaction by utilizing technology enabled solution that can give faster, efficient as well as secured service to the customers. By utilizing blockchain smart contract the various problems in insurance industry that affect the service rendering capabilities of the industry can be addressed. This technology is not only secured but also robust and can work with huge chunk of data. Thus blockchain smart contracts are totally going to revolutionise the insurance industry in the years to come. 

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