HAUST

NETWORK

White Paper v1.2

Introduction

The Decentralized Finance (DeFi) ecosystem has exhibited exponential growth, emerging as a disruptive paradigm within the traditional financial architecture. This growth can be attributed to the interplay between three key factors:

Network Effects: The rapid advancement of information networks, including high-speed internet and next-generation technologies like 5G, plays a pivotal role in catalyzing the expansion of decentralized finance (DeFi) through network effects. These advanced communication infrastructures offer the necessary bandwidth, low latency, and broad accessibility required for the efficient operation of decentralized applications (dApps) and protocols. By providing a robust and reliable backbone, these networks facilitate global, permissionless access to financial services, transcending the limitations of traditional centralized systems such as geographical boundaries, regulatory constraints, and operational inefficiencies. The enhanced connectivity and scalability of these networks enable users from around the world to interact with DeFi platforms in a secure, seamless, and near-instantaneous manner, promoting a positive feedback loop where increased participation leads to greater liquidity, innovation, and value creation within the ecosystem. This virtuous cycle of network effects not only accelerates user adoption but also drives the continuous evolution of DeFi protocols, making them more resilient, user-friendly, and capable of supporting a diverse array of financial services that are both accessible and inclusive on a global scale.

Economic Necessity: Automation and robotization are profoundly transforming the landscape of work and economic activity, displacing traditional labor roles and reducing the demand for human involvement in repetitive and routine tasks. This shift necessitates the exploration of alternative avenues for income generation to mitigate the economic impact on the workforce and society at large. Decentralized Finance (DeFi) presents a viable solution by creating new opportunities for income generation

through decentralized mechanisms such as staking, liquidity provision, yield farming, and participation in protocol governance. DeFi leverages blockchain technology to enable individuals to earn returns on digital assets, contribute to market liquidity, and actively participate in the decision-making processes of decentralized protocols, thereby democratizing access to financial services and allowing for more inclusive and diversified economic participation. This paradigm shift not only addresses the income disparities arising from automation but also catalyzes the evolution of financial systems towards more resilient, transparent, and decentralized structures that can accommodate the changing dynamics of global economic activity.

Demand for Alternatives: The demand for alternative investment avenues has intensified amid persistent economic uncertainty and volatility in traditional financial markets. This environment has spurred interest in decentralized finance (DeFi), which offers a rapidly expanding array of innovative financial instruments that extend beyond conventional investment options. DeFi encompasses decentralized lending and borrowing platforms, derivatives, synthetic assets, and insurance protocols, among others. These tools provide investors with novel mechanisms to generate returns, diversify their portfolios, and manage risks more effectively in the face of economic instability. By eliminating intermediaries and leveraging blockchain technology, DeFi platforms enhance transparency, reduce costs, and offer greater accessibility to financial services, enabling market participants to better navigate and capitalize on the complexities of the current economic landscape. This evolution underscores the growing role of DeFi as a critical component in modern portfolio management and risk mitigation strategies.

Challenge

However, despite its potential, existing DeFi solutions face limitations hindering its widespread adoption:

Market Fragmentation: The existing DeFi ecosystem is characterized by significant fragmentation across numerous incompatible blockchains and protocols. Each blockchain operates with its own set of technical standards, consensus mechanisms, and token ecosystems, leading to a siloed environment where cross-chain interoperability is limited. This lack of cohesion not only introduces inefficiencies but also significantly complicates the user experience, as navigating between different DeFi platforms often requires multiple transactions, bridging tokens, and additional layers of security and technical know-how. The result is an increased barrier to entry for users and developers alike, as well as liquidity dispersion across various chains, reducing the overall effectiveness of capital utilization in DeFi markets. Additionally, these challenges hinder the seamless integration of decentralized applications (dApps), restrict the scalability of DeFi services, and exacerbate issues related to transaction costs and speed, ultimately stalling the broader adoption and growth of the DeFi sector.

Accessibility Barriers: Decentralized Finance (DeFi) faces significant accessibility challenges that limit its potential as a universally open and inclusive financial system. One of the primary barriers is the high level of technical expertise required to interact with DeFi protocols. Users often need to understand complex concepts such as private keys, smart contracts, wallet management, and transaction fees. Furthermore, the interfaces of many DeFi platforms are not user-friendly, with steep learning curves that can deter individuals who are not well-versed in blockchain technology. Additionally, significant upfront capital requirements further exacerbate accessibility issues. Many DeFi protocols necessitate substantial amounts of collateral to participate in activities like lending, staking, or liquidity provision, which can exclude users with limited financial resources. Transaction costs, particularly on networks with high gas fees like Ethereum, can also be prohibitively expensive, making small-scale participation uneconomical.

Security Concerns: Security concerns in the decentralized finance (DeFi) ecosystem remain a significant challenge, primarily due to the persistent vulnerabilities in smart contracts, susceptibility to flash loan attacks, and various fraud schemes. Smart contract vulnerabilities, often stemming from coding errors, insufficient testing, or inadequate auditing, expose DeFi platforms to exploits that can result in substantial financial losses for users and protocols alike. Flash loan attacks, which exploit the instantaneous nature of uncollateralized loans to manipulate market conditions or drain liquidity pools, have become increasingly sophisticated and prevalent, further undermining the stability and security of DeFi platforms. Additionally, the rise of fraudulent schemes, such as rug pulls and phishing attacks, continues to erode user trust and impede broader adoption of DeFi solutions.

Solution

Haust Network is positioned to address the critical challenges and untapped opportunities within the DeFi landscape, with the goal of revolutionizing the sector by offering a holistic ecosystem that overcomes existing limitations. By integrating advanced features such as cross-chain compatibility, Haust Network facilitates seamless interoperability between various blockchains, thereby enhancing liquidity flow and expanding the accessibility of DeFi services. The platform's efficient liquidity solutions are designed to optimize capital utilization, reduce slippage, and improve yield outcomes for users, thereby addressing one of the most pressing issues in decentralized finance.

Moreover, Haust Network prioritizes user experience by providing intuitive, user-friendly interfaces that cater to both novice and advanced users, removing the complexity often associated with DeFi platforms. This approach ensures broader adoption and engagement, democratizing access to financial tools that were previously limited to a niche audience. Security is a cornerstone of Haust Network's

architecture, with robust measures including multi-layer encryption, smart contract audits.

By laying a comprehensive foundation for a new generation of DeFi protocols, Haust Network aims to not only address current inefficiencies but also to provide scalable and sustainable solutions that can adapt to the dynamic needs of global finance. Its innovative approach seeks to transform DeFi into a more inclusive, efficient, and resilient sector, ultimately contributing to the broader goal of economic transformation on a global scale.

The following sections will delve deeper into the core components and unique value proposition of Haust Network. We will explore how the platform leverages cutting-edge technology and innovative design to address the most pressing challenges in DeFi and empower users with secure, accessible, and efficient participation in the opportunities of decentralized finance.

DeFi and Stablecoin Regulation

Similar to the fault-tolerant replicated state machine concept in blockchains, effective DeFi regulation necessitates a delicate equilibrium. Here, innovation in a permissionless environment thrives alongside robust consumer and investor safeguards.

Decentralized Finance (DeFi) regulatory landscape exhibits significant heterogeneity across various jurisdictions. Certain nation-states, including Switzerland and Singapore, have adopted a progressive regulatory framework, fostering a conducive environment for the advancement of blockchain technologies and DeFi applications. Conversely, other nation-states, such as the United States and China, have implemented more restrictive approaches, potentially prohibiting or severely limiting specific activities associated with crypto assets.

A significant hurdle for regulators lies in token classification. Defining the legal status of these tokens is paramount. Many DeFi tokens might fall under securities regulations, triggering disclosure and registration

requirements. To mitigate legal risks, DeFi developers must meticulously analyze their local regulations and tailor their token models accordingly.

Stablecoins, cryptocurrencies tethered to real-world assets like the US dollar, are under regulators' watchful eye. They act as the lifeblood of DeFi, offering stability and user-friendliness. However, their potential to disrupt financial stability and facilitate money laundering raises concerns.

In 2021, the US Office of the Comptroller of the Currency (OCC) issued a landmark ruling, permitting banks to leverage stablecoins and interact with blockchain networks. This paves the way for integrating DeFi with traditional finance. However, regulators are expected to tighten oversight of stablecoin issuers, demanding increased transparency and accountability.

The DeFi industry, much like a blockchain striving for consensus, actively collaborates with regulatory bodies. Organizations like the Digital Asset Trade Association (DATA) and the DeFi Alliance champion industry interests and foster dialogue with policymakers and regulators. The goal is to establish a regulatory framework that fosters innovation without compromising consumer protection.

DeFi Market Development

The Decentralized Finance (DeFi) market exhibits rapid growth and ongoing transformation. Data from DeFi Pulse indicates Total Value Locked (TVL) within DeFi protocols surging from under $1 billion in early 2020 to exceeding $100 billion by the beginning of 2024 year. This exponential rise reflects intensifying investor and user interest in the opportunities presented by decentralized financial services.

A critical factor driving DeFi's growth is the emergence of infrastructure solutions. These include liquidity aggregators, cross-chain bridges, and layer-two protocols. These tools function by mitigating liquidity fragmentation, enhancing efficiency, and lowering transaction costs. Consequently, DeFi becomes more accessible to a broader user base.

Another significant trend is the convergence of DeFi with Traditional Finance (TradFi). Numerous institutional investors and financial institutions are initiating exploration of DeFi's potential, seeking methods to integrate decentralized financial instruments into their services and portfolios. Developments like the Aave Arc protocol, designed to provide DeFi solutions specifically tailored for institutional investors, are actively facilitating the merging of DeFi and TradFi spheres.

Furthermore, corporations and enterprises are demonstrating increasing interest in DeFi. These entities are investigating the utilization of DeFi for optimizing treasury management, trade finance, and risk management. Protocols like Centrifuge and Maple Finance offer DeFi solutions for lending and supply chain financing, thereby unlocking novel funding avenues for businesses.

Forecasting the Future of Finance

Decentralized Finance (DeFi) presents a paradigm shift for the global financial system, emphasizing accessibility, transparency, and efficiency. As DeFi matures, its adoption will likely surge across consumers and institutions.

Envisioning the Future of DeFi:

1. **Mass Embodiment:** Enhanced user experience coupled with a clearer regulatory landscape will propel individuals towards DeFi for routine financial transactions, savings, investments, and lending.

2. **TradFi Integration:** Traditional financial institutions (TradFi) will likely integrate DeFi solutions. This could involve directly offering DeFi products to clients or leveraging DeFi protocols to streamline internal processes.

3. **Institutional Influx:** Infrastructure and regulatory frameworks will pave the way for institutional capital to enter the DeFi space.

Hedge funds, family offices, and other sophisticated investors will seek new yield sources and diversification through DeFi.

4. **Novel Financial Primitives:** DeFi fosters the creation of entirely new financial instruments and business models unseen in TradFi. Automated market makers, decentralized identity/reputation systems, and tokenized real-world assets have the potential to revolutionize how we interact with financial services.

5. **Convergence Across Industries:** DeFi's future lies in integration with other sectors. This includes gaming (GameFi), social networks (SocialFi), and content creation (Creator Economy). The resulting convergence will blur the lines between finance and other aspects of our digital lives, giving rise to novel use cases and business models.

Challenges and the Road Ahead

The path forward for DeFi is not without hurdles. Security, scalability, and user experience remain key challenges that the industry must address. Additionally, effective engagement with regulatory bodies is crucial.

Despite these obstacles, the potential benefits of DeFi are undeniable. Democratizing financial services and creating a more open, accessible, and efficient financial system are transformative goals.

Haust Ecosystem

Haust Labs introduces a whole ecosystem of products designed to solve current Web3 challenges and bring the whole industry closer to the ideal future of DeFi.
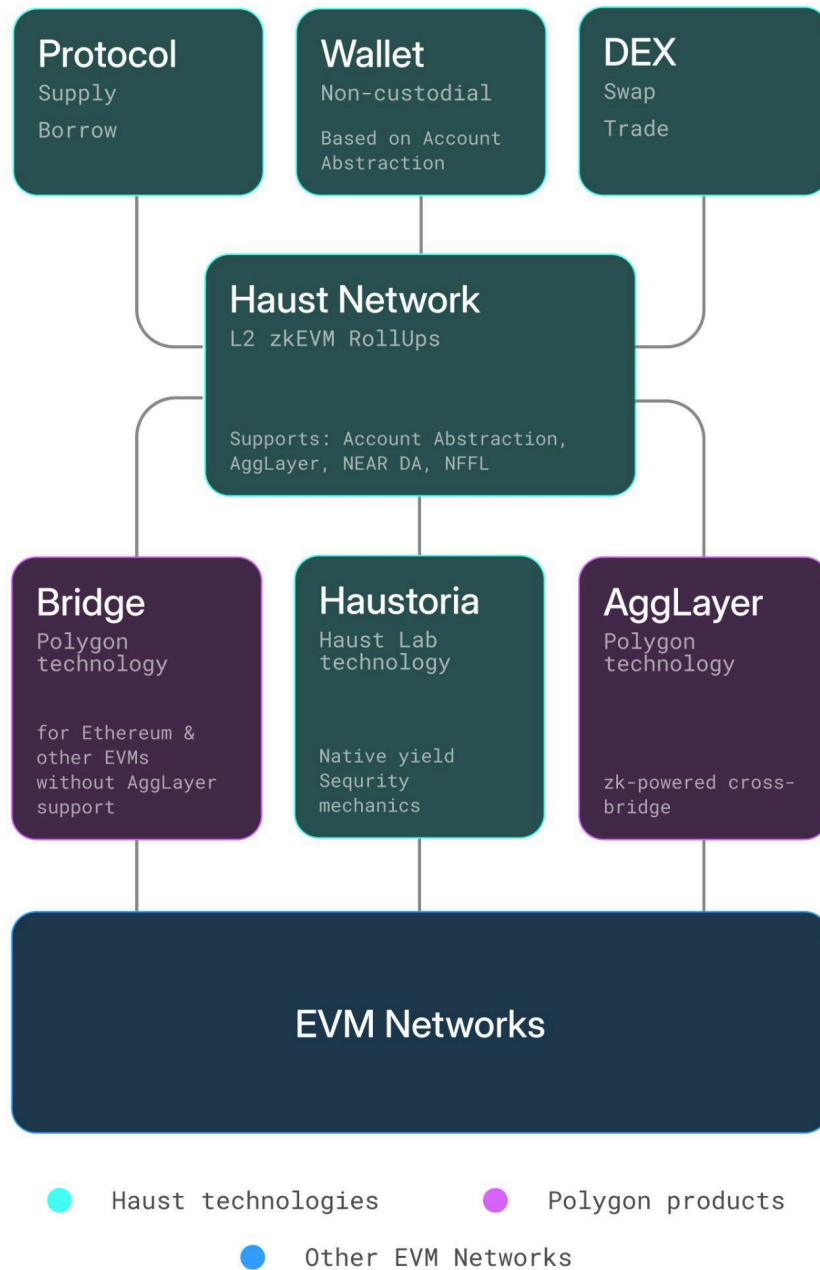
Haust Labs is a development team who build Haust Network and its ecosystem products, such as Haust Lend(Protocol), Haust Wallet, Haust DEX and Haustoria.

Haust Network Overview

Haust Network is positioned to be a vital player in this future. By providing users with a simple and efficient way to access DeFi opportunities across various blockchain networks, Haust Network can empower individuals and organizations. As the Haust Network ecosystem evolves, it has the potential to become the primary gateway to DeFi, accelerating the transition towards a more equitable and inclusive financial system.

Haust Network is an EVM-compatible Layer 2 blockchain powered by zk-rollups, integrating AggLayer, Data Availability, and Account Abstraction from the outset, and offering a seamless DeFi experience with native yield generation through the Haust Wallet and the innovative Haustoria mechanism.

Core of the Haust Network is based on **Polygon zkEVM**, the most sustainable solution up to date. Polygon zkEVM is to Ethereum a Layer 2 network and a scalability solution utilizing zero-knowledge technology to provide validation and fast finality of off-chain transactions. It is beneficial for developers and includes seamless deployment of smart contracts, developer tools.

Polygon zkEVM combines data availability and execution verification on L1, the Ethereum network, in order to ensure security and reliability of each L2 state transition.

The key benefits of using zkEVM for Haust Network:
Low cost
- Polygon zkEVM harnesses the power of ZK proofs to reduce transaction cost.
- Lowers total cost of usage for end users for a better user experience

High performance
- Fast network finality with frequent validity proofs
- Use of Polygon Zero technology, the fastest ZK proof in the world

EVM equivalence
- Deployment onto EVM without changes in code
- The vast majority of existing smart contracts, developer tools and wallets work seamlessly.
- Allows developers to focus on improving code rather than re-writing it

Security
- Ethereum security inherited in L2 with the additional benefit of L2 batching for scaling
- ZK proofs ensure transaction validity and safeguards user funds
- Assurance that information stored cannot be changed or corrupted

Polygon zkEVM harnesses the power of ZK proofs to reduce transaction cost and massively increase throughput, all while inheriting the security of Ethereum L1.
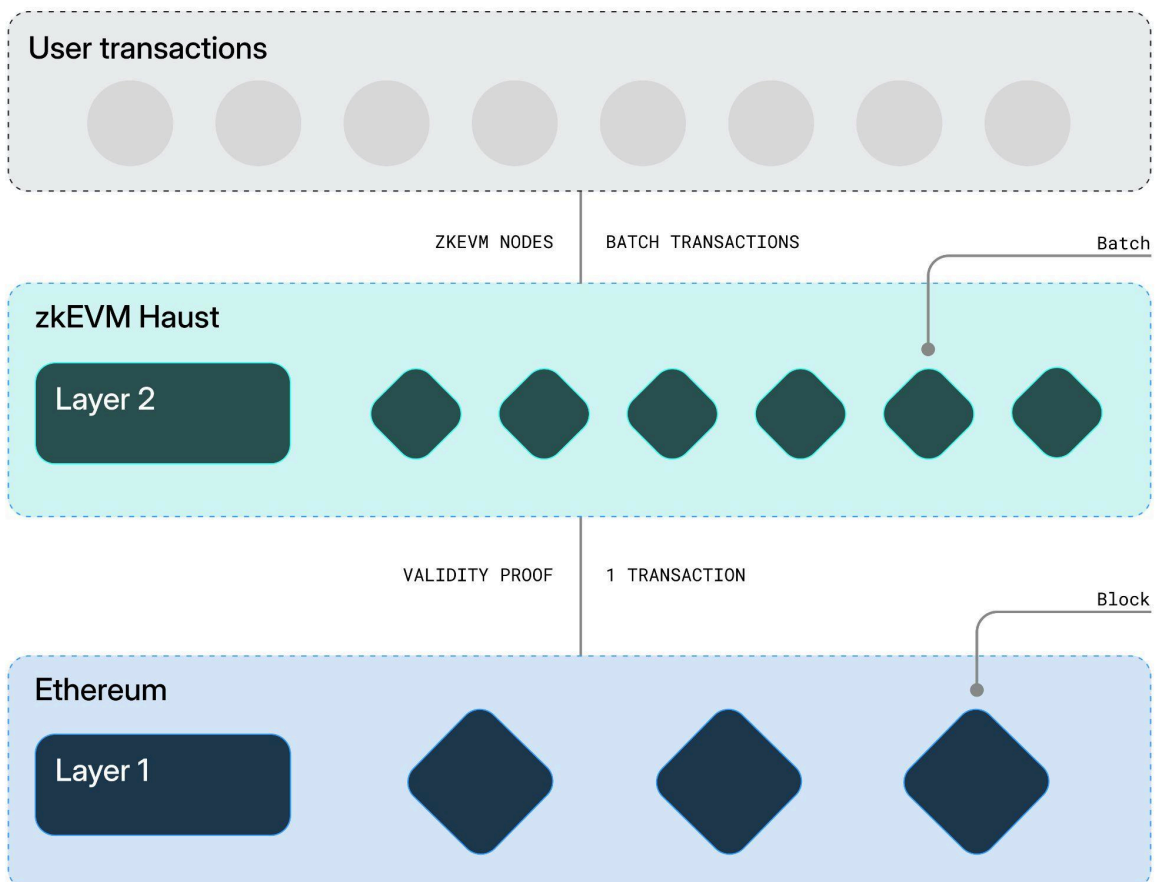
The trusted sequencer receives L2 transactions from users, orders them, generates blocks of transactions, fills batches, and submits them to the consensus contract's storage slots in the form of sequences.

The trusted sequencer processes batches and distributes them to L2 network nodes to achieve immediate finality and reduce costs associated with high network usage, all before submitting them to L1.

The trusted sequencer runs a zkEVM node in sequencer mode and controls an Ethereum account regulated by a consensus contract.

The trusted aggregator computes the L2 state based on batches of L2 transactions executed by the trusted sequencer.

On the other hand, the primary function of the trusted aggregator is to receive the L2 batches validated by the trusted sequencer and produce zero-knowledge proofs verifying the computational integrity of these batches. The aggregator achieves this by employing a specialized off-chain EVM interpreter to generate the ZK proofs.

The logic within the consensus contract verifies the zero-knowledge proofs, thereby endowing the zkEVM with the security of Layer 1. Before committing new L2 state roots to the consensus contract, verification is essential. A validated proof serves as undeniable evidence that a particular sequence of batches resulted in a specific L2 state.

The consensus contract used for interactions with L1 by both the trusted sequencer and the trusted aggregator.

To ensure even faster network interactions without endless bridges, easy access to liquidity from other blockchains and seamless UX - Agglayer was added to Haust Network.

The **AggLayer** is a decentralized protocol with two components: a unified bridge and the ZK-powered mechanism that provides a cryptographic guarantee of safety for seamless, cross-chain

interoperability. Agglayer addresses the problems of fragmented liquidity and state across rollups and the L1.
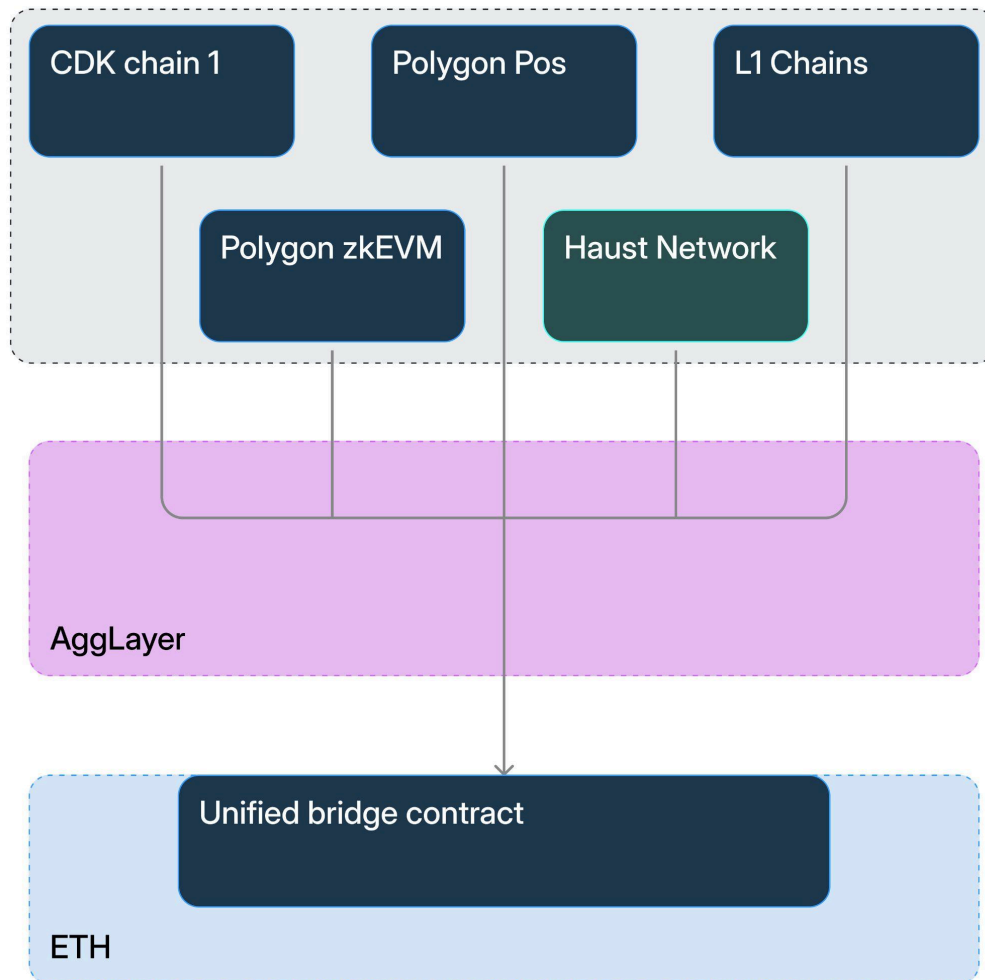

AggLayer components:
- The AggLayer connects chains built with Polygon CDK, which use ZK proofs to generate state transitions that are cryptographically secure.
- The unified bridge is a single bridge contract for all AggLayer-connected chains, allowing for the cross-chain transfer of fungible (non-wrapped) tokens. It is the source of unified liquidity for the AggLayer.

One of the beneficial feature for Haust Network - TVL of all connected chains in AggLayer is shared, allowing to focus on use-case and

product-market fit, not bootstrapping users. The AggLayer allows to use native token to pay gas fees.

The AggLayer is compatible with shared sequencers and third-party DA solutions.

Another mechanism that enhances the security framework is **NEAR Data Availability Layer**, it adds additional layers of security checks which are crucial for minimizing vulnerabilities and enhancing user trust. These additional layers maintain the transparency needed for audits and verifications while protecting user data from unwanted exposure. This is very important in managing data more securely and ensures that user privacy is maintained even as transaction speed and volume increases.
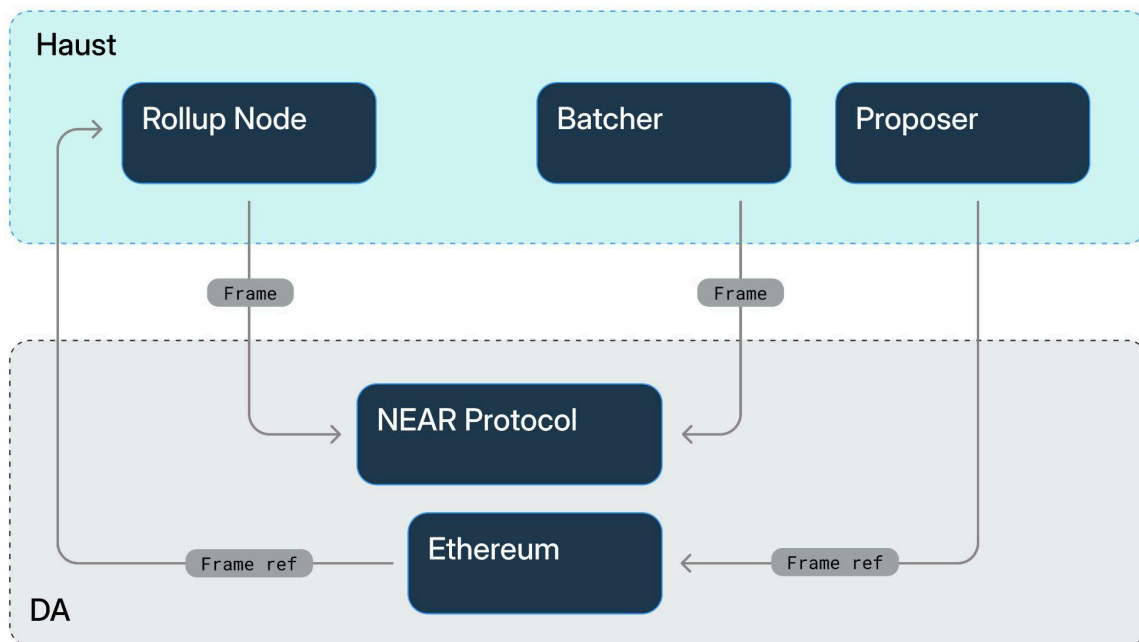
The data availability layer guarantees that all transaction data remains accessible to users, despite not being directly recorded on the main chain.

NEAR DA is notably inexpensive due to several key factors:
- NEAR offers a substantial amount of block space per shard, ensuring efficient utilization.

- NEAR optimizes this space by avoiding unnecessary cryptographic bloat, ensuring that each 4MB allocated equals precisely 4MB of usable data.
- NEAR's scalability is unmatched, as it can readily reshard and scale in response to increasing demand, unlike competitors who would need to resort to constructing rollups or sidechains, thus maintaining a consistently ample and cost-effective data availability solution.

Nuffle Fast Finality Layer (NFFL) technology, built on top of EigenLayer, will be leveraged to significantly speed up transaction finality on the Haust Network. This will improve the overall user experience and make the platform more competitive in the fast-paced DeFi landscape.

NFFL combines EigenLayer's Actively Validated Service architecture with NEAR Data Availability to enable fast finality and secure cross-chain communications. It uses restaked ETH for economic security and NEAR DA for storing Haust zk-rollup block data.

Account Abstraction (AA) is a blockchain technology that allows users to use smart contracts as their accounts. AA plays a critical role in the Haust Network to transform user experience within the Haust Wallet by offering features such as web2-style sign-in, keyless wallet management, social wallet recovery and gas fee management.

Key features of AA:

1. Enabling authorization over assets inside a wallet

Currently, if someone knows the private key for an Externally Owned Address (EOA), they have complete control over all the assets the account holds. With account abstraction it's possible to enforce rules about what a given private key can do, like multi-signature requirements, time-lock conditions and limits on transfer amounts and frequency. Can even restrict what smart contracts the account can interact with.

2. Facilitating fee sponsorship

In Web3 for a user to be able to transact on the blockchain, they need to have at least a small amount of the chain's native token in their EOA to cover gas fees. AA introduces the concept of a "paymaster", an entity that can cover the transaction fees on behalf of the user. Instead of the user having to pre-fund their own Smart Contract Account (SCA), a Haust Wallet will connect the user's SCA to a paymaster. This way, the SCA creation process as well as future transactions will have no cost for the end user.

3. Enhancing transaction fee payments

As mentioned before, AA - ERC-4337 standart doesn't require any protocol-level changes which means that transaction fees need to be paid in ETH. However, now possible to enable the user to pay for fees using any ERC-20 token they like, for example a stablecoin or a HAUST native token.

4. Account automation and pull transactions

In the conventional world of web2 many financial transactions inherently operate on a pull basis. For example, when paying for a subscription you don't actually need to take any action every month to pay for it, but instead the funds are pulled automatically from your payment method. Right now, for Ethereum and other EVM-based chains, the only type of transaction that exists is the push transaction, where the account owner needs to actively execute an action to send funds to a third party.

With account abstraction, on the other hand, it's now possible to grant access to a third-party to pull funds from your SCA automatically for a specified amount and with a specified periodicity. This allows for web2-like functionality in web3 applications, such as automatic payments and subscriptions.

5. Batch transactions

One of the hindrances with current dapps is having to approve multiple independent transactions to accomplish a single task. For example, when swapping USDC for ETH on Uniswap, you first have to sign a transaction approving the spending of USDC and then sign another one approving the actual swap. With account abstraction, you can now batch

these two transactions into a single approval flow, which significantly improves the user experience.

6. Improved recovery mechanisms

Wallet security is one of the biggest problems web3 is facing right now. Unfortunately, self-custody is too complex for the average user, and relying solely on centralized custodians has its own set of risks. Account abstraction can enable more flexible account recovery options, such as social recovery methods. Social recovery, a method for securing a wallet introduced by Vitalik Buterin, allows for the recovery of the wallet with the help of a user's social network.

With the implementation of all these technologies to the Haust Network we aim to reach our main priorities as a security concerns, and seamless UX.

Haustoria Protocol Overview

This inherent yield functionality within Haust marks an innovation in blockchain technology. Unlike traditional platforms, Haust automatically compounds the balance held within a user account. This native yield originates from haustoria protocols designed for liquid staking across various Networks. Haust seamlessly integrates with these decentralized protocols, effectively channeling their generated yield back to its users in an automated fashion.

Haustoria is a set of smart contracts that interact with different DeFi protocols across various networks, using user liquidity as collateral and distributing the averaged profit to the end user in native yield.

Benefits of Haustoria:

1. **Diversify Staking for Maximum Profitability**
At a time when liquidity has spread across dozens of blockchains, into hundreds of projects, we are not trying to pull it over to us. We want to give our users the opportunity to indirectly participate in staking and

generate their income simultaneously in the most reliable and profitable of them.

2. **Automated Integration and Yield Optimization**

The Haust Labs handles all aspects of finding and integrating the most liquid and profitable staking opportunities. This means users don't have to manually search for or switch between different options. The team actively manages and connects these opportunities with our Haustoria mechanism to ensure optimal performance.

- Continuous Improvement: This process is not static. Our team will continuously explore and deploy Haustoria across various networks to maximize coverage and profitability.

- Dynamic Deployment: New staking opportunities will be integrated as they become available, ensuring our users always have access to the best options.

3. **Adaptability and Integration with Multiple Protocols**

If a protocol, like one on the TON network, launches a new program offering an attractive APY (e.g., 100%), and it meets our safety and reliability standards, we can quickly deploy Haustoria on that protocol to leverage the opportunity. You can compare Haust Network to a decentralized hedge fund. And Haust Wallet - is DeFi crypto portfolio management wallet.

- Flexible Integration: Haust Network has the capability to integrate with any blockchain or protocol.
- Liquidity Attraction: By offering competitive APYs to our users, we attract liquidity to these protocols and provide our users with lucrative options.

This strategy allows Haust Network to dynamically adapt to the best opportunities available, ensuring high yields and safety for its users across multiple blockchain networks.

The simplified Haustoria Process:

1. **Deposit & Distribution:** Users initiate the process by depositing funds into a Haustoria contract on a chosen donor network. The

contract then distributes these funds across pre-selected high-yield programs within that network.

2. **Risk-Adjusted Allocation:** Haustoria intelligently allocates funds based on predefined parameters. This ensures a balance between maximizing potential yield and minimizing inherent risks associated with different DeFi protocols.

3. **Tokenized Representation:** In exchange for their deposited funds, users receive hTokens in Haust Network. These tokens represent a user's proportional ownership within the Haustoria system.

4. **Passive Income Distribution:** As yield is generated from the underlying programs, Haustoria automatically distributes these profits proportionally among all token holders.

Simplified example:

Imagine Alice deposits 1000 USDC into Haustoria on the Ethereum blockchain. Haustoria then distributes these funds across three pre-vetted yield programs with a predetermined size:

- · **500 USDC** in Compound (expected 13% annual yield)
- · **300 USDC** in Aave (expected 12% annual yield)
- · **200 USDC** in Curve (expected 10% annual yield)

In exchange for the deposited **1000 USDC**, Alice receives **1000 hUSDC** in the Haust Network, equal 1000 USD and decides to hold them in her Haust Wallet.

After some period, these yield programs generate income:

- · **Compound**: 5.41 USDC
- · **Aave**: 3 USDC
- · **Curve**: 1.67 USDC

Alice still holds **1000 hUSDC,** but the current equivalent is **1010.08 USD**. Both hUSDT and USD amounts will be shown in the Haust Wallet application.

This example demonstrates how Haustoria simplifies user participation in yield farming across multiple blockchains. Users can earn passive income without actively managing individual DeFi protocols or understanding their intricacies. Haustoria acts as a bridge, allowing users to benefit from DeFi opportunities through a user-friendly and automated experience.

Advanced Haustoria Process:

To fully understand the mechanics lets bring in some terminology:

- hToken - token in the Haust network that have passed through Haustoria
- hToken/Token rate - the ratio of the value of one hToken to a regular token
- Donor network - a blockchain from which hTokens can be added to the wallet. In the first release, tokens can be added from the Ethereum, Polygon, BSC networks.
- Collection service - a backend service responsible for collecting user funds to Vault in the donor network
- Vault - a smart contract for storing user funds in donor networks, from which 90% go through the Protocol plugin to the Protocol.
- AAVE protocol - one of the lending/staking protocols (further everything will be described for one AAVE protocol)
- AAVE plugin - a contract through which the transfer from the AAVE or to the AAVE protocol occurs.
- Proportion - the ratio of funds in Vault to funds in the AAVE protocol, set by the platform administrator. In order to reduce the number of requests to AAVE to maintain the proportion during the restaking process, the proportion is floating at +-2%. This means that the proportion can periodically be in the range of 8/92 - 12/88
- Restaking - backend service, responsible for submitting requests for the withdrawal of hTokens to the donor network, balancing of

Vault/AAVE Protocol ratio to comply with the proportion set by the administrator, updating the hToken / Token rate

- HaustHub - a contract, aggregating information in the Haust network about the balance of tokens in donor networks
- hTokenTotalSupply - a variable in the contract of h tokens, denoting the amount of this token in the Vault + Aave protocol for all donor networks
- TokenTotalSupply - a variable in the contract of h tokens, denoting the total amount of this token in the Haust network
- Liquidity in Vault - the amount of tokens users have contributed to the donor network. (In the first release, 12 Vault's - 4 tokens in 3 networks. For example, USDT vault in Polygon, BSC, Ethereum.)
- Liquidity in AAVE - the amount of user funds currently allocated in the AAVE protocol in donor networks, broken down by tokens. There are 12 liquidities in AAVE (for example, the amount of USDT in AAVE in Polygon, BSC and Ethereum)
- Total liquidity in the donor network - the amount of liquidity in Vault and in AAVE, broken down by tokens and networks. For example, total liquidity of USDT in Polygon = liquidity of USDT Vault in Polygon and liquidity of USDT in AAVE in Polygon.
- Yield in Protocol - when liquidity is contributed to AAVE Protocol, the value of the contributed liquidity is fixed and it grows over time. Therefore, further in the text, these terms mean how much the initially contributed liquidity has increased.

DEPOSIT :

1 The user transfers tokens to the **Address** generated in Haust Wallet to deposit through Haustoria. Tokens can be sent from different wallets and the user pays the commission for the transfer themselves.

2 The **Collection Service** tracks the balances on Haustoria deposit addresses and checks if the minimum balance is provided.

3 If the balance is higher than the minimum one, the service transfers tokens to the **Vault**. The transfer commission(gas) is paid by the Haustoria backend.

4 Simultaneously with the accumulation of tokens in the Vault, the backend accesses the **Haust Hub** contract and reports the number of tokens that the user has transferred.

Based on received information the Haust Hub refers to the hToken contract in order to:

- Determine how much hTokens user should receive in the Haust Network, based on the current hToken/Token exchange rate
- Mint the required number of hTokens to the user's address in Haust Network (accessible via **Haust Wallet**)
- Update the **hTokenTotalSupply** and **TokenTotalSupply** variables in the token contract to maintain the exchange rate

* This transaction occurs in Haust Network and the transaction fee is paid by the Haustoria backend.

5 At regular intervals (set by the platform administrator based on the opinion of the community), **Restaking** occurs. During restaking, the following tasks are performed:

- Withdrawal requests are being processed regarded the queue
- Balances of Vaut and the AAVE Protocol are being checked to determine the need of rebalancing proportion to rich 10/90
- Access to the AAVE Protocol contract to deposit/withdraw Tokens if it is needed to achieve 10/90 proportion

As part of restaking, the following transactions are performed:

- Transfers to the users which applied for withdrawal requests of hTokens.
- Withdraw/deposit Tokens to the AAVE Protocol if needed.
- Access to the Haust Hub contract to update hTokenTotalSupply

WITHDRAW:

The user would like to withdraw some of hTokens.

At Haust Wallet, the user sees currently available liquidity across all Haustoria in different networks and can select the network that has the required number of tokens.

Then, depending on whether there are the required number of tokens in the Vault, the user receives funds from the donor network either immediately or will join the withdrawal requests queue.

If the Vault in donor network has the required amount, then 2 transactions occur:

1 In the Haust Network to the **Haust Hub** contract in order to:
- burn the required number of hTokens at the user's address
- update the hTokenTotalSupply and TokenTotalSupply variables on the contract of the withdrawn hToken in the Haust Network

*The transaction fee is paid by the user. For some categories of end users, it is free (Haust Network pays for the user through mechanics of Account Abstraction(AA)), or the cost of the transaction is reduced from the withdrawal amount in the withdrawn token (through AA as well).

For example, the user withdraws 100 hUSDT, equivalent to 120 USDT. The backend estimated the cost of the transaction within Haust Network at 1 HAUST, 1 HAUST = 1 USD, where 1 USDT = 1 USD. Haust Network pays for the transaction for the user and user should receive 119 USDT.

After the transaction above has been made by the Haustoria backend same calculation happened on the donor network side:
- The current cost of the transfer calculating, estimated at USD.
  For example, in Polygon the transfer costs 1 Matic = 0.41 USDT, where 1 USDT = 1 USD.
- Based on the cost of gas the commission amount is calculating: Commission = cost of gas * platform coefficient (set by the platform administrator)

2 The Haustoria backend transfers the final amount to the user's address in the donor network.
In example above its 119 USDT - 0.41 USDT = 118.59 USDT

If the required amount is not enough in the Vault in donor network, then the following occurs:

1 Transaction in the Haust Network to the **Haust Hub** contract in order to:
- burn the required number of hTokens at the user's address
- update the hTokenTotalSupply and TokenTotalSupply variables on the contract of the withdrawn hToken in the Haust Network

*The transaction fee is paid by the user. For some categories of end users, it is free (Haust Network pays for the user through mechanics of Account Abstraction(AA)), or the cost of the transaction is reduced from the withdrawal amount in the withdrawn token (through AA as well).

Then the withdrawal request goes to the queue and waits for the start of **Restaking**.
During the restaking process, the Haustoria backend transfers required amount of Tokens(**X**) from the AAVE Protocol to the Vault, based on formula:

X = (hToken/Token)*hTokenWithdraw - TokenVault + (TotalToken - ((hToken/Token)*hTokenWithdraw))*0.1

(hToken/Token)*hTokenWithdraw - amount of Tokens user want to withdraw
TokenVault - current amount of Tokens in the Vault (Liquidity in Vault)
TotalToken - the Sum of TokenVault and Liquidity in AAVE
(TotalToken - ((hToken/Token)*hTokenWithdraw))*0.1 - 10% must remain in the Vault after the withdrawal request is made (based on Proportion)

Then the Haustoria backend doing the same transaction as with a regular withdrawal:

First:
- The current cost of the transfer calculating, estimated at USD.
- Based on the cost of gas the commission amount is calculating:

> Commission = cost of gas * platform coefficient (set by the platform administrator)

Then the Haustoria backend transfers the final amount to the user's address.

For the end user the Deposit or Withdraw process will be simple with seamless UI, removing the gap between Web3 complexity to Web2 easiness.
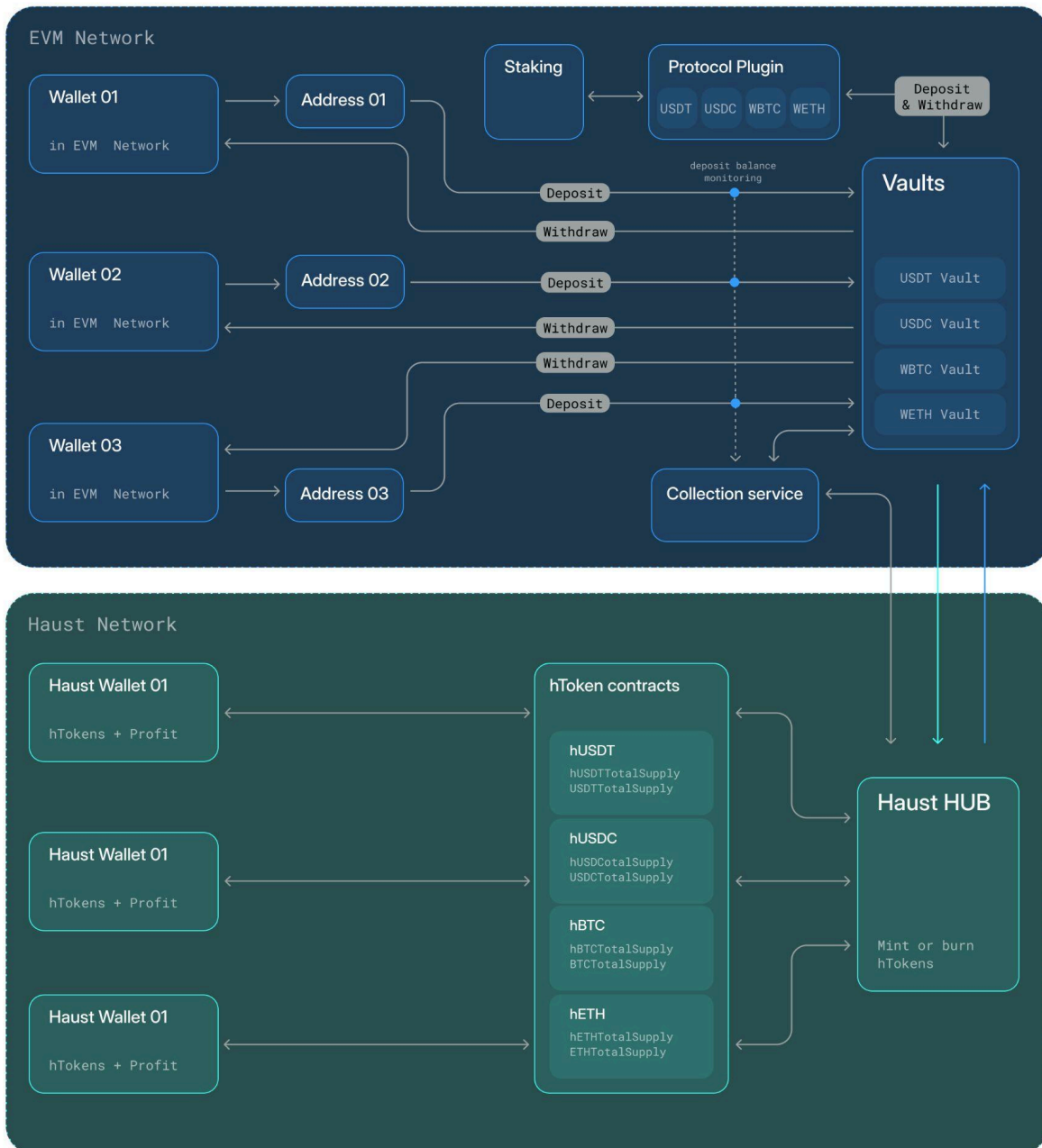
Haustoria, block-scheme mechanic.

* Advanced Haustoria examples can be found in Docs.

DAO / management and development

To ensure that the Haust Labs will continue evolving when the management goes to the DAO and every vote counts, we are currently working to implement a maximally fair system.

Haust DAO leverages a unique governance model to empower its community and shape ecosystem development. This system hinges on two key elements: ve-tokens (vote-escrowed tokens) and quadratic voting.

veHAUST: Locking Power for Influence

HAUST token holders can lock their tokens for a predefined period in exchange for ve-tokens. The amount of ve-tokens received is directly proportional to the number of locked HAUST tokens and the duration of the lock. Essentially, users with greater skin in the game (more locked tokens) and a longer commitment (longer lock time) wield greater influence through increased ve-tokens.

Quadratic Voting: Balancing Representation

Ve-HAUST holders gain the right to participate in crucial votes that determine the protocol's development trajectory. These votes encompass critical matters such as:

- Selecting new donor networks to integrate with Haust Network.
- Establishing risk and return parameters for Haustoria contracts within each network.
- Allocating grants from the Haust ecosystem fund.
- Implementing adjustments to tokenomics parameters and incentive mechanisms.

Haust Network utilizes quadratic voting for these decisions. In this system, the weight of each vote is not simply a binary yes or no, but rather scales based on the square root of the number of ve-tokens used. This approach ensures a more equitable distribution of power within the community. Voters with a smaller stake still have their voices heard, while those with a larger stake don't hold absolute control. Quadratic voting discourages the concentration of influence in the hands of a select

few, fostering a more balanced and representative decision-making process.

Example:

Haust Network community is considering a proposal to integrate with the new Solana blockchain. The proposal is put to a vote involving three ve-token holders:

- **Alice**: 10,000 ve-HAUST, votes "For"

- **Bob**: 40,000 ve-HAUST, votes "Against"
- **Carol**: 250,000 ve-HAUST, votes "For"

Under a regular voting system, the proposal would be accepted with 86.7% of the votes "For" (260,000 out of 300,000). However, under quadratic voting, the situation changes:

- **Alice**: sqrt(10,000) = 100 votes "For"

- **Bob**: sqrt(40,000) = 200 votes "Against"
- **Carol**: sqrt(250,000) = 500 votes "For"

Total: 600 votes "For" and 200 votes "Against", i.e., 75% "For".

In this case, the proposal is still accepted, but Carol's influence on the outcome is reduced, giving more weight to the votes of minority participants.

Quadratic voting, when coupled with veTokens (ve = voting escrow), establishes an incentive mechanism for participants to truthfully reveal their preferences and engage in informed decision-making that prioritizes the long-term health of the entire ecosystem.

veHAUST: Benefits

Holding veHAUST provides users with significant economic & governance advantages within the Haust ecosystem.

- 1.5% out of all total rewards in different staking protocols within all haustoria being distributed to veHAUST holders. The more veHAUST a user holds, the greater the percentage of the total rewards they receive.
- veHAUST holders have the right to participate in governance votes on the Haust Network, including decisions on protocol management, fee subsidies and other important aspects.
- Users with veHAUST are exempt from network fees in the Haust (minimal external fees and withdrawal fees may apply)
- veHAUST holders can increase the yield of their liquidity pools through the "boost" mechanism.
- veHAUST allows users to participate in the distribution of HAUST tokens.

Incentive mechanics

The Haust Network incorporates a dynamic incentive structure. This structure leverages a tokenized reward system to incentivize a diverse range of participant activities that contribute to the positive development and ongoing functionality of the network ecosystem.

1. **Staking:** HAUST token holders can participate in a verifiable locking contract, committing their tokens for a predetermined period. The reward function correlates positively with the lock-up duration and token quantity. This incentivizes long-term holding, promoting network stability and security through increased token illiquidity.

2. **Bug Bounty Program:** Haust Network implements a vulnerability disclosure protocol that incentivizes the responsible reporting of security vulnerabilities. Researchers and security auditors submitting verified bug reports are rewarded with HAUST tokens based on a pre-defined severity scale. This fosters a continuous improvement cycle, enhancing platform security and reliability.

3. **Developer Grant Program:** An ecosystem fund allocates grants to promising developer teams. Project selection leverages a quadratic voting mechanism, empowering the community to identify and support innovative decentralized applications (dApps) and

services built on the Haust protocol. This mechanism fosters a vibrant development ecosystem, attracting talent and accelerating infrastructure creation.

This multifaceted incentive structure fosters a collaborative environment within the Haust Network, aligning participant actions with long-term ecosystem goals.

For example:
A developer David, deploys a Decentralized Finance (DeFi) application (denoted as DApp_David) onto the Haust Network. Due to demonstrably high user activity and the implementation of innovative features, DApp_David garners significant positive community sentiment.

Grant Allocation: David submits a Grant Request to the Haust Ecosystem Fund for the purpose of expanding DApp_David's functionality and fostering interoperability with established protocols. The community leverages a Quadratic Voting (QV) mechanism to evaluate Grant Request and allocates a reward of 50,000 HAUST tokens to David.

Resource Utilization: Upon receiving the Haust Ecosystem Fund allocation, David directs resources towards the development of new functionalities, recruitment of additional specialists, and integration with a lending protocol.

Outcome Measurement: As a consequence of these actions, the Total Value Locked (TVL) within DApp_David experiences significant growth to $10 million and daily transaction volume reaches 20,000.

Incentive Framework: In recognition of David's contribution to the Haust Network ecosystem, a multi-faceted incentive framework is implemented:

1. **Fee Sharing:** David receives a predefined share of the transaction fees generated by DApp_David users.

2. **Performance-Based Rewards:** David receives additional HAUST token rewards contingent upon achieving pre-defined performance metrics. These metrics include TVL growth and transaction volume increase.

This scenario exemplifies how Haust Network employs a combination of financial and non-financial incentives to motivate developers like David. This framework encourages the creation of innovative DApps, fosters user acquisition, and aligns participant interests with the long-term sustainability of the Haust Network ecosystem.

Tokenomics

Haust Network employs a meticulously crafted tokenomic model that prioritizes the alignment of incentives for diverse actors within the ecosystem. This meticulously designed framework fosters the protocol's enduring growth and development trajectory.

Core parameters:
- Ticker: **HAUST**
- Maximum supply: **10,000,000,000 HAUST**
- Emission mechanism: An initial distribution event with token creation, followed by a gradual release process achieved through staking rewards and ecosystem contribution incentives.

Token distribution:
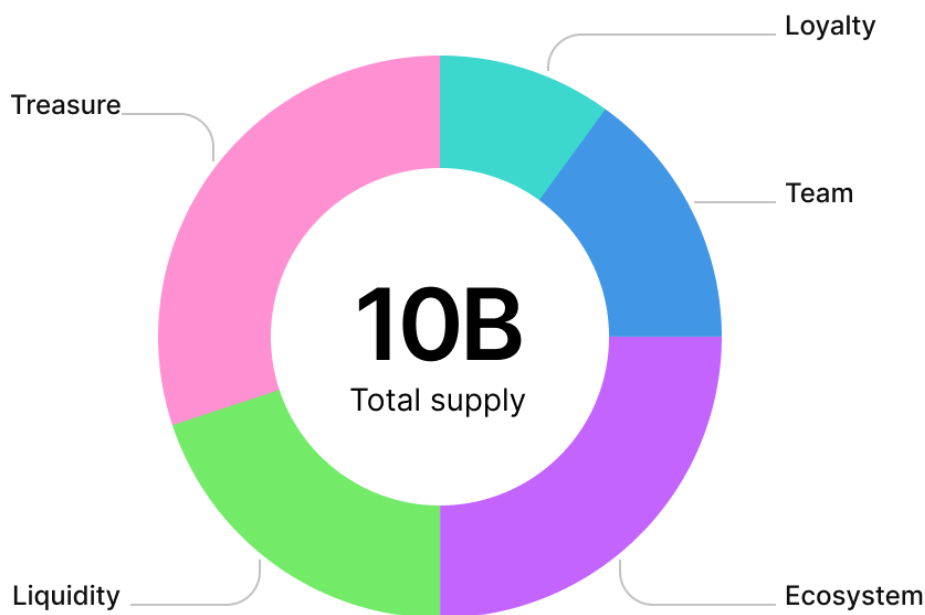
- Liquidity: 20% (2,000,000,000) for providing initial liquidity on DEXs and CEXs, with a portion immediately available and the rest gradually unlocked as needed

- Ecosystem: 25% (2,500,000,000) for incentivizing developers, users, and partners, distributed through grants and rewards over 5 years

- Treasure: 30% (3,000,000,000) reserve for strategic initiatives and ensuring the protocol's sustainability together with reserve for subsidize gas fees, unlocked as needed

- Loyalty: 10% (1,000,000,000) for Loyalty Program point holders with a 1-year unlock period

- Team: 15% (1,500,000,000) for the core team and advisors, with a 3-year unlock period

2% out of 10b HAUST tokens will be in circulation within the first 2 years.
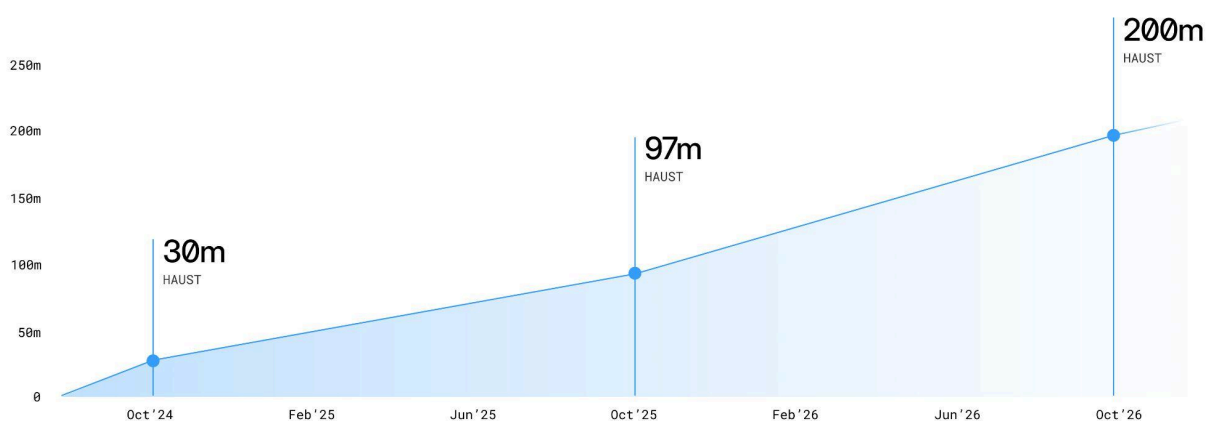
HAUST distribution model

HAUST token utility:
- Non-subsidized transaction fee
- Deploying smart-contracts
- Listing of external projects
- veHAUST DAO
- Developing by Haust Labs

- Fee for Haust protocols and resources
- Haust Oracles connection fee (Soon)

-**Key Success Factors for Sustainable Growth:**

- Balanced initial token distribution
- Linking emission to real activity and contributions from participants
- Incentivizing staking and token utilization
- Adaptive management of monetary policy through the decentralized community

Roadmap

Q4 '24 Testnet Launch

- Deployment of the network based on zkEVM
- Integration of Haustoria contracts in Ethereum, Polygon, and BNB Smart Chain blockchains
- Launch of AggLayer for fast asset transfer between networks

Q4 '24 Mainnet Launch

- Launch Haust protocol and Haust DEX
- Launch Haust Wallet within native iOS, Android apps, Web and Telegram mini app
- Security audits
- Launch of not Airdrop campaign

Q1 — Q2 '25 Ecosystem Expansion

- Expansion of Haustoria on other EVM networks
- Development of Haust Oracles
- Launch of the grant program for developers

- Incentivize program for Liquidity Providers

Q3 — Q4 '25 Market Expansion

- Native token expansion to different Networks
- Expansion of liquidity pools and listing on DEXs and CEXs
- Global marketing campaign to attract mainstream audience
- Onboarding new tokens

Q4 '25 — Q1 '26 Infrastructure Development

- Launch of governance through ve-tokens and staking ve-tokens
- Launch of an NFT marketplace for trading gaming and collectible items

Q2 '26 + Mass Adoption

- Full transition to the DAO
- Integration of new innovative technologies

Opportunities for Community Participation

Haust Network adopts a collaborative development paradigm, empowering its community to actively participate and influence the protocol's evolution. This section outlines the core avenues for community engagement:

1. Governance via Staking: HAUST token holders can cryptographically lock their tokens (stake) to acquire ve-tokens. These ve-tokens empower holders with voting rights on governance proposals, directly shaping Haust Network's future. This mechanism ensures the protocol's development trajectory aligns with the collective will of its stakeholders.

2. Liquidity Provision: Community members can contribute to the network's liquidity infrastructure by supplying assets to protocol's liquidity pools. This action enhances the efficiency of Haust Network's token exchange mechanisms, facilitating smoother transactions across the ecosystem. In return for their contribution, liquidity providers earn rewards incentivizing their continued participation.

3. DApp Creation and Integration: Developers and entrepreneurs within the Haust Network community can leverage their skills to construct decentralized applications (dApps), tools, and additional services. These innovations expand the protocol's functionality and unlock novel use cases. By integrating these projects into the Haust Network ecosystem, developers gain access to the existing user base and established infrastructure, accelerating the protocol's adoption and growth cycle.

4. Knowledge Sharing and Mentorship: Experienced community members can foster a supportive environment by educating and guiding new users. This mentorship empowers newcomers to navigate the intricacies of the Haust Network ecosystem, enabling them to effectively utilize its products and services. By lowering the entry barrier, mentorship fosters broader protocol adoption.

5. Feedback and Ideation Loop: The Haust Network community serves as a wellspring of valuable insights, suggestions, and ideas for protocol improvement. The Haust Network team actively solicits community input and integrates it into the decision-making process. This ensures that the protocol's development remains focused on addressing the genuine needs and challenges experienced by its user base.

This multi-faceted approach to community engagement empowers HAUST token holders, developers, and enthusiasts to become active participants in shaping the future of Haust Network.

Incentives for Community Participation

Haust Network implements a multi-tiered incentive scheme to promote active member participation and ecosystem growth. This scheme leverages a combination of token economics, resource allocation, and access control mechanisms.

1. **Staking Rewards:** HAUST token holders can participate in network governance by locking their tokens in a smart contract. This contributes to the protocol's security and stability. In return for their commitment, participants receive a pro-rata share of the protocol's rewards generated through transaction fees or other mechanisms. This incentivizes long-term token holding and aligns stakeholder interests with the long-term success of the Haust Network protocol.

2. **Grants Program:** Haust Network fosters ecosystem development by offering grants to qualified individuals and teams. Grant recipients are selected based on their proposed projects or initiatives that demonstrably contribute to ecosystem growth. These grants function as seed capital, providing resources to translate innovative ideas into tangible projects and attract skilled developers and entrepreneurs to the Haust Network community.

3. **Token Distribution Events:** The Haust Network distributes HAUST tokens periodically to all community members through a fair distribution model mechanics.

4. **Access and Privilege Management:** Haust Network implements an access control system that grants varying levels of privileges to community members based on the significance and consistency of their contributions. These privileges may include early access to new features and product releases, invitations to exclusive events, direct communication channels with the development team, and other benefits. This system incentivizes ongoing, high-value participation and fosters a sense of community ownership.

Joining the Haust Network Community

The genesis block of Haust Network signifies the initiation of a novel and trailblazing endeavor within the DeFi space. By integrating with the Haust Network ecosystem at this nascent stage, participants have the potential to influence the protocol's future trajectory and contribute to the establishment of a more approachable and universally accessible DeFi environment.

To actively engage with the Haust Network community and obtain the latest updates and prospective advantages, users can undertake the following actions:

- **Social Media Integration:** Establish connections with Haust Network's designated communication channels across prevalent platforms such as Twitter and Telegram.
- **Community Forum Participation:** Engage in discussions and dialogues occurring within Haust Network's community forum in Discord.
- **Knowledge Dissemination Events:** Attend workshops and webinars facilitated by the Haust Network team and their collaborative partners.
- **Feedback Mechanism Contribution:** Utilize established channels to deliver constructive criticism, suggestions, and innovative concepts for the betterment of the protocol.
- **Ecosystem Role Exploration:** Investigate opportunities to contribute meaningfully to the Haust Network ecosystem by assuming the role of a developer, liquidity provider, or content creator.

The launch of Haust Network symbolizes the commencement of a transformative journey. With the unwavering support and active involvement of its dedicated community, the protocol possesses the inherent potential to revolutionize the paradigm by which individuals interact with and harness the multifaceted advantages of DeFi. We invite you to partake in this momentous chapter within the decentralized finance narrative and collaborate with us in constructing a more equitable and inclusive financial future for the global populace.

Developer Support and Infrastructure

Haust Network prioritizes fostering a robust and prosperous developer ecosystem, recognizing its critical role in the protocol's long-term success. We achieve this by offering an extensive developer toolkit and dedicated support mechanisms.

1. **Modular Architecture:** Haust Network leverages a modular and extensible design. This enables developers to seamlessly construct and integrate novel features and applications. A suite of adaptable primitives and APIs empowers rapid prototyping and deployment of innovative applications with minimal overhead.

2. **Secure and Reliable Oracles:** Haust Network integrates with secure and reliable oracles, facilitating the incorporation of real-world data and services into smart contracts. This encompasses price oracles for stablecoin valuation, random number oracles for verifiable randomness generation, and oracles for off-chain data access. By granting developers convenient access to high-fidelity oracles, Haust Network expedites development and minimizes risk.

3. **Advanced Analytics and Monitoring Tools:** Haust Network seamlessly integrates with leading blockchain analytics and monitoring tools. This empowers developers with real-time or near-real-time performance tracking of their applications, data analysis capabilities, and potential issue identification.

4. **Comprehensive Documentation Suite:** Haust Network offers in-depth documentation, step-by-step guides, and educational resources encompassing all facets of protocol development. Our documentation empowers developers to get started swiftly and leverage the platform to its full potential, covering aspects ranging from initial setup and smart contract deployment to integration with external services and performance optimization.

5. **Active Developer Support and Mentorship:** The Haust Network team actively engages with developers, providing support and guidance throughout the development lifecycle. Dedicated

support channels, mentorship programs, and frequent events facilitate personalized assistance from experienced team members.

6. **Grants and Incentive Programs:** Haust Network provides substantial grants and incentives for developers building high-quality applications and contributing to the ecosystem's growth. These programs offer financial backing, resources, and enhanced visibility for outstanding projects, fostering continuous innovation and developer ecosystem expansion.

By implementing these initiatives, Haust Network establishes a solid foundation for a flourishing and innovative ecosystem of DeFi applications. As the network matures, we will continue to refine our developer support, guaranteeing that our partners consistently possess the necessary tools, resources, and assistance to thrive on our platform.

Cost-Efficiency and Fee Exemptions

Haust Network prioritizes fostering a maximally inclusive and accessible Decentralized Finance (DeFi) environment by mitigating factors that might impede mainstream user adoption. Core to this strategy is a commitment to minimal transaction fees and, in specific circumstances, complete fee exemptions for designated user groups.

Cost Optimization Mechanisms:

1. **Dynamic Gas Pricing:** Haust Network utilizes dynamic gas pricing algorithms. These algorithms automatically adjust transaction fees in response to network congestion. During periods of high demand, gas prices rise modestly to incentivize efficient network usage and prevent congestion. Conversely, during low-demand periods, gas prices decrease to maintain affordability. This adaptive model optimizes user costs while ensuring sufficient incentives for network validators.

2. **Fee Subsidies:** Haust Network can subsidize transaction fees for specific user actions or applications to encourage activity and enhance accessibility. This might involve covering fees for new users making their initial deposits or for critical actions within strategic dApp partnerships. By mitigating these costs, Haust Network eliminates friction and reduces entry barriers for users.

3. **Fee Exemptions:** Haust Network offers complete transaction fee exemptions for designated user categories, such as early adopters, highly engaged community members, or holders of substantial HAUST tokens. These exemptions reward user loyalty and contributions to the protocol, creating tangible benefits for the ecosystem's most dedicated participants. Through targeted fee exemptions, Haust Network paves the way for a potential zero-fee network.

4. **Validator Incentive Mechanisms:** To ensure network sustainability and security in a low-fee environment, Haust Network offers robust incentives and rewards for node operators and validators. These rewards might include a share of protocol revenue, block rewards, or adaptable staking programs that align validator interests with those of the broader ecosystem. By balancing minimal user fees with attractive validator rewards, Haust Network establishes a win-win scenario for all participants.

Haust Network's cost-efficiency and fee exemption approach exemplifies its commitment to fostering a truly inclusive and user-centric DeFi experience. By eliminating barriers associated with high fees and rewarding loyal users, Haust cultivates a welcoming environment for everyone, from casual users to seasoned DeFi veterans. As the network continues to mature, Haust Network pledges to continually explore innovative methods to optimize costs and enhance accessibility, ensuring that the advantages of DeFi remain readily available for all.

Conclusion

Haust Network operates as a decentralized liquidity aggregation protocol, functioning across various blockchain networks. Its core objective centers on establishing a universally accessible interface for harnessing the potential of Decentralized Finance (DeFi) and fostering widespread adoption of blockchain technology.

Haust leverages a suite of innovative solutions, including Haustoria smart contracts, a ve-token based governance model, dynamically adjusted incentives, and an adaptable tokenomic structure. This comprehensive framework lays the groundwork for a new generation of DeFi protocols specifically designed to cater to the real-world requirements of users.

The Haust Network ecosystem actively seeks collaboration from developers, investors, strategic partners, and blockchain advocates. This collaborative effort fosters the construction of a more inclusive, equitable, and readily accessible financial landscape for all participants.

Integration into the Haust Network community presents an opportunity to partake in the ongoing revolution within Decentralized Finance.

Join today and become a driving force in this transformative movement.