

A Paper On Blockchain Technology in Supply Chain Management

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Introduction

At the outset, it is essential to comprehend the de facto explication of Supply Chain Management. In a capsule version, it can be elucidated as all the manoeuvres and individuals entailed in fulfilling a customer's requisitions. The activities assuredly include procurement of raw materials, storage, work in process inventory, movement of finished goods, distribution, marketing and finally customer service. It is significantly vital to note that supply chain activities are not restricted to the aforementioned ones. It might also encompass other operations. For instance, let's say a customer visits a retail store to purchase a soap. The supply chain initiates when need is appeared in the customer. Consequently, he visits the retail outlet. This is the next step. Now the products in outlet might have been arranged through inventory which might have been supplied by distributor. Apparently, distributor might have been merchandised by the manufacturer. Manufacturers might have procured the raw materials from suppliers and who in turn might have procured by low tier suppliers. This is how supply chain operates. Customer is the most intrinsic part in this set-up.

Speaking on the part of block chain technology, it is the decentralised ledger which helps in distribution of digital information and avoids the possibility of it being copied. It was invented in the year 2008 to expedite the Bitcoin transactions. Over a period of time its applications in other areas have been realized and are being implemented. Blockchain technology diminishes human errors and frauds and it intensifies

transferability, security and accountability by creating an eco-system between the parties involved. The rudimentary idea being, every transaction must be updated to the people involved.

Incorporating Block Chain Technology in Supply Chain Management:

Supply chain is indisputably something which is very much tangled and clumsy in nature. Although companies have made enormous investments in digital framework, the discernment and visibility is still penurious. Analog gaps are the ones to be blamed here which exists within and across the enterprise. For instance, let's say a person has 500 litres milk and it has to be sent to processing in next step. But the other person is saying that he has already received the milk and processing has been started. Now, it is impossible for an inventory to exist same time at two places. In order to avoid such issues and frauds Blockchain technology has to be incorporated in supply chain management. Blockchain technology is going to metamorphose Supply chain management completely. The fundamental idea behind applying Blockchain technology in supply chain is, "No inventory can exist in two place at a same time."

Blockchain in supply chain finds it's applications in:

1. Procurement
2. Data and analytics
3. To avoid frauds

Speaking of procurement, Blockchain helps in documentation of assets while transferring. It also

helps in tracking the orders, returns, delivery and shipment details. It also increases transparency. These days we know have very limited knowledge about how a product has been processed. Many food products claim to be organic. Blockchain assists in understanding whether the claimed thing is true or not. It increases security as well. Transparency and high end security are the two main forte of Blockchain. It also aids in linking the goods which are physical in nature with bar codes.

Uncertainties are almost inevitable in supply chain. Companies always maintain inventory to compensate uncertainties. A huge amount of money has to be invested in this. With Blockchain technology these uncertainties can be vanquished. The accuracy level is greater and forecasting is also better.

When it comes to payments, it takes ages between manufacturer and supplier. Third party has to be involved which adds up to addition cost and it is also time consuming. Analog gap is created. Blockchain aids in evading this issue by creating an eco-system amongst the parties involved. Blockchain homogenises logistic partners, banks, deliveries and payments.

As Blockchain is a decentralised ledger, no one can mishmash with the transactions. If any company tends to do so, it will be messing with its own ledger. The instant it doesn't sync with other ledgers, it will be automatically thrown out from the eco system.

CONCLUSION:

As mentioned before, Supply chain happens to be an intrinsic part of every company. Much heed is paid to it in order to elude certain issues which weighs a lot on companies financially. Yet the metamorphosis can't happen overnight. Compulsively, many companies are experimenting with Blockchain lately. They also claim it to be beneficial. Executed accurately, it is not even that difficult to incorporate Blockchain in Supply chain. It just appendages the current Enterprise Resource Planning software. As digitalisation and globalisation are gaining momentum lately, it is indeed beneficial to give it a whirl.

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