



Editorial

Contemporary relevance of blockchain technology

K J Thankachan^{1*} 

¹Dept. of Management, Christ Institute of Management, Rajkot, Gujarat, India

Received: 27-01-2025; **Accepted:** 03-02-2025; **Available Online:** 05-03-2025

This is an Open Access (OA) journal, and articles are distributed under the terms of the [Creative Commons Attribution-NonCommercial-ShareAlike 4.0 License](https://creativecommons.org/licenses/by-nc-sa/4.0/), which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

For reprints contact: reprint@ipinnovative.com

The fundamental technology of Bitcoin, blockchain technology, was first presented in 2008 by a person or group going by the pseudonym Satoshi Nakamoto. Developing a peer-to-peer electronic cash system without the need for middlemen was the goal. The success of Bitcoin inspired the creation of numerous other applications by showcasing the blockchain's possibilities beyond digital currency.

Programmable smart contracts, which are self-executing agreements with specified rules encoded directly into the blockchain, were made possible by later developments, most notably the 2015 launch of Ethereum, which increased the potential of blockchain technology. This development created new opportunities for industries and decentralized apps (dApps) to take advantage of blockchain's capabilities.

Often hailed as one of the most revolutionary inventions of the twenty-first century, blockchain technology has developed beyond its cryptocurrency roots to become a vital component of contemporary technological progress. The uses of blockchain are as varied as they are exciting, ranging from supply chain management to banking, healthcare to government. This editorial examines the fundamental ideas of blockchain, looks at its present uses, and assesses how applicable it is to solving today's problems.

Basically, blockchain is a decentralized ledger technology (DLT) that securely, irrevocably, and transparently logs transactions across a network of computers. The transactions recorded in each "block" are

cryptographically connected to the one before it, creating a "chain." The data is protected against unauthorized changes and modification thanks to its design.

Decentralisation is one of the key attributes of Blockchain which operates through a distributed network, enhancing transparency and reducing single points of failure. The Immutability attribute gives protection against unauthorised alterations once data is recorded on a blockchain, it cannot be altered without consensus from the network participants, ensuring the integrity of the records. Public blockchains allow all participants to view and verify transactions, fostering trust among stakeholders, thus provides for enough transparency. Advanced cryptographic techniques protect data from unauthorized access and cyber threats, giving high level of security to the data.

The Blockchain Technology is applied in financial services. Traditional monetary systems have been upended by cryptocurrencies like Bitcoin and Ethereum because they make it possible to conduct cross-border transactions without the need for middlemen. Furthermore, systems for decentralized finance (DeFi) have surfaced, providing services like trading, borrowing, and lending without the need for banks or other financial institutions.

Blockchain technology is being used for financial services like Remittances by cutting down on fees and transaction times for international money transfers. It helps decreasing fraud by offering safe and verifiable Digital

*Corresponding author: K J Thankachan
Email: dr.kjthankachan@gmail.com

Identities. Using tokens on a blockchain to represent the tangible things like equities, real estate, or artwork.

The transparency and immutability of Blockchain make it ideal for supply chain management. Blockchain is widely used in the area of health care also. It revolutionised the storage and sharing of medical records. Using drug traceability, it can track drugs throughout the supply chain through which counterfeit medications can be prevented. It has the potential to improve governance and voting by fostering transparency and reducing corruption. Decentralized energy grids powered by blockchain enable peer-to-peer energy trading. In the area of Art and Entertainment Blockchain is redefining intellectual property and content distribution. Musicians, artists, and filmmakers are exploring blockchain to establish direct relationships with audiences.

In today's rapidly digitizing world, blockchain technology deals with several urgent challenges. With cyberattacks and data injuries becoming more and more common, blockchain cryptographic security offers a robust solution. A distributed system reduces the risk associated with a central default point, and encrypted transactions ensures user privacy. Trust is of paramount importance as digital interactions dominate the personal and professional landscape. Blockchain transparency and the promotion of

immutability foster trust among parties, even without traditional intermediaries. Blockchain has the potential to bridge the financial gap in the unbanked population. By eliminating intermediaries, blockchain solutions provide access to financial services for individuals in remote or inadequate regions. The decentralized nature of blockchains promotes global cooperation by enabling seamless and secure cross-general transactions, data exchange and communication. Blockchain plays a role in sustainability initiatives by enabling transparent persecution of carbon footprints, renewable energy credits, and sustainable practices across industries.

In developing nations such as India, blockchain technology holds immense potential to address longstanding challenges and drive inclusive growth. Key areas of impact include Financial Inclusion, Agriculture and Supply Chain, Land Records and Property Rights, Healthcare Accessibility, Governance and Public Services like Subsidy Distribution, Voting, Identity Management etc., and Energy and Sustainability.

Prof. (Dr.) K J Thankachan

Principal, Christ Institute of Management,
Rajkot

Cite this article:. Thankachan K J, Contemporary relevance of blockchain technology. *J Manag Res Anal.* 2025;12(1):1-2