BLOCKCHAIN BEYOND CRYPTOCURRENCIES

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INTRODUCTION TO BLOCKCHAIN

- Blockchain technology securely records transactions across multiple computers.
- It has various uses beyond cryptocurrencies.

Blockchain, which is empowered with decentralized and distributed ledger technology, gained prominence through its unique capabilities in ensuring the integrity of transactions using the cryptographically interlinked distributed ledger including cryptocurrency networks.

Blockchain beyond cryptocurrency : Trust, data management and automation

APPLICATION OF BLOCKCHAIN

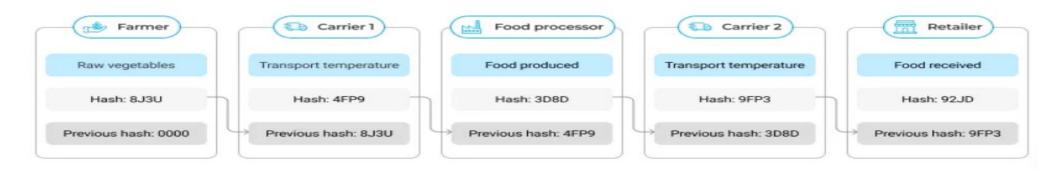|		
Smart Contracts Explained	**Healthcare Innovations**	**Blockchain in Supply Chain**
Identity Management	**Financial Services Transformation**	**Real Estate Transactions**

BLOCKCHAIN IN SUPPLY CHAIN

Blockchain in supply chain networks helps companies manage their suppliers more efficiently.

- The technology makes supply chains transparent and traceable, enabling businesses to
- Manage recalls more efficiently
- Strengthen their market position after major incidents in the industry
- Monitor conditions during transportation
- Prevent cargo theft
- Verify the origin of raw materials

- Blockchain is a system that stores data in a special way. It records it as separate blocks and seals it with a digital signature, or a hash. Additionally, each block contains a digital signature from the previous block. In this way, the blocks are connected as a chain

In a blockchain, each record contains a digital signature of the previous one, making the chain hard to tamper with

Farmer	Carrier 1	Food processor	Carrier 2	Retailer
Raw vegetables	Transport temperature	Food produced	Transport temperature	Food received
Hash: 8J3U	Hash: 4FP9	Hash: 3D8D	Hash: 9FP3	Hash: 92JD
Previous hash: 0000	Previous hash: 8J3U	Previous hash: 4FP9	Previous hash: 3D8D	Previous hash: 9FP3

SMART CONTRACTS EXPLAINED

- Smart contracts are contracts written directly into code

- They automate processes and eliminate the need for intermediaries

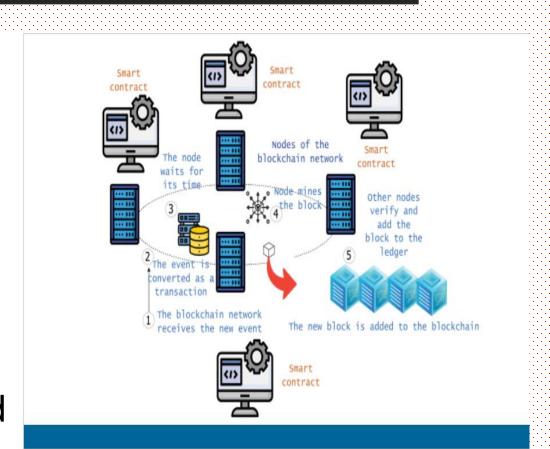- They make transactions faster and more secure while reducing costs

FIGURE 1.
Blockchain workflow.

HEALTHCARE INNOVATIONS

- Blockchain in healthcare securely stores patient records
- Ensures data integrity and accessibility
- Facilitates interoperability among different systems
- This leads to improved patient care and streamlined operations

IDENTITY MANAGEMENT

- Decentralized identity management through blockchain

- Individual control over personal data

- Prevention of identity theft

- Enhanced privacy

FINANCIAL SERVICES TRANSFORMATION

- Enables faster and cheaper cross-border transactions
- Facilitates peer-to-peer lending, reducing reliance on traditional banks
- Increases financial inclusion for underserved populations

- Blockchain's ledger technology has the ability to quickly and cost-effectively process banking payments, act as an anti-money laundering monitoring tool and even offer alternative options to measure creditworthiness.
- **Blockchain Banking Examples**
- Ripple
- Chainalysis
- Paxos
- BlockFi
- Republic
- Nium

REAL ESTATE TRANSACTIONS

1. Transparency: Clear ownership record.

2. Immutability: Data can't be altered.

3. Less Paperwork: Streamlined digital records.

4. Faster Transactions: No intermediaries.

5. Fewer Disputes: Verified ownership reduces conflicts.

- **RealT**

　　RealT is another Blockchain real estate company that utilizes tokenizations for fractional investments in properties. The company provides ease to investors around the globe to buy digital tokens that represent their partial ownership in the property and earn a profit over time. The team collectively works to craft a new real estate ownership experience.

- **PropertyClub**

　　PropertyClub is a New York City-based Blockchain real estate company that enhances the overall property buying experience. The company achieves this motive simply by using smart contracts, enabling digital transactions with cryptocurrencies instead of working with traditional financial institutions.

CHALLENGES AND LIMITATIONS

- **Scalability:** Needs to handle more transactions.
- **Regulatory Issues:** Requires clearer legal frameworks.
- **Energy Consumption:** High energy usage concerns.

CONCLUSION

- In conclusion, blockchain technology holds significant promise beyond cryptocurrencies. Its potential to enhance **transparency**, **security**, and efficiency across diverse sectors makes it a transformative force in the digital age.

THANK YOU