Requirements for a blockchain enabled supply chain ecosystem

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This presentation basically introduces the concept of blockchain enabled supply chain ecosystem and pinpoints major requirements for its realisation. This presentation has two parts and they are:

• Scope of Blockchain in Supply Chain

• Requirements for realising blockchain enabled supply chain ecosystem

Scope of Blockchain in Supply Chain:

Supply chain is involved in the daily life of every one. A person's purchase makes him/her part of a supply chain. Every business unit is an entity or agent in the network of organizations referred to as a supply chain. Hence supply chain is a multiagent system. Generally, a trust issue emerges among the entities, and between the agents and the common man. This can be solved using the blockchain technology.

Usually, a supply chain network has a lot of intermediaries. A reduction in intermediaries makes the supply chain less complex. The application of blockchain technology is one of the ways for reducing number of intermediaries.

Blockchain technology is generally used for securing the transactions. Mainly, supply chain has three types transactions (flows): (i) Material flow, (ii) Information flow, and (iii) Cash flow. In the material flow, provenance and ownership are to be securely revealed to the players of the supply chain. This is possible with the help of blockchain technology. One of the important characteristics of modern supply chain is collaboration through communication. Blockchain makes the communication safe and secure. Supply chains operate for creating surplus cash flow. The security, authenticity and auditability of the cash flow can be ensured with blockchain technology.

In short, blockchain enabled supply chain ecosystem is a concept that integrates blockchain technology into all the aspects of modern supply chains. Blockchain can further be combined with other technologies such as AI/ML, IoT, Smart contract, Digital twins, etc. for making this concept incredible.

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