WHITEPAPER

STENIX

A SCALABLE BLOCKCHAIN PLATFORM

STENIX

STENIX – A SCALABLE BLOCKCHAIN PLATFORM

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ABSTRACT

Current blockchain architectures face several challenges, particularly in terms of extensibility and scalability. This issue arises from closely linking two crucial components of the consensus architecture: canonicality and validity. This whitepaper presents Stenix as a solution to these challenges and explains how Stenix's architecture, will fundamentally distinguish the two.

By separating these two components and focusing on essential security and transport functions, we enable easy core extensibility on-site. Addressing scalability involves utilizing a divide-and-conquer strategy for these two functions, expanding its capabilities by incentivizing untrusted public nodes.

This architecture allows various consensus systems to wo in a trustless, fully decentralized manner, providing trust-free access within the network. We propose a method to ensure compatibility with one or more existing networks, like Ethereum. In our view, this system serves as a foundational element in the pursuit of a scalable and private global-commerce solution.

INTRODUCTION

Blockchain technology has shown significant potential for application in a variety of domains, including the "Internet of Things" (IoT), finance, governance, identity management, online decentralization, and asset tracking, among others.

Nevertheless, in spite of the technological promise and great discourse, we have not yet witnessed a large deployment of the technology that is currently available in the actual world.

We at Stenix are of the opinion that this can be attributed to five primary shortcomings of the existing technological stacks:

01.

- **Scalability:**

What is the global expenditure on processing, bandwidth, and storage for the system to handle a single transaction? And how many transactions can be processed under peak conditions?

02.

- **Isolatability:**

Is it possible to effectively meet the diverse requirements of different parties and applications within a single framework?

03.

- **Developability:**

Are the tools effective? Do APIs satisfy developers? Are educational materials available? Are the integrations correct?

04.

- **Governance:**

Is the network flexible enough to change over time? Can decisions be made with inclusion, legitimacy, and transparency to enable decentralized system leadership?

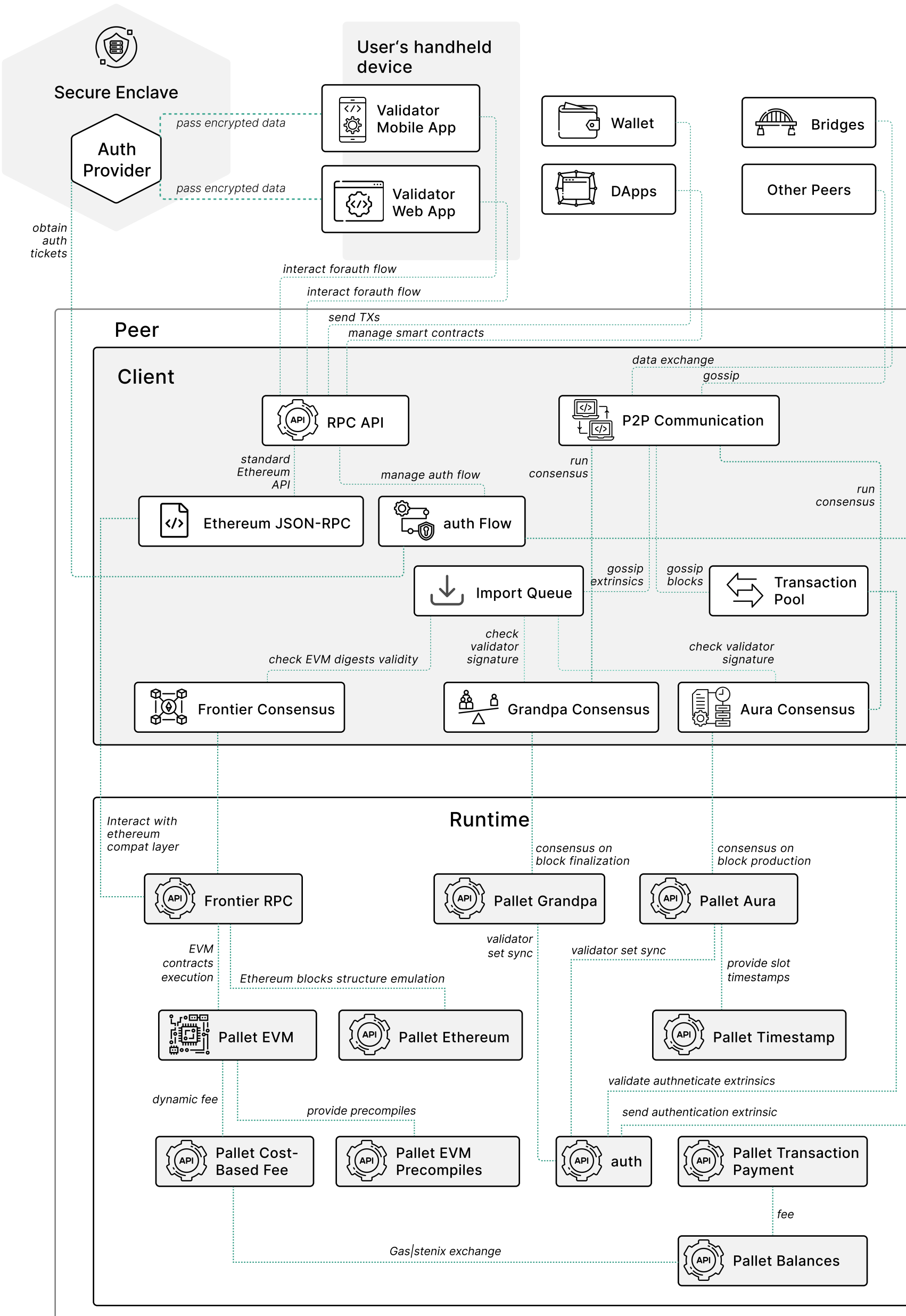
05.

- **Applicability:**

Does the technology effectively meet a pressing demand on its own? Are there any additional middleware components needed to connect with real applications?

In this whitepaper, our goal is to tackle the first two challenges: **scalability** and **isolatability.** In our view, the Stenix framework has the potential to be the solution and offer significant enhancements in each of these problem categories.

STENIX ARCHITECTURE



STENIX BLOCKCHAIN PROTOCOL

The initial deployment of Stenix is designed to be an easy-to-maintain and reliable codebase, with ongoing development planned for the future. To develop a top-notch system, it is crucial to establish a solid foundation. One of the primary decisions to be made is selecting the most suitable programming language for the implementation.

Rust

After careful evaluation of Rust, Go, and C++, we have selected Rust as the ideal choice for our implementation, with Go being a strong contender. Rust and its top-class type system and memory safety are excellent options for long-term projects that require high code quality and maintainability. The fact that it generates native code instead of a VM makes it an extremely efficient language.

Rust embraces the principle of efficiency by only requiring developers to pay for what they actually use, resulting in zero-cost abstractions. It does not utilize a garbage collector, and the implementation of the async runtime is done within the user code rather than being integrated into the language. This level of control is quite impressive.

One of the challenges with Rust is its steep learning curve, making it a language that requires time and effort to become proficient in. Additionally, when compared to languages like Go, the development process in Rust tends to be slower. Mastering Rust allows for complete control over various system elements, requiring expertise and dedication to ensure proper implementation. After careful consideration, we determined that the advantages of Rust far surpass the expenses, making it the ideal choice for our Stenix use case.

substrate

Every blockchain developer must make a decision: whether to create the codebase from scratch or utilize an already existing one that suits their requirements. This decision may appear straightforward at first glance, but it poses a challenging dilemma.

Substrate is an adaptable platform that empowers the development of pre-built blockchains through the combination of customizable or pre-existing elements. As a project, our main goal is to remove the token's role in the consensus mechanism. Therefore, we are dedicated to developing consensus-based aspects of the network. And that is why the concept of modular customization is a valuable asset on our Stenix journey.

After a thorough evaluation of the alternatives (e.g., building a code from scratch or using existing codebases), we decided to go with Substrate for a number of reasons:

Substrate has been designed specifically as a developer tool rather than an end product, serving as a platform for building blockchains.

The code quality of Substrate is impressive, indicating a strong commitment to maintaining high standards.

We decided we wanted something more like a library than a framework, and Substrate's code flexibility and modularity was just what we required. If we were writing the code from scratch, we would take a very similar approach to the Substrate developers.

Many individuals are always working on and improving Substrate, which means that merely building on Substrate will result in a steady stream of improvements. Substrate has a strong community that can assist with any issues that may arise.

Substrate has shown to be a wonderful tool thus far, allowing us to focus on difficulties unique to Stenix rather than the common ones of blockchain development.

STENIX COMPONENTS

Here is a list of the essential components that encompass the primary requirements for achieving our goals with Stenix.

The Stenix App

The Stenix App is a versatile application that empowers users to actively engage with the Stenix network. With this app, users can effortlessly navigate the network, securely complete transactions, contribute as a node operator, participate in block production, and actively engage with the Stenix DAO.

The Stenix Peer

The Stenix Peer (substrate-based node) is a blockchain node that operates within the Stenix network.

The Stenix-runtime

The Stenix-runtime is a crucial component that shapes the behavior of the Stenix network. It encompasses various aspects such as storage, state transition logic, block processing, and transaction processing. Additionally, it allows for one of the key features of Substrate-based blockchains: the ability to upgrade the runtime without the need for a fork.

The Stenix-rpc

The Stenix-rpc is a crucial component that facilitates seamless interaction between blockchain users, including the Stenix app and other dapps, and the Stenix network through HTTP and WebSocket RPC servers.

Consensus

Consensus is a fundamental principle of the Stenix network, enabling participants to reach agreement on the state of the blockchain. This is a crucial aspect of Stenix's features- Proof-of-stake.

Aura Consensus

Aura consensus is a deterministic consensus protocol that focuses on block authoring. It allows a limited list of authorities, known as validators, to take turns creating blocks. Prior to the commencement of block production, it is crucial to select the appropriate authorities who possess a comprehensive understanding of the entire authority set. Time is organized into "slots" of a predetermined duration. Each slot produces one block, with the authorities taking turns indefinitely to produce blocks.

Grandpa Consensus

Grandpa consensus is a deterministic consensus protocol that ensures block finalization by involving each authority in two rounds of block voting. Once two-thirds of the authorities have cast their votes in favor of a specific block, it is deemed to be officially finalized.

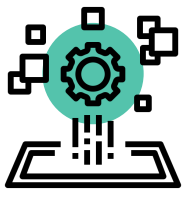
Frontier Consensus

The frontier consensus is a feature that adds an Ethereum compatibility layer to enable the native execution of Ethereum decentralized applications (dapps). It achieves this by enabling the capabilities of running Ethereum Virtual Machine (EVM) contracts, emulating Ethereum blocks, and validating transactions.

STENIX FEATURES

What's the primary objective of Stenix? The significance of Stenix lies in its function as a catalyst for blockchain experimentation and development. Similar to how Ethereum enabled the exploration of decentralized applications (DApps), Stenix seeks to expedite the process of testing and experimenting with novel state transition features in the blockchain industry.

Here are some key purposes and features of Stenix:



Driving the Pace of Innovation:

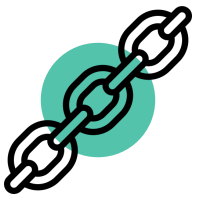
Stenix's goal is to accelerate the innovation process in the blockchain industry by offering a platform for testing new features and state transitions.

Creating Cryptocurrencies Made Easy:

Stenix streamlines the process of cryptocurrency creation. Individuals or organizations can effortlessly generate their own tokens for personal or corporate use with a simple click on the Stenix blockchain.

Security and Confidentiality:

Stenix offers a cutting-edge shared security system that enables chains to authenticate transactions through its robust infrastructure. It enables seamless collaboration between projects that prioritize privacy, forks, and other techniques for maintaining confidentiality.



Utilizing Chain Features:

Stenix enables the blockchain to harness its own capabilities for spreading innovations and improving functionality.

Overall, Stenix is a platform that facilitates blockchain experimentation and collaboration, aiming to expedite the development and adoption of blockchain technology.

MAIN PALLETS

Cost-based Fee

The cost-based fee is a mechanism that allows for the implementation of transaction fee economics in the Stenix network.

Ethereum

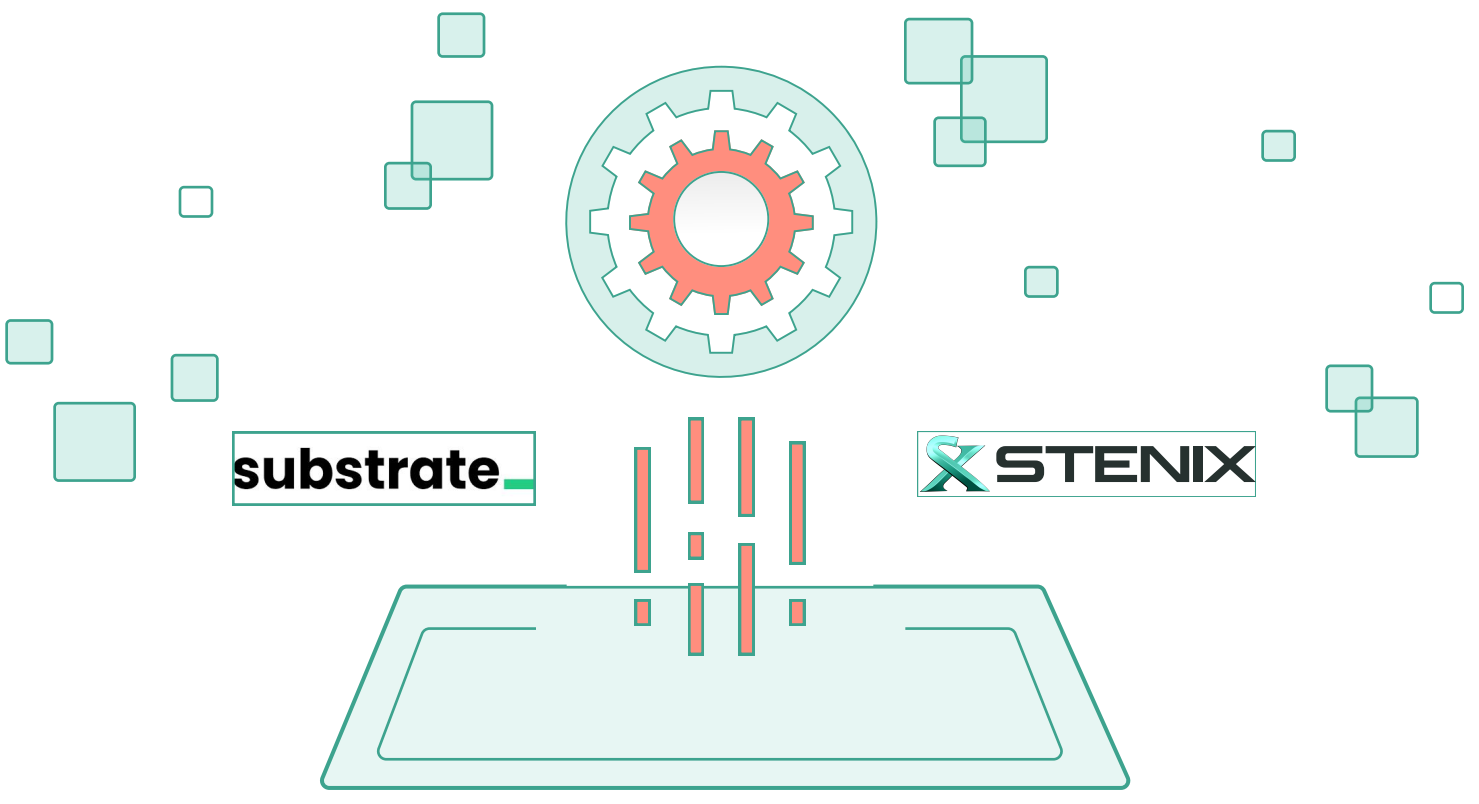
Ethereum is a module that, when combined with the RPC module, provides for the emulation of Ethereum blocks, validation of Ethereum-encoded transactions, and deployment of existing dapps on a Stenix network with few modifications.

Staking

Staking enables participants to lock their tokens in the network to support its security and operations. In return, they receive rewards, fostering engagement and stability within the Stenix network.

Consensus agnosticism

A fascinating feature of Stenix that we strive for is consensus agnosticism, which refers to the capability of altering the network's consensus method if approved by the Stenix DAO. It arises from the need for ongoing investigation into the best appropriate agreement for a system without a leader, where all nodes have equal authority to validate. Various consensus processes possess distinct advantages and disadvantages that continually develop, alter, and fluctuate as a result of extensive research conducted by numerous scientists worldwide in this field. Implementing interchangeable consensus techniques would enable the Stenix network to progress and avoid being limited by a single consensus framework. In addition, the Substrate ecosystem is now making efforts to provide support for this particular feature.

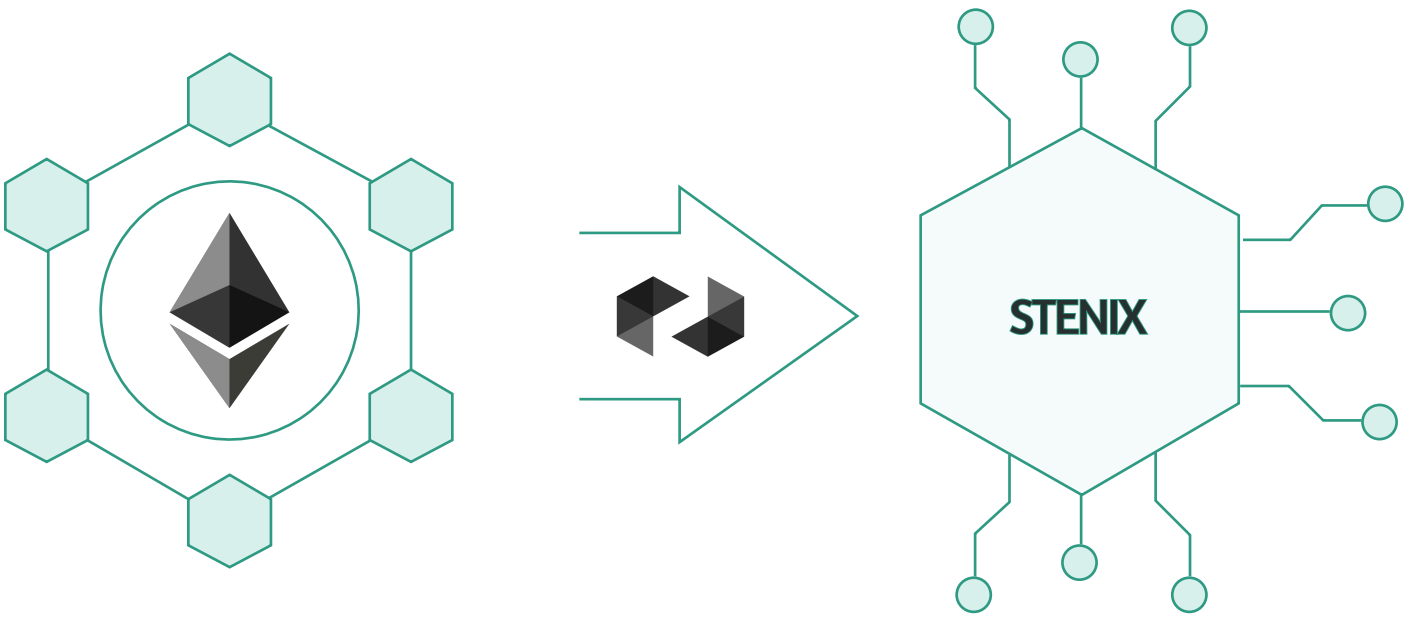


ETHEREUM COMPATIBILITY

The Stenix network incorporates an Ethereum Virtual Machine (EVM) pallet, enabling it to execute Solidity smart contracts and utilize pre-existing developer tools. The implementation relies on SputnikVM, which comprises four modules: evm, evm-core, evm-runtime, and evm-gasometer. The Stenix network aims to address the existing challenges of transaction fee pricing by ensuring that the costs remain consistent in terms of USD, regardless of the fluctuations in the value of the native token. Therefore, the evm-gasometer is substituted by a charge system based on costs.

Unified accounts, initially suggested by Moonbeam, address the issue of account incompatibility between H256 Substrate addresses and H160 Ethereum addresses. This incompatibility prevents users from directly sending transactions, forcing them to maintain two separate accounts and transfer assets between them in order to access both chains. By utilizing unified accounts, users can achieve a seamless multichain experience with only one H160. Transitioning a dapp or a smart-contract framework from Ethereum to Stenix will necessitate just minor modifications. Smart contracts written in Solidity, along with block explorers, development tools, bridges, and frameworks for decentralized autonomous organizations, can be seamlessly transferred to the chain that relies on validators with equal authority.

The network will provide private Sybil resistance for dapps and protocols on other chains by connecting Stenix with other EVM-compatible chains. A Solidity-based smart contract deployed on a specified blockchain will establish communication with a decentralized financial protocol. Subsequently, the contract will transmit the request to the Stenix network, which serves as a repository for verification data. The Stenix network securely transmits ZK liveness proof and identity verification results to the DeFi protocol, ensuring that the user is a genuine human without relying on any Personally Identifiable Information (PII).



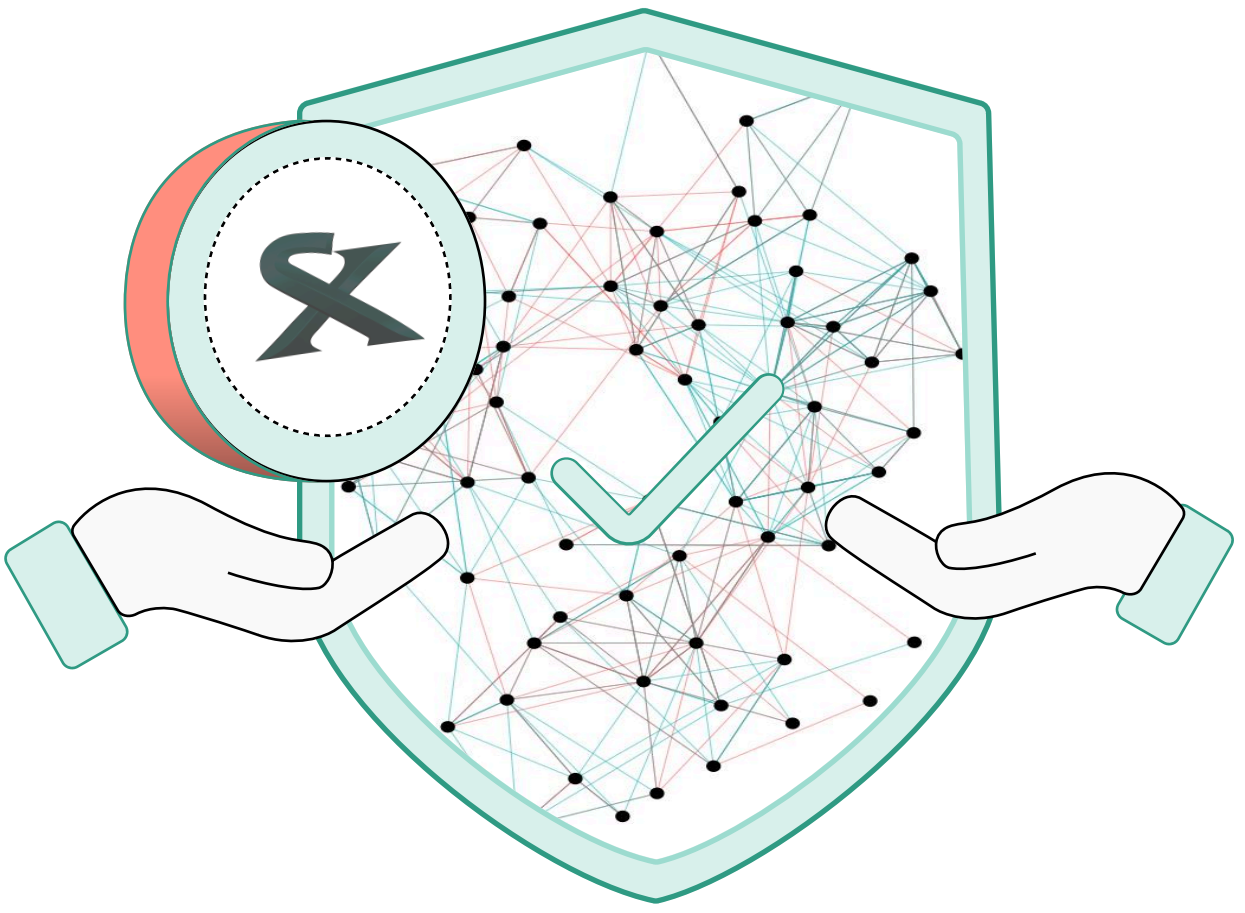
STAKE DELEGATION

Holders of Sten Tokens can delegate all or part of their Sten Tokens to Validator Nodes or candidates for Validator Node positions, thereby increasing the number of Sten Tokens staked to the respective Validator Node or candidate for a Validator Node position. While Sten Tokens are staked, they cannot be spent or otherwise moved. Staked Sten Tokens are time-locked and can be unlocked with a waiting period. However, staking Sten Tokens to a Validator Node does not limit the Sten Token holder's ability to participate in governance votes in Stenix. For the service which they provide for the security of the Stenix network, Sten Token Holders who delegate Sten Tokens to Validator Nodes receive a reward in the form of additional Sten Tokens. Stake delegation promotes competition between Validator Nodes and supports the decentralization of the Stenix network.

VALIDATOR NODES

The Stenix Blockchain is maintained by a set of Validator Nodes, which validate transactions, record valid transactions in Stenix's public ledger and append blocks to the Stenix Blockchain. This implies that they need to run an up-to-date software implementation of the Stenix protocol and operate a Stenix full node at all times.

The maximum number of Validator Nodes is capped. Entry to the current set of Validator Nodes is permissionless and determined solely based on the number of Sten Tokens which are staked to the respective Node, whereby both owned and delegated Sten Tokens are counted.



STEN TOKEN

Introducing The STEN Token

The STEN token lies at the heart of the Stenix ecosystem, serving as a fundamental component driving its functionality, utility, and value proposition. This chapter delves into the core aspects of the STEN token, outlining its purpose, features, and potential impact within the Stenix project.

Tokenomics and Initial Value

The STEN token was introduced with an initial value of $0.10, establishing a foundational basis for its valuation within the Stenix ecosystem. This initial value reflects the intrinsic value proposition of the token and sets the stage for its future growth and adoption.

Funding Allocation

- TEAM - 7%
- IDO - 5%
- MARKETING AND GROWTH - 15%
- ECOSYSTEM PRODUCTS - 10%
- ACTIVITY REWARD - 5%
- PARTHNERS - 5%

Token Distribution

- AIRDROP - 2%
- STAKING REWARDS - 25%
- LIQUIDITY - 10%
- RESERVE - 5%
- PRE SALE - 10%
- BONUS - 1%

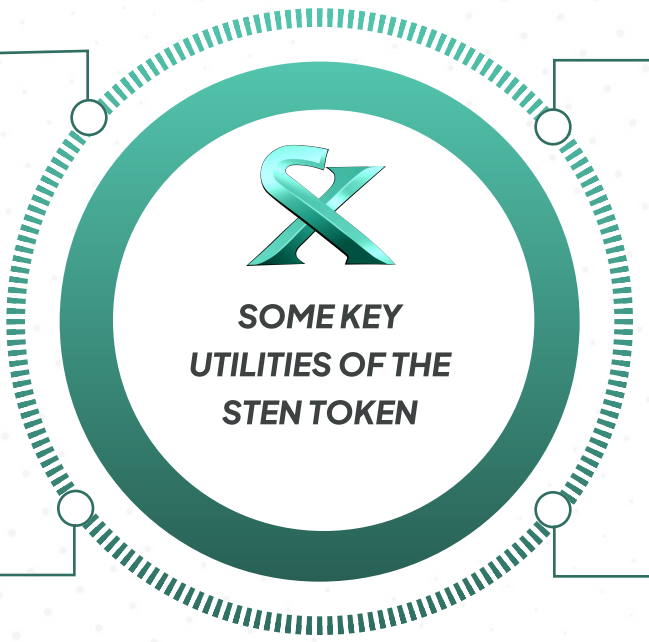
UTILITY WITHIN THE STENIX ECOSYSTEM

Transaction Fees

STEN tokens are used to pay transaction fees on the Stenix network, contributing to the smooth operation of the blockchain and incentivizing network participants to contribute to its security and functionality.

Staking and Validation

STEN tokens can be staked by network participants to become validators or nominators within the Stenix network. Validators play a crucial role in securing the network and validating transactions, while nominators delegate their tokens to validators and earn rewards in return.



Governance and Voting Rights

STEN token holders have the opportunity to participate in governance decisions and voting processes within the Stenix ecosystem. This ensures that the community has a voice in shaping the future direction of the project and influencing important decisions.

Incentives and Rewards

STEN tokens serve as incentives and rewards for active participation and contributions to the Stenix ecosystem. Whether it's promoting the project, developing applications, or supporting network infrastructure, participants are incentivized to actively engage with the ecosystem through STEN token rewards.

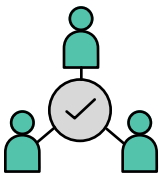
Economic Model and Future Outlook

The economic model of the STEN token is designed to promote sustainability, growth, and stability within the Stenix ecosystem. Through mechanisms such as tokenomics, inflationary or deflationary measures, and supply dynamics, the STEN token aims to maintain a balanced and thriving ecosystem that benefits all stakeholders.

As the Stenix project evolves and expands, the STEN token is poised to play an increasingly pivotal role in driving innovation, adoption, and value creation within the blockchain space. With its diverse range of utilities, robust economic model, and supportive community, the STEN token represents a cornerstone of the Stenix ecosystem and a key enabler of its long-term success.

ACTIVE PARTICIPANTS IN STENIX

Active participation lies at the core of the Stenix ecosystem, driving engagement, security, and innovation within the network. This chapter delves into the various roles and responsibilities of active participants in Stenix, highlighting the incentives and rewards associated with each role.



Validators

Validators play a critical role in maintaining the integrity and security of the Stenix network. Their responsibilities include adding new blocks to the blockchain, enabling transactions, and participating in the consensus mechanism. Validators are tasked with verifying the accuracy of information within blocks and helping to create new blocks based on attestations of validity. Incentives for validators include transaction fee rewards in STEN tokens, while penalties may be imposed for non-compliance with consensus rules.

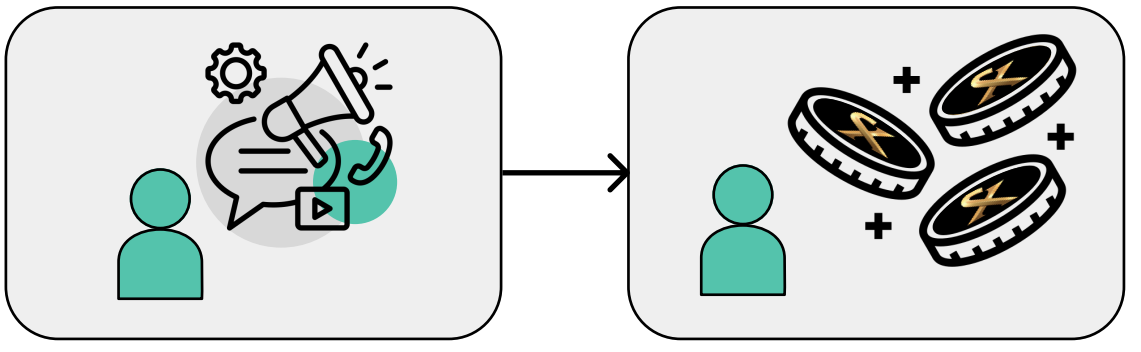
Nominators

Nominators appoint validators to perform validation work on their behalf and deposit funds as collateral for security. A significant portion of STEN tokens may be staked to validators for staking purposes. Nominators must carefully analyze and select validators whose behavior aligns with Stenix rules. The value of participants' stakes increases or decreases proportionally with the amount of STEN tokens deposited as collateral.

Initiative Participants

Initiative participants provide evidence for validation based on transactions from the blockchain. They play a crucial role in creating state transition proofs for validators, monitoring the network for incorrect behavior, and maintaining full nodes. Initiative participants are akin to miners in traditional proof-of-work blockchains, responsible for creating new blocks and executing transactions.

Promoters



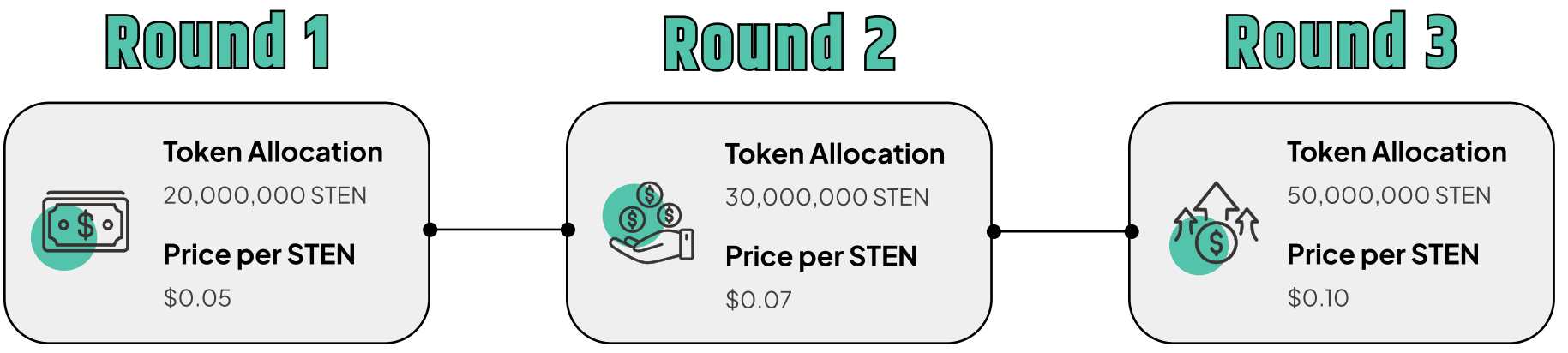
Promoters contribute to the implementation of Stenix's airdrop and pre-sale programs by actively promoting the project on the internet and social networks. Their efforts in spreading awareness about the values of the Stenix blockchain are rewarded with STEN tokens. Additionally, participants demonstrating high activity in partnership relations receive incentives in the form of STEN tokens and Sten20 USDT after the launch of the stablecoin on the Stenix network.

STEN TOKEN PRESALE

Stenix is launching the initial presale of STEN tokens in a limited, multi-phase format. This is an opportunity for early supporters to access tokens at a reduced price while contributing to the development of the platform. Funds raised during the presale will be used for further protocol development, security audits, and the launch of key user tools.

The presale is divided into three rounds, each offering a fixed price and capped token supply.

Presale Rounds



Each subsequent round comes with a price increase and reduced token availability.

Bonus Structure

Participants can receive additional STEN tokens based on the size of their contribution:

Contribution Amount	Bonus in STEN
from $1,000	**+5%**
from $10,000	**+10%**
from $100,000	**+20%**

Example: A $10,000 purchase in Round 1 grants tokens at $0.05 each, plus an extra 10% in bonus tokens.

Early Participant Bonus

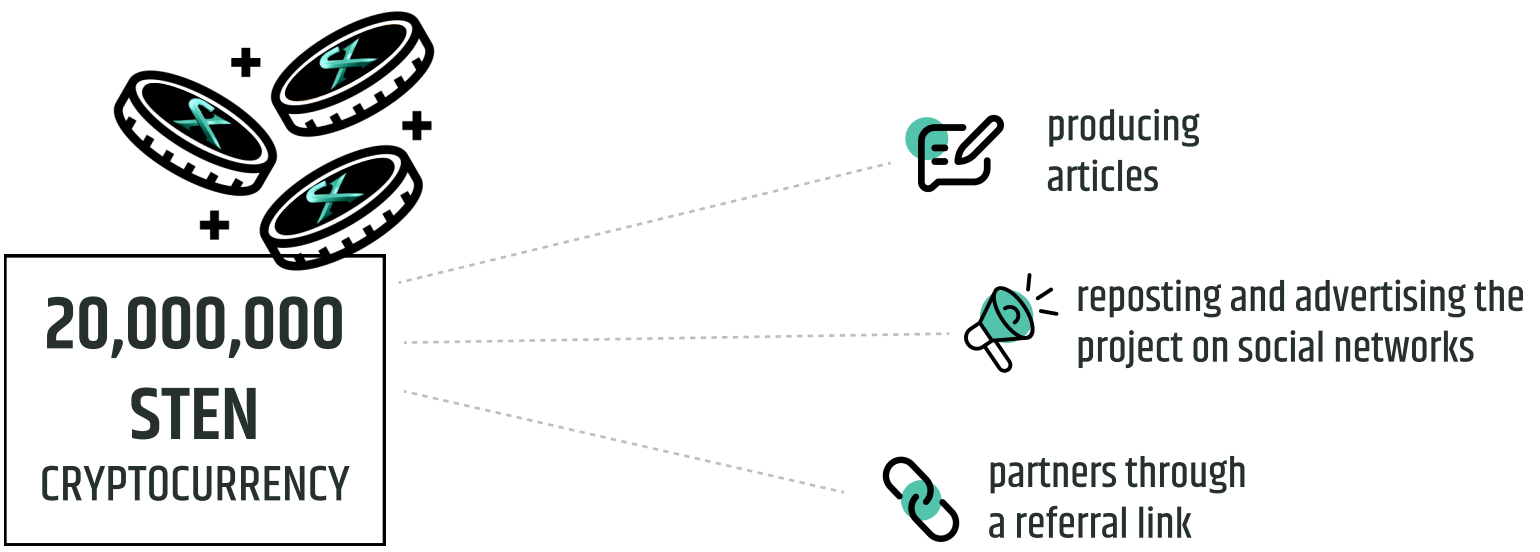
An additional **1% of the total STEN** supply is reserved for early contributors as part of the tokenomics. This pool will be distributed among the first presale participants and is strictly limited.

Additional Notes

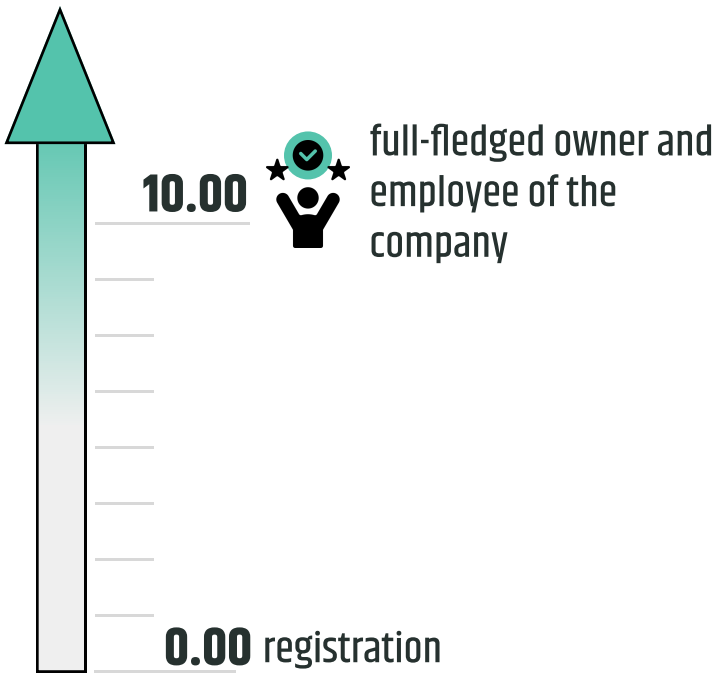
- Participation requires a verified wallet.
- Bonuses are automatically calculated and added.
- Token distribution will occur after the presale ends or once the round cap is reached.

STENIX AIRDROP

There will be a distribution of free coins equal to 2% of the issue, and 20,000,000 STEN cryptocurrency, for active engagement throughout the airdrop process. This includes introducing partners through a referral link, reposting and advertising the project on social networks, producing articles, and other similar activities.



For active promoters and project participants who have an estimated rating increase from 0.00 to 10.00 points, where 0.00 is simply registration and 10.00 is a full-fledged owner and employee of the company, it is anticipated that they would experience professional advancement inside the STENIX ecosystem.



When other corporate products are released, all of the ratings and career advancements that have been gained within the Stenix ecosystem will be transferred to those other company products (you can see the project roadmap that will reveal the project that will be released).

ROADMAP

Goal

Creation and development of a decentralized ecosystem based on the Stenix blockchain network, providing a wide range of financial and technological tools for users.

Q3 2023

Initiation of the Stenix blockchain network development

Start of the Stenix blockchain network development. Integration of key technologies to ensure functionality and scalability.

Responsible: **Stenix development team**

Q4 2024

Stenix blockchain network launch

Official launch of the Stenix network, buidling the foundation for the decentralized ecosystem of the project.

Responsible:
Technical team and infrastructure department

Q2-Q3 2025

STEN token pre-sale launch

STEN token public pre-sale starts at an early stage with special pricing for the very first participants.

Responsible:
Marketing and sales team

Q4 2025

Launch of the Stenix financial platform

Implementation of the Stenix financial platform with key tools: farming, staking, swap, generation of custom tokens, NFT marketplace, and gamification elements.

Responsible:
Development team and product department

Q1 2026

Token listing on global exchanges

Listing the STEN token on the world's leading cryptocurrency exchanges to increase liquidity and availability.

Responsible:
Finance department and listing partners

ROADMAP

Q2 2026

Expanding platform functionality

Integration of new tools into the Stenix platform: landing market, voting system, and crowdfunding.

Responsible:
Development team and product department

Q1-Q2 2027

Preparation and Development of a Cryptocurrency Casino

Create infrastructure for a decentralized cryptocurrency casino on the Stenix blockchain.

Responsible:
Development team and strategic partners

Q3-Q4 2026

Implementation of additional tools

Adding new features, including EVM predictions, asset insurance, centralized arbitrage via cross-chain bridges, and tokenization of real assets.

Responsible:
Development team and strategic partners

Q3-Q4 2027

Launch and Scaling of the Cryptocurrency Casino

Full launch of the casino and strengthening the Stenix ecosystem.

Responsible:
Development team and strategic partners

This roadmap represents our commitment to continuous innovation and development, as we strive to create a comprehensive ecosystem that empowers users and drives the adoption of blockchain technology. We look forward to achieving these milestones and shaping the future of decentralized finance and applications with the Stenix project.

CONCLUSION

The Stenix network represents a paradigm shift in blockchain scalability and usage potential. With its innovative architecture and efficient transaction processing capabilities, Stenix is poised to become a cornerstone of the decentralized future. As the blockchain ecosystem continues to evolve and grow, Stenix stands ready to accommodate the increasing volumes of usage, driving innovation and adoption across the industry.

At its core, Stenix aims to overcome the limitations of existing blockchain frameworks by providing a scalable and flexible infrastructure that fosters collaboration and integration. By leveraging sadvanced bridge technologies, Stenix enables seamless communication and data exchange with other EVM-compatible blockchain networks, thereby unlocking new possibilities for cross-chain transactions and interoperability.

One of the key strengths of Stenix lies in its governance model, which prioritizes inclusivity, legitimacy, and transparency. Through a decentralized governance mechanism, Stenix empowers its community to participate in decision-making processes, ensuring that the network evolves in a democratic and adaptive manner over time.

Furthermore, Stenix offers a diverse range of features and functionalities to cater to the needs of developers, businesses, and users. From its intuitive development tools and APIs to its comprehensive educational resources and documentation, Stenix strives to provide a user-friendly and accessible platform for building and deploying blockchain applications.

Looking ahead, Stenix is poised to revolutionize the blockchain landscape by offering a scalable, interoperable, and developer-friendly ecosystem that fosters innovation and collaboration. As the blockchain industry continues to evolve, Stenix stands as a beacon of progress, offering a solution that addresses the challenges of today while paving the way for a decentralized future.

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STEN tokens play a multifaceted role within the Stenix ecosystem, offering a wide range of utilities and benefits to token holders, participants, and stakeholders.