Blockchain In Telecom Market - Growth, Trends, Covid-19 Impact, and Forecasts (2023 - 2028)

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Report description:

The Blockchain Market in the Telecom Industry is expected to register a CAGR of approximately 61.45% over the forecast period. In the telecom industry, blockchain plays a very significant role in preventing fraud, securing user identities, and supporting next-generation network services and IoT connectivity solutions, which in turn is driving the market significantly.

Key Highlights
The increasing adoption of 5G is a catalyst for blockchain implementation in telecom, as 5G is helping in quick and reliable blockchain operations. Blockchain technology provides robust encryption to record and store the data on the network in a more secure and verifiable way. It makes the information transparent and tamper-proof. Thus, Blockchain technology is expected to help various telecom companies boost their network security and reduce operational costs, driving the market's growth.
Moreover, telecommunications or telecom fraud is a fast-growing field of criminal activity. According to Europol's European Cybercrime Centre and Trend Micro, telecom fraud costs around USD 32.7 billion annually. It represents a new challenge for law enforcement agencies. Blockchain can help in fraud detection and prevention for communication service providers, exponentially fueling the market's growth.
Furthermore, in emerging countries such as India, the effectiveness of telecom regulator's deployment of blockchain technology for curbing spam SMSs has set an example for the government to build a transparent and trustworthy framework for various critical use cases such as Aadhar authentication, property, and vehicle ownership records and direct tax collection among others. In March last year, the Ministry of Electronics and IT released a draft policy on blockchain technology to regulate its deployment in various public and private use cases. The telecom regulatory authority of India (TRAI) has also deployed distributor-ledger technology (DLT), which is currently one of the most significant use cases of blockchain technology to control spam SMS traffic.
However, on the other hand, scalability and interoperability are the several critical factors necessary for the overall adoption of blockchain technology. This is only possible when industry standards are set, which is at a lagging phase. The Telecom sector

needs help with the mass adoption of blockchain technology, which can hinder the market's growth.
The onset of the pandemic has highlighted the criticality of telecom infrastructure. The global health emergency is placing new pressures on telecom services and suggesting a pivotal role they can play beyond simple connectivity in emergency scenarios. Beyond the coronavirus pandemic, the world is expected to see substantial interest in new fintech services as the growing demand for virtual and online services continues to build. Within the telecommunications industry, the pandemic is driving the need for expanding digital infrastructure and data-driven services. Telecom companies increasingly focus on network resiliency and reliability, particularly in 5G investments.

Blockchain in Telecom Market Trends

Smart Contract to Dominate the Market

Smart contracts allow computer code to execute when specific conditions are met. The telecom industry is expected to witness significant adoption as it provides scope for automation in its internal operations, like billing, supply chain management, and roaming.
Deploying smart contracts to manage all the billing related to roaming can lead to significant cost savings, as it provides prevention against fraudulent traffic. Blockchain can also add value to identity management solutions by cutting out intermediaries through smart contracts. This helps reduce roaming frauds, cost savings, and instant settlements. It helps telecom players to resolve disputes quickly through tamper-proof verifiable transactions and real-time updates to end customers.
In March 2022, STC Bahrain introduced its official Chainlink node, which intends to offer smart contracts with access to a secure source of real-world data and fast off-chain computations. This makes STC Bahrain the first major telecom in the Middle East and North Africa (MENA) region to introduce a Chainlink node, enhancing the development of the smart contract ecosystem both in the area and throughout the globe.
Moreover, 5G technology is one of the significant instances of how blockchain would change the telecommunication industry. For instance, in 5G technology, smart contracts can streamline the overall provisioning between the end user and the networks with a blockchain-based solution. For 5G to be implemented securely, the data received by connected devices must be reliable and free from various malicious interference. Further, to enable 5G to reach its full potential and protect against large-scale security breaches, blockchain can deliver decentralized, tamper-proof, and real-time verification of data transmission.
As per 5G Americas, Solid growth in 5G subscriptions is expected to continue into the foreseeable future, reaching 5 billion subscriptions by the end of 2026. That includes the overall development of 700 million subscriptions from the current to next year and 900 million by next-to-next year.

Asia Pacific to Witness the Highest Growth

The Asia-Pacific region boasts tremendous potential for the market, primarily owing to the growing prominence of mobile payments in countries such as India and China. India, specifically after the demonetization scheme, has witnessed many telecom operators shifting toward this model. For instance, Jio and Airtel, the country's leading telcos, offer digital wallets to enable customer-to-customer payments. Thus, the adoption of blockchain to handle the transactions by these companies could make their wallets more secure and cheaper, driving the market significantly.
China Telecom, China Mobile, and China Unicom have joined the CAICT's Trusted Blockchain Initiative, which would use blockchain technology to bolster operations and security in the telecom industry. The companies are expected to focus on blockchain-based apps that relate to IoT data sharing and customer identity verification.
Further, as the world is currently embroiled in a privacy debate over WhatsApp's policy changes, India's communication platform

as a service (CPaaS) industry has been gearing up for the adoption of end-to-end encryption of commercial mobile SMSes, emails, and all other types of business communication between the enterprises and service providers.
For instance, next year, CPaaS provider Tanla Platforms, in partnership with Microsoft, launched its edge-to-edge global blockchain network called Wisely, which was made for sending encrypted SMSes directly from enterprises to the telecom operators, which the company also claims to disrupt the existing aggregator model of commercial communication.
In Japan, too, startups are developing blockchain solutions that enable secure smartphone-based money transfers that do not require formal banking documentation. For instance, a Japanese startup Telcoin leverages blockchain to facilitate telecommunication operators to provide money transfer services. Telcoin Wallet, built on the Ethereum blockchain, allows mobile users to make global transfers instantly, irrespective of local mobile service providers. Hence, adopting a standardized blockchain platform will help operators fully realize the technology's value and pave the path for faster adoption within the region, driving the market's growth significantly.

Blockchain in Telecom Market Competitor Analysis

The market is concentrated, with few significant vendors offering blockchain solutions across the telecommunication industry. The vendors are also receiving investors' funds, further helping in innovative blockchain services.

November 2022 - Information technology (IT) services firm Tech Mahindra and telecom analytics solutions provider Subex have joined hands to roll out blockchain-based solutions for telecom operators globally. These solutions would mitigate fraud and drive operational efficiencies for communication service providers (CSP) by minimizing overall compliance issues.
February 2022 - Bharti Airtel, India's premier communications solutions provider, declared that it had acquired a strategic stake in Aqilliz, a Blockchain as a Service Company under the Airtel Startup Accelerator Program, subject to applicable statutory approvals. Airtel aims to deploy Aqilliz's advanced blockchain technologies at a larger scale across its fast-growing Adtech, Digital Entertainment, and various Digital Marketplace offerings.

Additional Benefits:

The market estimate (ME) sheet in Excel format
3 months of analyst support

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