

Security in 5G Verticals

V2X, Finance, ... (?)

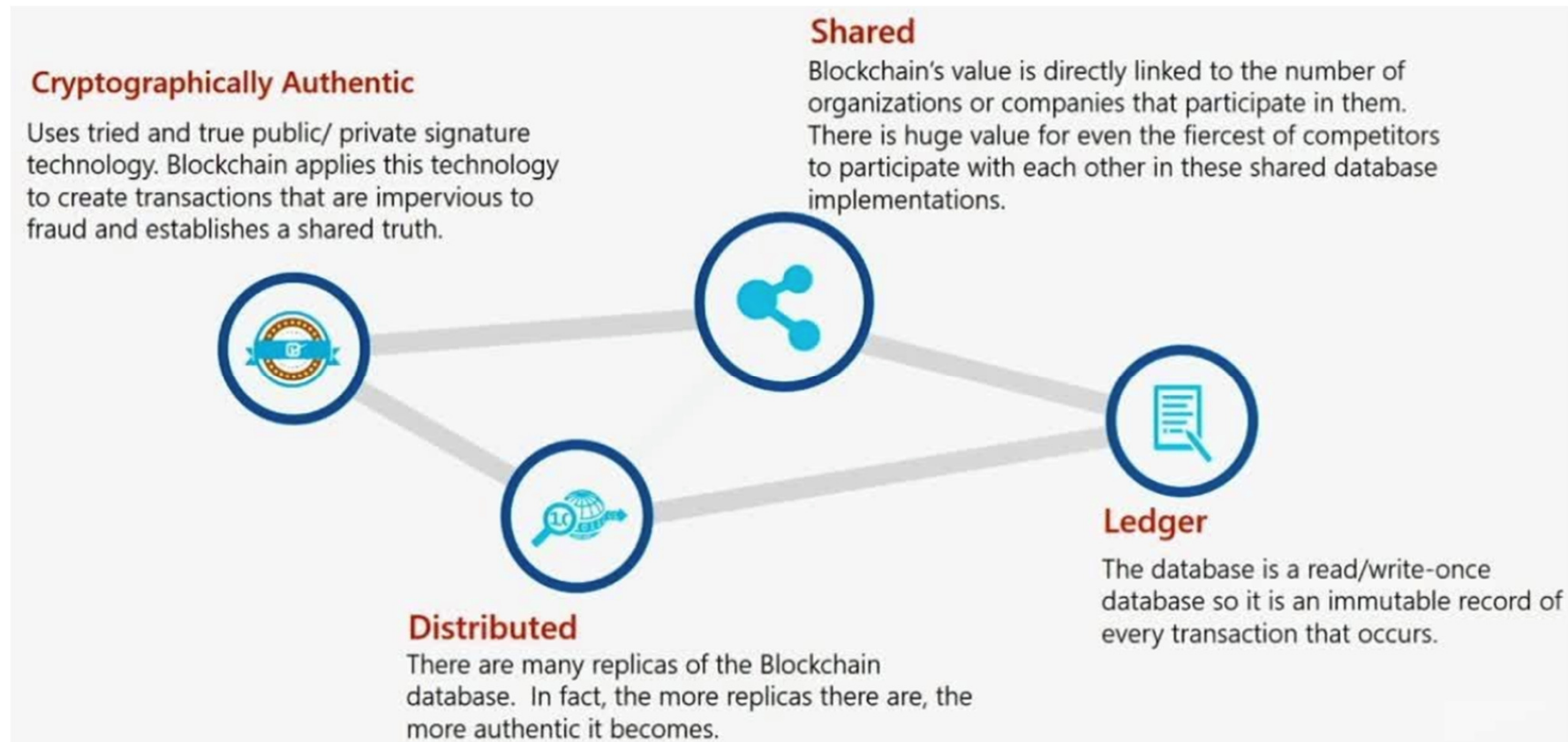
V2X - issues

- Intelligent Transport System is maturing into an application of advanced ICT
- V2X and vehicular communication is not just about vehicle to vehicle, also vehicle to infrastructure, and vehicle to pedestrian
- 'Endless' possibilities to offer value-added services
- The V2X 'entities' likely to require storing security credentials and other vital information which need to be protected from malicious modification
- V2X messages processing and generating should be protected in a secure environment to guarantee the integrity and authenticity of V2X messages

Financial Services

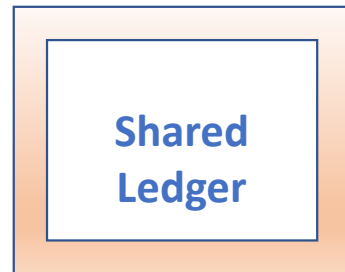
Blockchain in Action

- Blockchain is a shared, distributed ledger that facilitates the process of recording transactions and tracking assets in a business network
 - An asset can be – a house, a car, cash, land or intellectual property such as patents, copyrights or branding.
- Track and trade with help of blockchain network reduces risk and costs for the involved parties.



Blockchains suitable for Business (?)

- Four Key concepts of blockchains for businesses



Application - Financial Services

- Commercial Financing – Businesses need to purchase goods and services on credit with end-to-end visibility to avoid and resolve transaction disputes. Benefits:
 - Complete visibility of the order-to-delivery pipeline
 - Reduction in number of disputes filed
 - Reduction in the time required to resolve disputes.
- Trade Finance – Businesses need a way to streamline the process of obtaining approvals from multiple legal entities for the movement of goods across borders. Benefits:
 - Complex processes simplified into a single process, all accessing a shadow ledger
 - Increased access to capital, because it's not caught up in long settlement times or errors and disputes.
 - Increased trust and accountability among enterprises, regulators and consumers.

Applications

- Insurance – Providers need an efficient way to process claims, verify that an insurable event (such as an accident) actually occurred, and provide customers with fair timely payouts. Benefits:
 - Eliminates the cost of processing insurance claims
 - Reduces the opportunity of insurance fraud
 - Improves customer satisfaction
- Health care – Needs a more efficient and secure system for managing medical records, pre-authorizing payments, settling insurance claims, and performing and recording other complex transactions. Benefits
 - Electronic Medical Records: Tamper-resistant means of storing medical history, reduced time in resolution of insurance claims and increased efficiency in providing insurance quotes & complete medical history of the patient for use by physicians for precise drug recommendations.
 - Healthcare payments pre-authorization: Claims can be reviewed and paid more efficiently and quickly & the system can suggest alternative services that have better coverage.

Applications

- The Internet of Things (IoT) – for M2M interaction, any relevant information can be reported by the machines and recorded in the blockchain to increase efficiency and accuracy and reduce costs. Benefits
 - Greater transparency of shipment process improves efficiency
 - Trust grows, as all transactions are indelibly recorded
 - Accuracy is improved and costs are cut through IoT participation
 - Participants gain the ability to optimize and automate business process through IoT
 - Future vision allows for "freight autonomy"