



# BLOCKCHAIN



SMART LIGHTING MARKET

## INTRODUCTION

# BLOCKCHAIN MARKET SCENARIO

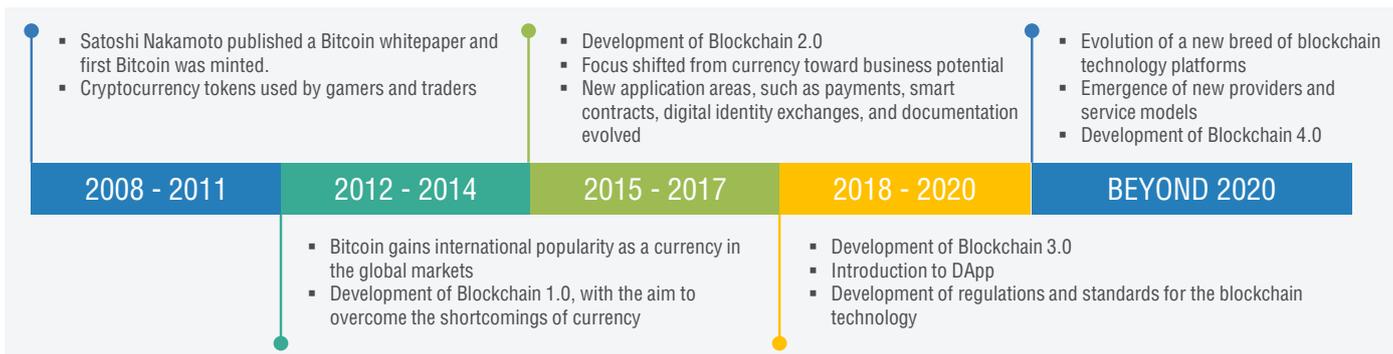
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Blockchain empowers enterprises to secure and perform transactions faster with greater trust, reduced inefficiencies, and notably minimized operating costs and complexities in cross-enterprise business processes. The integration of blockchain technology can drive new business models and safeguard regulated industries.

Blockchain adoption is steadily increasing in regulated and data-driven industries to complement their infrastructure-related upgradation to sustain the stiff competition. Financial institutions and insurers are experiencing advancements in the adoption of new payment modes and exchange platforms that require transparency and immutability for secure transactions. The increasing digitalization trend, beyond Machine-to-Machine (M2M) process automation, is expected to result in a gradual convergence of technologies, data, processes, assets, and people across an integrated ecosystem.

Blockchain technology has continued to evolve in terms of technologies and application areas.

## EVOLUTION OF THE BLOCKCHAIN MARKET



## COVID-19 IMPACT

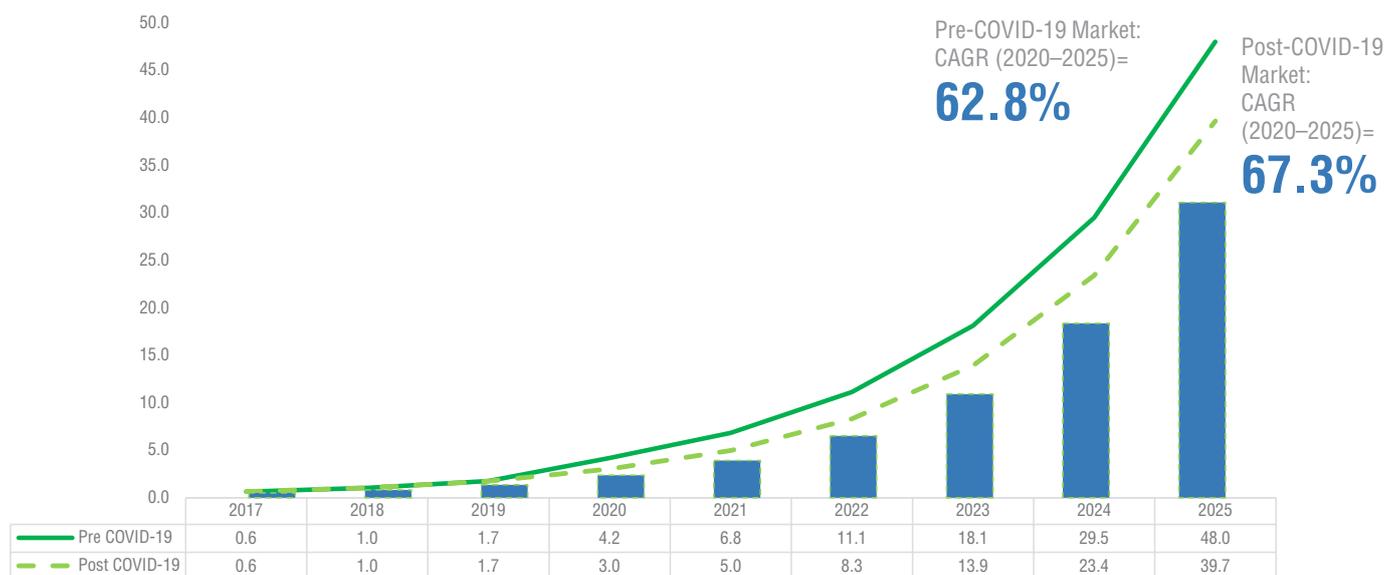
### ON THE BLOCKCHAIN MARKET

The COVID-19 pandemic has affected more than one aspect of the blockchain and the cryptocurrency market. According to Cointelegraph, mining manufacturers have stopped equipment production in China. Restrictions and economic slowdowns have led to the sale of blockchain tokens without any investments, while some Initial Coin Offering (ICO) launches have been postponed. For instance, SWAZM, a blockchain company, postponed the launch of its initial exchange offering.

The blockchain market is expected to face slow growth during 2020–2021 pertaining to the post-COVID-19 circumstances. This situation is very delicate as investors are withdrawing their interest from ongoing deals. For instance, the Australian Securities Exchange delayed the launch of its blockchain-based post-trade solution due to the COVID-19 crisis.

## COVID-19 IMPACT:

### GLOBAL BLOCKCHAIN MARKET, 2020-2025 (USD BILLION)



Source: Secondary Literature and MarketsandMarkets Analysis

According to the World Economic Forum (WEF), digitization and blockchain can help fix supply chain disruption. While blockchain may not be able to address the impact of COVID-19 directly, it can help with supply-chain visibility. Suppliers are hesitant to share their customer details with their partners as they fear losing the competitive advantage over their competitors. Hybrid blockchain allows suppliers to share customer data without disclosing the identity of the supplier. Additionally, the increasing use of blockchain for digital payments during the COVID-19 is one of the major factors driving blockchain providers to promote the use of other blockchain-based applications.

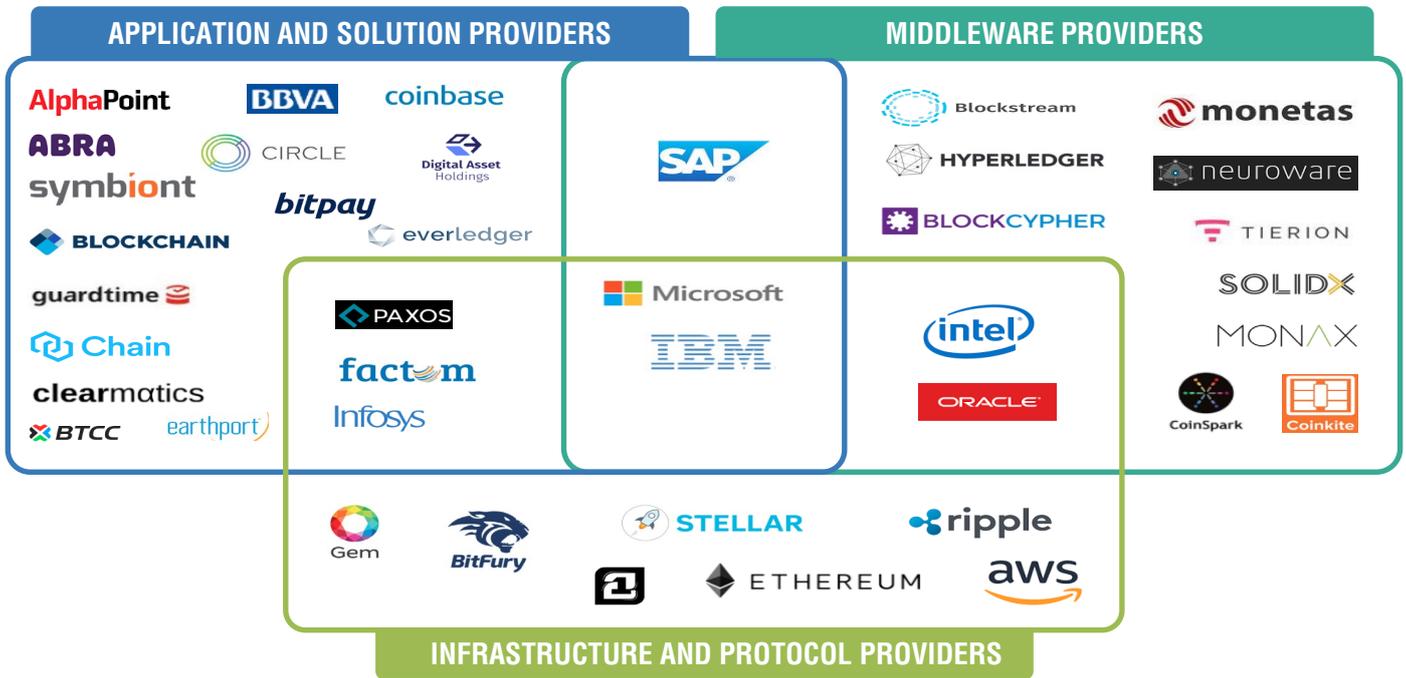
While the economic impact of the COVID-19 outbreak is expected to be evident even in the latter half of the year, it provides an opportunity for blockchain providers to become more robust and innovative. Furthermore, blockchain providers are looking to offer various blockchain technology applications that can prove to be useful during the pandemic. For instance, blockchain technology is being used by government regulatory bodies to track the source of fake news that is being spread by the anti-social elements for causing panic during the pandemic.

On the strategic front, companies are utilizing different growth strategies, such as mergers and acquisitions, partnerships and collaborations, and product developments, to increase their shares in the market. Some of the major developments in the market are as follows:

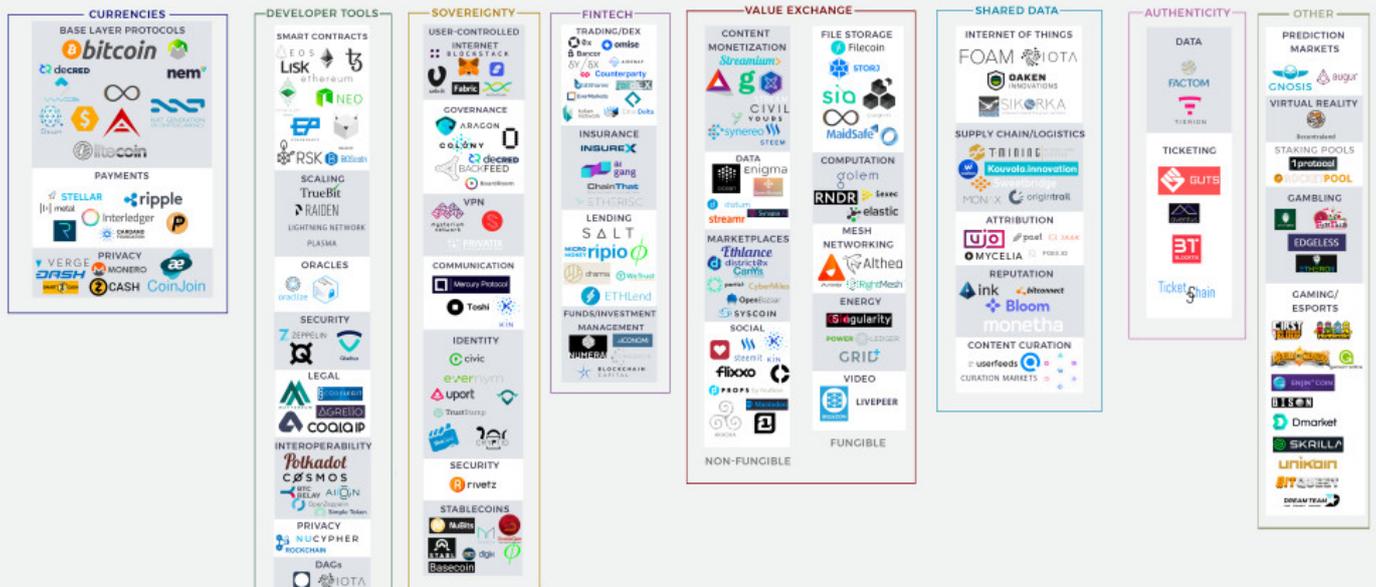
- In April 2020, IBM and Nestle entered a partnership, allowing Nestle to use the IBM Food Trust enterprise blockchain for the traceability of its Zoégas coffee brand. Zoégas coffee will come with a Quick Response (QR) code that can be scanned by consumers to trace the coffee beans to their origin. The IBM Food Trust blockchain will further record data about the farmers, time of harvest, transaction certificate for the specific shipments, as well as the roasting period of the coffee beans.
- In February 2020, Microsoft integrated Lition blockchain into Azure so that Microsoft Azure's worldwide enterprise clients can develop, test, and deploy Lition side chains and applications with ease on its platform.
- In January 2020, IBM and Digital Asset Holdings (DAH) upgraded the Hyperledger Fabric. Developers can write smart contracts written in widely adopted programming languages, such as Go, Java, and Javascript, that support Ethereum's Solidity smart contracts language.
- In October 2019, IBM launched a new Sterling Supply Chain Suite that allows distributors, manufacturers, and retailers to integrate their own data and networks along with suppliers into a Hyperledger-based blockchain to track and trace products and parts.
- In May 2019, leveraging SAP's blockchain, Coke One North America (CONA) increased the efficiency and transparency of the gargantuan supply chain. CONA expects to reduce the duration of order reconciliation from months to just days since it will now be able to view all transactions made by different bottlers on a distributed ledger.



# BLOCKCHAIN ECOSYSTEM



# BLOCKCHAIN PROJECT ECOSYSTEM





## TRANSPARENT AND IMMUTABLE NATURE OF BLOCKCHAIN

The integration of blockchain technology with existing business models helps prevent data manipulation, which is expected to be one of the biggest driving factors for the growth of the blockchain technology market. All changes to the blockchain

can be publicly viewed by all parties, thereby creating transparency in operations. All the transactions are

immutable and cannot be altered or deleted. It is highly useful for financial transactions, as it improves data security.

## LOWER OPERATIONAL COSTS

The increasing demand from enterprises for data security and data accuracy is addressed by blockchain technology as an alternative to traditional transaction stacks at a fraction of the cost.

## HOT POCKETS

Blockchain is emerging as one of the business imperatives as organizations have begun to realize its potential with the success of an initial set of projects from early adopters to address key business issues. Further, the combination of blockchain with IoT, Artificial Intelligence (AI), and the cloud is enabling companies to untap potential of use cases that enhance their customer value and experience. Moreover, companies can retrospect themselves for exploring process optimization, productivity improvement, and restructuring options. The benefits offered by blockchain have garnered interest from several industries to derive higher Return on Investment (RoI) value. Visionary and ambitious projects of governments and organizations are the ones especially demanding the presence of blockchain technology to ensure fool-proof transparency, compliance management, security of critical processes, and proactive and predictive monitoring of vital information. Some of the key opportunity areas driving blockchain adoption are:

### Smart City Initiatives

Owing to the increased interest in blockchain, government bodies are investing in research activities of blockchain solutions. Government entities worldwide have started adopting blockchain solutions to enhance the overall experience of public service delivery, by improving the transparency and efficiency in their operations. Further, the immutable nature of blockchain encourages governments to adopt them for preventing malpractices and eliminate operational

inefficiencies, especially in critical projects.

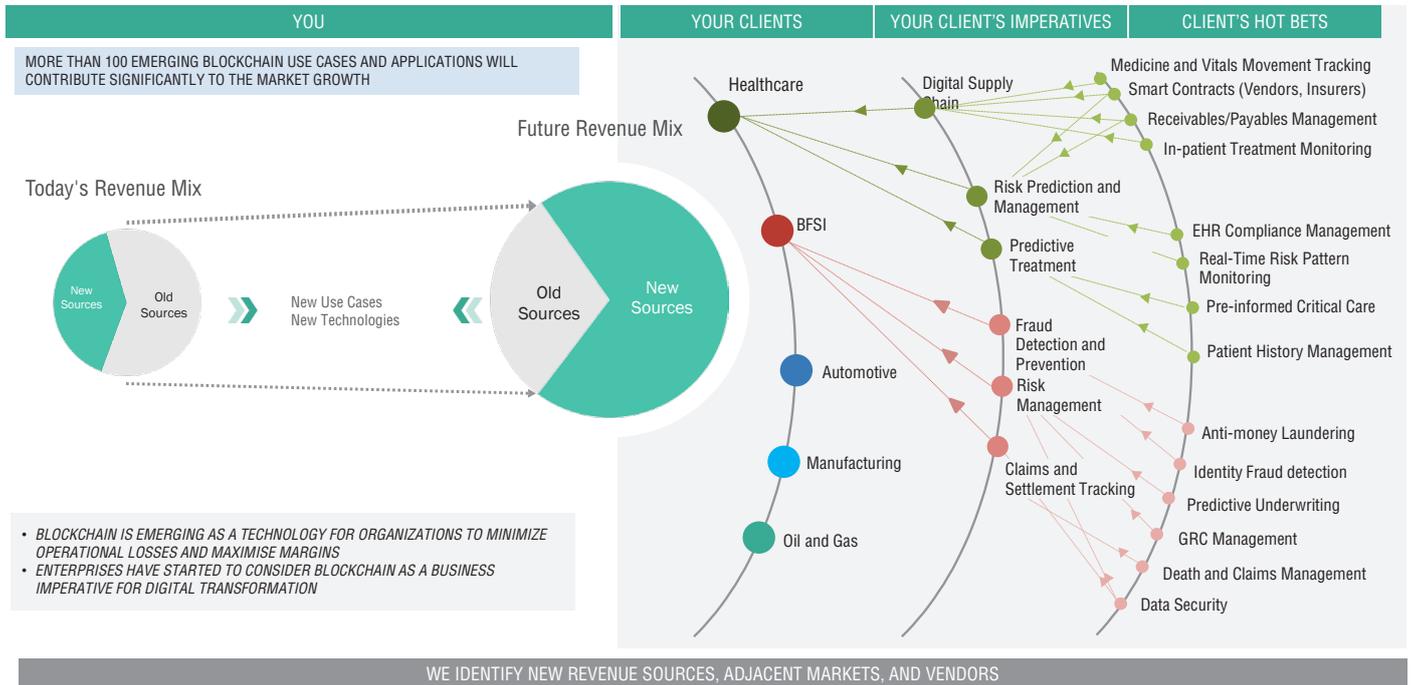
### Blockchain IoT for the Security of Critical Processes

Organizations are implementing blockchain solutions to create a decentralized network of IoT devices, which would eliminate the need for a central location to handle the communication between devices. Blockchain technology is expected to enable devices to communicate with each other directly, thereby reducing the need for a dedicated monitoring system. The need to secure data with strong authentication and cryptography mechanisms to prevent malicious attacks, fraudulent transactions, and Distributed Denial of Service (DDoS) attacks is urging businesses to adopt blockchain IoT solutions. Blockchain IoT is majorly leveraged for smart contracts, data security, data sharing/communication, asset tracking and management, among other applications.

### Data monetization

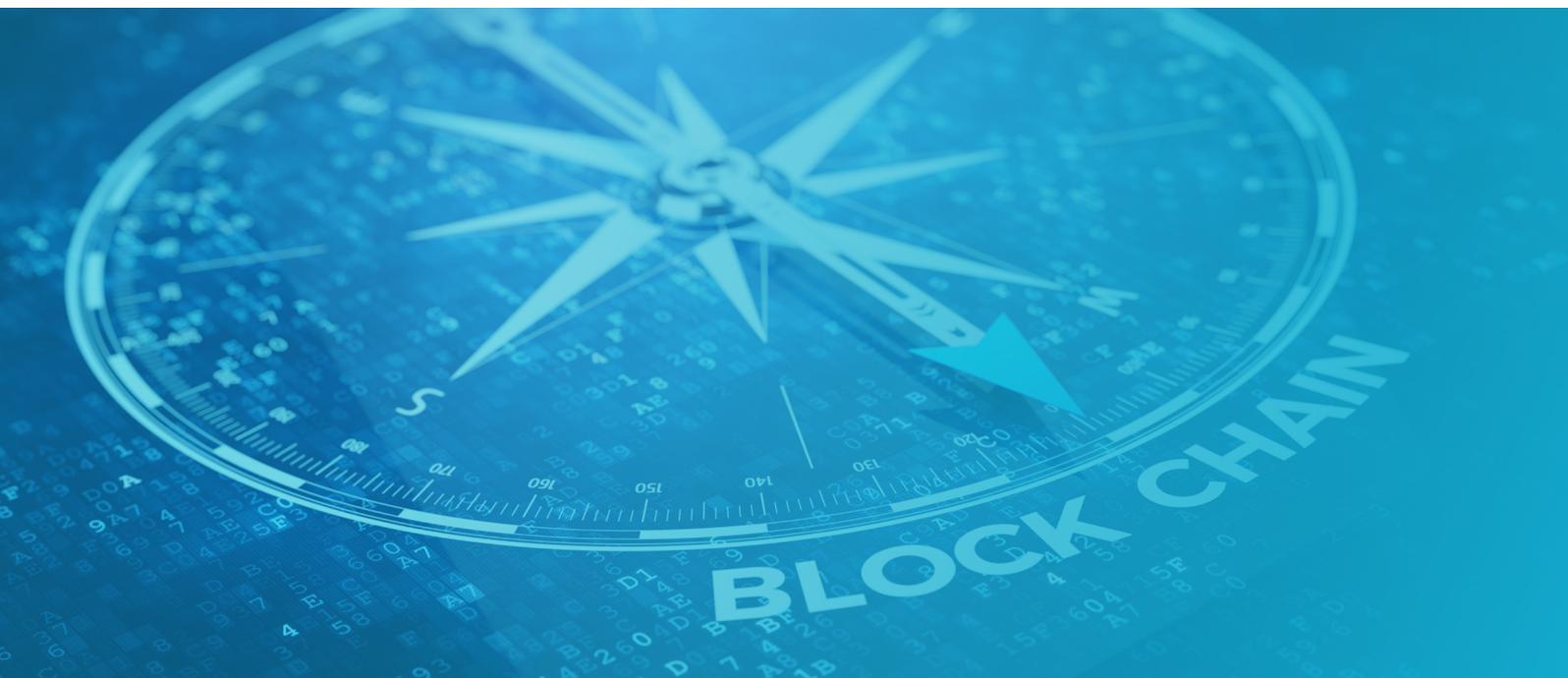
Blockchain AI is in demand with the need for advanced data monetization programs from organizations. Credible, immutable data sources are required to build powerful AI algorithms for data monetization. Blockchain can enable organizations to assimilate real-time data that is collected through an IoT network and feed them to AI programs for predictive inputs. Further, unlike other algorithms, the blockchain design rejects any input that it cannot verify and then deem it suspicious, thereby providing only errorless data for AI programs.

FIGURE:  
**TRACKING ADJACENT MARKETS IN BLOCKCHAIN TO SHOWCASE ITS IMPACT ON CLIENT REVENUES**



## WAY FORWARD

A surge in the overall blockchain adoption is expected to rise post-2021, owing to the success and RoI of blockchain projects. Once the modernization and futuristic projects gain momentum, the blockchain market will gain significant traction with innovative use cases. Currently, blockchain is majorly used as a retrofit option to optimize existing processes, feed errorless data for AI models and cryptocurrency applications, among others. Regulatory clarifications in leveraging blockchain for security, compliance, financial, and non-financial applications will further accelerate its adoption. Further, the combination of blockchain with IoT, AI, and the cloud is expected to attract blockchain investments in many folds.





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