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BLOCKCHAIN POWERED GOVERNANCESOLUTIONS

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Abstract: **In today's world, blockchain has exposed the common man to a plethora of decentralized applications that are solving a number of real-world problems in various industries. One of the major concerns raised by the users is governance challenges between communities within the application ecosystem. For example, an application providing a real estate platform to a variety of users (brokers, builders, buyers, sellers, channel partners, etc.) needs a shared governance system where contracts progress only with the approval of all concerned parties, ensuring transparency for those involved.**
"With growing applications, it is anticipated that the global blockchain market will reach$19.9 BN by 2026, expanding at a CAGR of 43%" (Karkara, 2023)
This paper aims at analyzing and attempting tosolve the governance protocol issues faced by decentralized applications on various blockchain networks based on a framework consisting of different layers (infrastructure, application, company, and institution).
At Hexaview Technologies, we are generating a 360-degree value by giving our clients access to frameworks that let them create cutting-edgedigital products for frictionless business.

CURRENT SITUATION & COMPLICATION

A. Situation

In today's world, blockchain has exposed the common man to a plethora of decentralized applications that are solving a number of real-world problems in various industries. One of the major concerns raised by the users is governance challenges between communities within the application ecosystem. For example, an application providing a real estate platform to a variety of users (brokers, builders, buyers, sellers, channel partners, etc.) needs a shared governance system where contracts progress only with the approval of all concerned parties, ensuring transparency for those involved..

Common issues that occur in any voting system scenario

1. Remote voting is not possible
2. Anonymity is not completely maintained
3. A very costly manual process
4. Manipulation of contractual data in a system
5. High lead time for approval between different parties involved
6. Fraudulent approval parties

We at Hexaview acknowledge the need to act now and facilitate the change required to address such an issue in building decentralized apps.

B. Complications

Maintaining communication between governing councils and social groups on decentralized platforms is crucial but also challenging; without any single authority, shared governance principles are vital for all parties and network infrastructure elements. Blockchain networks face challenges across industries due to their complexity. Moving money globally is tough for many institutions, as traditional financial systems are slow and go through a complicated network of intermediaries. Foreign bank transfers often take days to settle because of this outdated infrastructure. The worldwide financial system, which consists of a vast network of funds, asset managers, traders, and others, also needs the bank balances to be reconciled.
Keeping note of the owners is the foundation for
buying and selling assets like stocks, commodities, or debts. A complicated network of exchanges, brokers, clearinghouses, central security depositories, and custodian banks helps financial markets achieve this. These groups rely on an outdated paper-based ownership system, which is slow, error-prone, and susceptible to fraud. Health Information Exchange is another time-consuming and repetitive process that leads to high costs.
The biggest challenges so far in population health management involve interoperability, data sharing, and protection. Poor data governance cripple patient's information safety and weakens value-based care. A

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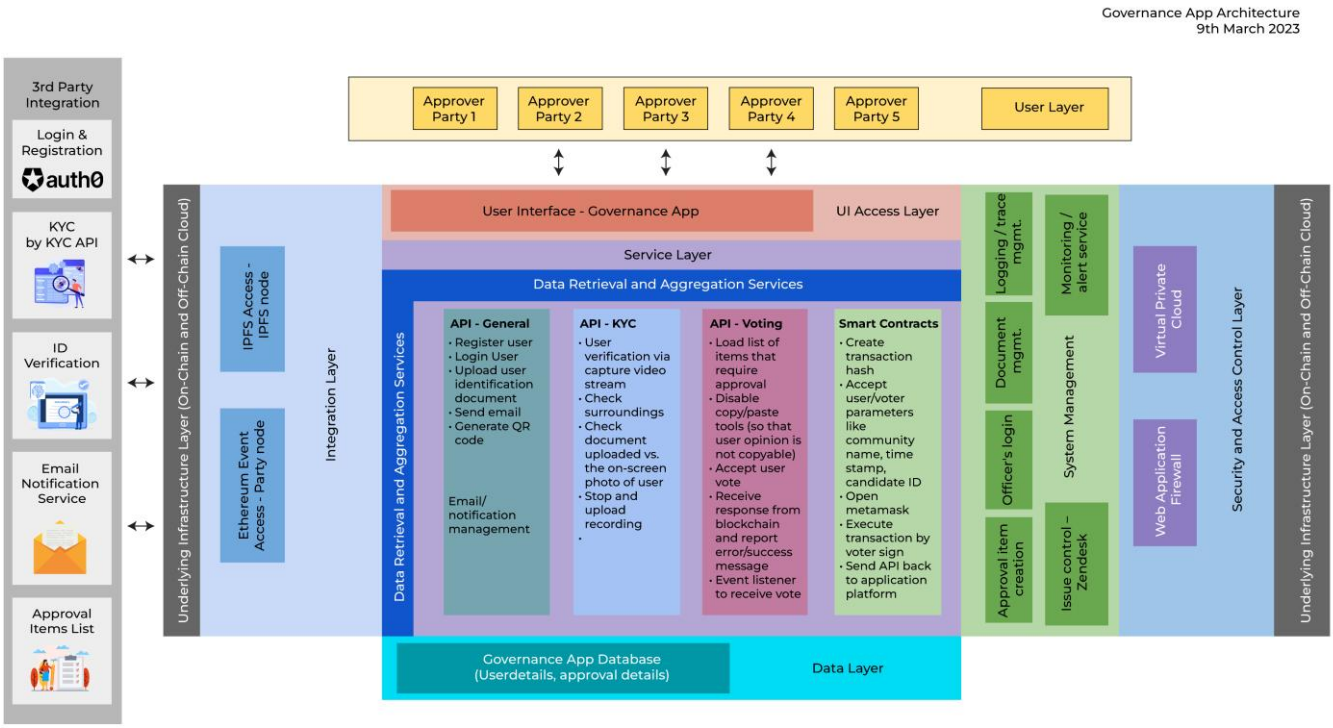
solution for the transparency of the system, which also ensures reduced costs and ease of access. Hexaview's Blockchain Solution framework, combined with its platform expertise, can help you tackle such issues in your decentralized application.

II.BLOCKCHAIN SOLUTION –GOVERNANCE FRAMEWORK

The Hexaview governance framework comprises all six layers, namely user, UI access, services, integration, data, security, and access. These together will ensure that the approver whose vote has been requested in a community will be able to enter the platform, verify their identity anonymously, and securely provide their opinion.
The framework has certain best practices that will help our clients to develop sustainable and efficient products. It has been briefly described for the purpose of this paper. Introducing this conceptual framework that can be adopted for solving the issues.



A. Stakeholders of the system

Blockchain governance is about dealing with different governance and technology layers that make up the blockchain. The responsibility is shared across various parties.

Core developers – Develop, maintain, and manage the blockchain code of the application
Token holders – They hold the tokens for the stability of the system and for making decisions
Node operators – Storage and power for blockchain operations
Blockchain team - Funding, negotiations, and communications

B. Key component of a governance system

Consensus – Handles the communication and the transaction verification
Information – Flow of information within the network
Incentives – Helps run the blockchain by providing nodes the incentives for their actions
Governing structure – pertaining to the network

C. Advantages of a governance system

Various underlying key concepts and advantages of the framework are as below

I. Decentralization

The governance system uses decentralization at its centre of execution, as each transaction is transparent to all the participants in the network as well as anonymous. It has the potential to prevent many types of transaction frauds. Its decentralized structure spreads responsibilities among numerous independent nodes, making collusion unattainable. The various users of this framework confirm votes and count nodes. Independent validation and consensus algorithms for keeping the vote records of the

system make it tamper proof.
For e.g., a blockchain network is used in the healthcare system to preserve and exchange patient data through hospitals, diagnostic laboratories, pharmacy firms, and physicians. Decentralized applications can accurately identify severe mistakes and even dangerous ones in the medical field. Thus, it can enhance the sharing of medical data in healthcare by improving transparency, security, and performance. It also helps medical institutions analyze records more effectively and gain valuable insights.

II.Governance
Transactions on this framework do not require any authorization, validation, or verification by a trusted third party or intermediary. The conventional governance systems lack transparency as they are closed to public inspection. They are therefore vulnerable to rigging. Votes can be verified through systems based on blockchain technology. Data, which cannot be altered, is stored and timestamped in the decentralized database. Blockchains are inherently transparent and accountable.

III. Privacy
The framework offers a privacy protection mechanism through, for example, maintaining the votes and the voter data in isolated portions of the system.

IV. Security
The framework can significantly improve the security for supporting the system for voting on a smart contract in the process. It enables secure voting across a range of devices such as smartphones and computers.

V. Resilience and immutability
The framework is designed for secure distribution operation in a peer network of (public/private) nodes, or computers, each of which holds a copy of the entire blockchain, thereby making it extremely resilient to change. Hence, voting can be forever written on the chain.

VI. Remote voting
Voting can now be completely remotely handled, so anyone from anywhere in the world can vote for their opinion in their council for the application. This framework can be extended to various other industry practices, wherever transparency is the key attribute that will also protect anonymity. For e.g., worldwide distribution of various life-saving vaccines, the pharmaceutical industry faces an array of challenges, mostly led by lack of visibility in a complex global supply chain. By providing transparency and enabling trust, this governance framework can help.

III. CONCLUSION

Centralized system breaches can have disastrous effects, as history has demonstrated. For e.g., the phone numbers and email addresses of 533 million Facebook users have been exposed in a recent data breach in 2021. On the other hand, the decentralized strategy has greatly benefited many different areas. Decentralization, however, is not a panacea for electoral system problems. To protect anonymity and provide the required transparency, new systems must be online or mobile and have the highest security measures.
Blockchain is transforming how we live and work, serving as a tool rather than the ultimate goal. We can assist you in leveraging this technology to propel your journey into the future. We start with an understanding of your specific aspirations, followed by a practical application of blockchain innovation to solve governance issues. This framework will help in addressing governance use cases that can be extended to other industries. We can solve many such issues where transparency in transactions is required. Blockchain technology assists in preventing fraud at any phase by demanding the prearranged consensus of the chosen validation parties.

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