# China implements national data infrastructure strategy with blockchain integration



China has recently announced a comprehensive strategy to strengthen its data infrastructure through the introduction of the “National Data Infrastructure Construction Guidelines.” Central to this initiative is the integration of blockchain technology, which is poised to enhance data security, transparency, and scalability as part of the nation’s broad digital transformation objectives.

The guidelines, launched by the National Development and Reform Commission in collaboration with various agencies, position blockchain as a foundational element for facilitating trusted data exchange across multiple industries and geographical regions. The document outlines a vision in which blockchain networks will support secure data circulation, ensure traceability, and avert data tampering, ultimately aiding in the development of a national integrated data market.

According to the proposed timeline, China aims to establish a fully operational blockchain-powered data infrastructure by the year 2029, with a phased approach to implementation. From 2024 to 2026, the government plans to initiate pilot projects in pivotal regions which will serve to refine blockchain frameworks and test real-world applications. By 2028, insights gained from these pilot programs are expected to evolve into a comprehensive national blockchain network capable of facilitating extensive data flow across provinces, various sectors, and through public-private partnerships.

A key aspect of this plan involves developing “trusted data spaces” that leverage blockchain technology to facilitate seamless and secure data sharing among multiple parties while safeguarding privacy, integrity, and ownership rights. These spaces, underpinned by distributed ledger technology (DLT), are anticipated to create decentralised environments wherein businesses, government authorities, and individuals can exchange data transparently and securely.

The creation of these trusted spaces aims to tackle prevalent issues related to data governance by establishing immutable records of all data transactions, thus granting stakeholders the ability to verify the origin and compliance of data with regulatory frameworks. These ecosystems are expected to play a critical role in sectors such as cross-border logistics, supply chain management, e-commerce, and financial services.

Moreover, the guidelines suggest the creation of “data markets” founded on blockchain networks. These markets will facilitate the tokenization of data assets, allowing for fractional ownership, monetization, and secure trading across various platforms—an innovation poised to generate new revenue avenues and promote widespread data sharing.

In addition to the overarching infrastructure strategy, the document outlines the establishment of blockchain-based platforms specifically tailored for various industries. By the year 2026, pilot projects are set to trial decentralised applications (dApps) in vital sectors such as digital finance, green energy, and smart manufacturing, thus enhancing data interoperability among enterprises and driving the adoption of blockchain technology across sectors.

For instance, the guidelines highlight the potential for developing blockchain-enhanced supply chain networks within agriculture and industrial manufacturing, which would ensure product traceability and significantly minimise the risk of fraud. In the financial sector, the exploration of decentralised finance (DeFi) solutions supported by state-approved blockchains is encouraged, offering secure and cost-effective alternatives to conventional systems.

Significantly, China’s approach to blockchain extends beyond data sharing; it encompasses the security of the infrastructure as well. The guidelines propose the integration of blockchain with advanced privacy-enhancing technologies, incorporating secure multi-party computation, homomorphic encryption, and zero-knowledge proofs. This synergy is designed to allow sensitive data to be processed without being exposed, thereby addressing privacy concerns prevalent in sectors such as healthcare and finance.

The guidelines also elaborate on the establishment of blockchain-based monitoring systems that will conduct real-time data integrity checks to protect against unauthorised access, data leaks, and cyber threats. By decentralising control over critical data flows, this initiative aspires to reduce single points of failure and fortify national data resilience.

As these ambitious plans unfold, the integration of AI and blockchain within China’s national data infrastructure could reshape business practices and influences across various sectors, signalling a significant shift towards an interconnected and secure digital landscape.

Source: [Noah Wire Services](https://www.noahwire.com)

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