

Chapter 9

Blockchain Open Issues, Research Gaps, and Road Map of Future Blockchain for 2030: Charting the Digital Future

Bhagvan Kommadi

 <https://orcid.org/0000-0002-1098-1792>

ValueMomentum, India

ABSTRACT

The future is great for blockchain technology. Blockchain market size can grow from 3 billion USD to 39.7 billion USD by 2025. Thirty percent of blockchain projects might go live this year. There is another prediction that 90% of those projects might have a substitute solution. Twenty-five percent of Forbes Global 2000 might start implementing blockchain for improving digital trust. The implementations might not use tokenization, smart contracts, decentralized consensus, and other features. The latest solutions during COVID-19 lockdown are becoming the reference solutions for the blockchain initiatives. The number of enterprises that are part of the blockchain networks has significantly increased. On the other hand, long-term blockchain implementations are on hold. Future projects are focusing on creating a digital platform for post-pandemic scenarios. Private blockchains are becoming popular, and they will have a bigger market share compared to public blockchains. European countries are coming up with their cryptocurrency, and China is ready with its crypto yuan.

DOI: 10.4018/978-1-7998-8493-4.ch009

“The blockchain symbolizes a shift in power from the centers to the edges of the networks.” –William Mougayar

INTRODUCTION

Many companies are using Blockchain to secure their transactions and businesses. In the manufacturing and packaging industry, enterprises are using this technology for compliance and traceability. In BFSI (Banking Financial Services Insurance) verticals, accounting departments are implementing blockchain for transparency and improving efficiencies. A blockchain is a distributed ledger used to store the transactions in sets of blocks. A hashing function is used for creating encrypted blocks. Public and private blockchains are popular these days. Public blockchains are used for storing transactions. They ensure immutability and security.

Let us look at 360 degree view of blockchain, concepts, benefits, applications, potential, and impact on our society and economy.

Blockchain helps in managing the transactions providing immutability. The information cannot be modified or deleted. Blockchain consists of blocks of data transactions in a chain form. Most of the cryptocurrencies are managed in exchanges which use blockchain as the platform. Cryptocurrencies can be bought, stored, and traded using the blockchain platform. The digital currencies like bitcoin, Litecoin, or Ethereum can be used for online transactions. These transactions can be managed using the blockchain platform. Blockchain will have the irrefutable, immutable, and secure record of the cryptographic transactions. (Lewis, 2018)

The important features of blockchain are:

- Improved Security Model
- Immutability
- Quick Settlement
- Consensus
- Decentralized
- Distributed Ledgers

Blockchain has been implemented in different areas and different applications are listed below:

- Health Care Records Storing
- Trading Market places
- Digital Asset Management
- Payment Processing
- IOT based environments

28 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage: www.igi-global.com/chapter/blockchain-open-issues-research-gaps-and-road-map-of-future-blockchain-for-2030/293841

Related Content

How "E" are Arab Municipalities? An Evaluation of Arab Capital Municipal Web Sites

Hana Abdullah Al-Nuaim (2009). *International Journal of Electronic Government Research* (pp. 50-63).

www.irma-international.org/article/arab-municipalities-evaluation-arab-capital/2066

Why do eGovernment Projects Fail? Risk Factors of Large Information Systems Projects in the Greek Public Sector: An International Comparison

Euripidis Loukissand Yannis Charalabidis (2011). *International Journal of Electronic Government Research* (pp. 59-77).

www.irma-international.org/article/egovernment-projects-fail-risk-factors/53485

Approaches to Development in M4D Studies: An Overview of Major Approaches

Jakob Svenssonand Caroline Wamala Larsson (2015). *Promoting Social Change and Democracy through Information Technology* (pp. 26-48).

www.irma-international.org/chapter/approaches-to-development-in-m4d-studies/134251

EDRM and ECM Systems in the Russian Federation: Review of Current Situation

Liudmila Varlamova (2020). *Cases on Electronic Record Management in the ESARBICA Region* (pp. 215-242).

www.irma-international.org/chapter/edrm-and-ecm-systems-in-the-russian-federation/255943

Sociopolitical Digital Interactions' Maturity: Analyzing the Brazilian States

Herman Resende Santos, Dany Flávio Tonelliand Paulo Henrique de Souza Bermejo (2014). *International Journal of Electronic Government Research* (pp. 76-93).

www.irma-international.org/article/sociopolitical-digital-interactions-maturity/122484