



Sienna Network

Privacy-first, cross-chain decentralized finance protocol.

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1.0 Executive Summary

Sienna Network is a cross-chain, privacy-first protocol for decentralized finance (DeFi), which empowers its users to manage their tokens securely, with no outside interference or intrusion, knowing that outsiders will not be able to view the details of the transaction or compromise their identity to any 3rd parties.

The project is building upon the promise of decentralized finance by delivering tools and services which respect and preserve the privacy of individual users. Until now, the activities of DeFi users have remained an open book - publicly preserved on the blockchain and forever vulnerable. This level of disclosure has created a chilling effect for the industry, discouraging even remotely privacy-conscious users from participation in DeFi, whilst concerning regulators who wish to ensure that users, private and professional alike, are properly protected.

Modern blockchain based technologies fall short when it comes to preserving privacy - the nature of the early blockchains brings everything in the open - Sienna looks to solve for the same problem that has been solved by banks for their customers for many years - privacy in terms of your funds and transactions and protected by computational privacy.

Sienna Network's mission is to right this wrong. At the heart of the network are robust financial tools for the assurance of privacy to all consumers. Sienna Network will offer an AMM with swaps followed by additional products according to the published product roadmap (which changes as the project develops).

Sienna Network launched its primary product: The **Sienna Swap**, a decentralized Automated Market Maker (AMM) for private, seamless, P2P token swaps. Sienna Swap provides near instant swapping of SNIP-20 based tokens.

The second product, which is planned to follow in Q4-2021 is **Sienna Lend**, which facilitates the borrowing and lending of crypto assets, while also offering staking

options for various crypto trading pairs. Sienna Lend includes a number of strong incentivization options which encourage participation in the network.

These products will be complemented by Sienna Network's planned integrations with **Self Sovereign Identities**, which provide users with total control of their personal data in a private decentralized ID. This data can then be leveraged in private smart contracts, such as to demonstrate positive behaviors on the network or to incorporate real world credit scores into Sienna Lend, thus enabling under-collateralized loans.

Sienna Network builds upon a number of pre-existing technologies to make this vision a reality. Foremost is the Secret Network, a blockchain built on Cosmos with Tendermint technology. This technology stack allows privacy-preserving smart contracts, great scalability, fast transactions and low gas fees. It also offers great utility and flexibility, including cross-chain bridging with Ethereum and other networks including the Binance Smart Chain, Polkadot and more via the IBC technology for the Cosmos ecosystem – powered by the IBC and Secret Networks Supernova upgrade.

Sienna Network is a DAO and is governed by SIENNA, its powerful governance token which confers considerable functionalities to holders. Each SIENNA token entitles its owner to one vote, with voting on matters such as interest rates, ratios, new rules, collateral limits and more. Desirable activities on the network will be incentivized with SIENNA, generously rewarding users.

2.0 Sienna Network

Sienna Network is a privacy-focused DeFi protocol designed to protect users from unwelcome surveillance by bad actors, and to preserve their right to privacy. The vision is to create decentralized services which are by default completely private, highly scalable, and easy to use. This will usher in a wave of new industry standards for the management and trading of crypto assets and encourage a new wave of DeFi users to enter the space, including professional and institutional users, at the same time enhancing consumer protection.

Privacy by Default

Sienna Network believes that your privacy is a fundamental right. Until now decentralized finance has promised full financial control and self-reliance, but at the expense of personal privacy. The inherent transparency of blockchain - advantageous in some areas - holds concomitant privacy and security risks. In centralized finance that risk is reduced, but comes at the cost of personal control and having to trust centralized third parties. For those who prize their personal privacy as well as their financial freedom, neither CeFi nor DeFi has yet provided all the answers.

Sienna Network is different, and provides complete freedom, with privacy by default. Sienna Network is designed to execute private smart contracts with the programmability of Ethereum, while maintaining privacy. This is due to the privacy features from the protocol Sienna Network is built on top of - Secret Network.

Moreover, the programmable privacy means that verifiable sensitive data (i.e. sender and receiver information) can be exchanged in a completely decentralized manner.

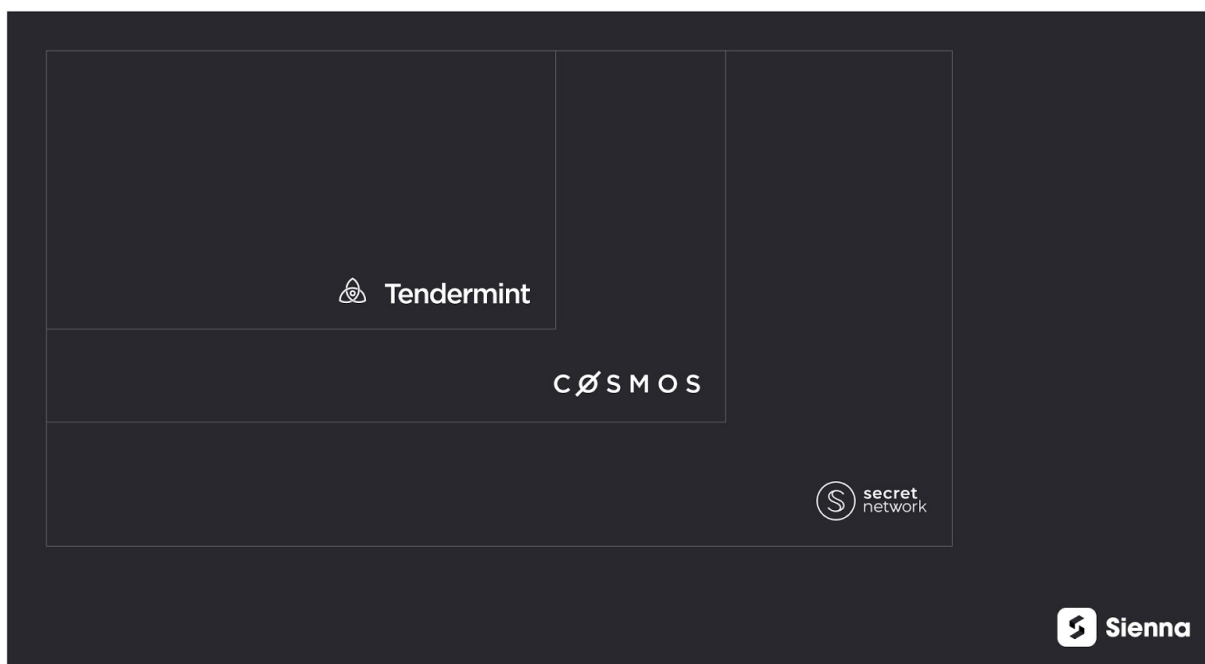
This baked-in privacy ushers in a new wave of impactful features for DeFi including private trading, private lending, private decentralized identities, decentralized credit scores and distributed under-collateralized loans. With the integration of oracle-type data sources these opportunities will only expand.

The privacy and integrity of the network and its financial tools strengthens the value proposition of decentralized finance. This is especially true for institutional participants, who are extremely cautious of exposing their financial strategies and trading activities. This has been a persistent impediment to institutional adoption, slowing growth and in some cases dissuading greater levels of participation.

There is huge potential for a private platform where positions and trades remain private, if desired. In Sienna Network that privacy comes as standard, although, for those who wish or need it, relevant data about sender and receiver can be shared by the user.

2.2 Mass Scalability

Sienna Network is built on the Secret Network blockchain, developed with the Cosmos software development kit (SDK) which takes advantage of Tendermint consensus technology. This technology stack allows for the creation of powerful, and highly scalable decentralized applications.



Sienna Network's technology stack

Cosmos is a network of independent but interoperable parallel blockchains, each maintaining individual control in their 'sovereign zone'. Each Cosmos sovereign zone is capable of hosting multiple blockchains running in parallel to each other, facilitating thousands of transactions per second (TPS).

Building on Cosmos SDK allows Secret Network to take advantage of Tendermint with parallel scaling, allowing for much higher throughput than monolithic public blockchains. Sienna Network takes advantage of all of the scalable nodes of its parent chain, thus achieving high throughput in the range of thousands of transactions per second, even under severe network loads.

2.3 Protocol Level Interoperability

One of the core benefits of Cosmos is its Inter-Blockchain Communication (IBC) protocol. This makes it possible for blockchains on the network to connect and communicate with each other without ever giving up their native application states or their consensus protocols.

Since the Cosmos Hub keeps a transactional record of all tokens within its ecosystem of sovereign zones, tokens from one platform can be easily transacted to another blockchain, even if both blockchains are running separate application layers and corresponding consensus mechanisms.

Sienna is able to facilitate interoperability within its service offerings without compromising privacy. In the product roadmap Sienna Network will seek to implement cross-chain capabilities to other significant blockchain ecosystems outside Cosmos such as Polkadot.

2.4 Gas fees and Front-Running Mitigation

Cosmos SDK, IBC, and Tendermint Consensus Protocol allow for a far higher transactional throughput than Ethereum and because of this, much cheaper transaction fees are possible.

Unlike the Ethereum model in which users are caught in a perpetual arms race of ever-increasing gas fees, Cosmos offers parallel scaling with near instant transaction times. In this ecosystem the burden of transactions is more easily spread, reducing the necessity of aggressively incentivizing transactions where time is of the essence.

Since transactional throughput on Cosmos is very high, even under strenuous network loads, users no longer need to “front run” their transactions to be assured of timeous completion. Furthermore, due to the utilization of the Secret Network and its Secret Contracts, the transactional information for transactions occurring on Sienna Network are private - eliminating the merest possibility of front-running with the purpose of shorting the market on Sienna Network.

2.5 Contributing Towards Institutional Adoption

The lack of privacy in decentralized finance, and issues it creates such as front running, raises barriers for institutional players, making it less likely they will allocate a portion of their portfolio, it also completely rules out any regulated product in the longrun.

Sienna Network’s ecosystem assures institutional players by keeping all of their transactions, trading positions, liquidity provisions and more, private. This positions Sienna Network as the gateway for institutional players who wish to engage in decentralized finance, allowing them to add their wealth to this growing sector.

2.6 Making DeFi Easy

If DeFi is to fulfill its true potential and reach beyond the existing market of diehard crypto geeks, it must first broaden its appeal and lower the barriers to entry. To make this vision a reality, Sienna Network intends to focus on education of users, the user journey and ease of use.

Sienna Network's tools and product lines are designed to be quickly understood, utilizing an intuitive graphical interface that allows users to quickly get to grips with the platform. Sienna Network will further work to educate and inform its user base, helping them to upskill and level up whenever necessary.

2.6.1 Education

Sienna Network will be developing tools and step by step guides which will allow the second generation of DeFi users to learn, absorb and execute a greater range of functions as they become increasingly familiar with the sector. Sienna Network's online documentation will allow for explanations of all aspects of DeFi – from 'WrappedETH' through to 'Yield Farming' etc.

2.6.2 User Journey

The contributors at Sienna Network have extensive experience in building products that onboarded tens of millions of users. They created user journeys that brought millions of non-technical people onto the internet as it grew in the late nineties, through bringing internet chat and video calling to many homes, and through website development.

By building upon the same philosophy, Sienna is looking to bring their winning approach to DeFi and Sienna Network.

2.6.3 Trust

Sienna Network has a strong stand on Trust, defined by:

Privacy: With privacy by default users have peace of mind, allowing them to trust in Sienna Network as a safe protocol to conduct their tokens actions.

Security: Since Sienna is a private and encrypted decentralized network, there is no central repository to risk and no single point of failure which can be exploited. This allows users to trust that their information is highly secure and protected on Sienna Network.

Clarity: A user-centric design will lay the foundation upon which user trust is developed as Sienna Network goes live. All user touch points within the network are designed to benefit the user, for the very best levels of comprehension and clarity. Users can easily understand their current position. Via the Secret Network tools users will be able to access their on chain trading history and grant relevant 3rd party access if they should choose (need) to.

Fairness: The prevention of front-running further establishes trust with the user base. Sienna Network cannot guarantee user profitability, but can ensure that users do not face unfair exploitation and front running.

Transparency: While Sienna Network will always vigorously defend users' right to privacy, the foundation itself will be open, transparent and communicative with its community. It will also submit itself to outside scrutiny and auditing. As part of that commitment Sienna Network has submitted its code to external auditors before it was deployed on the mainnet and made available to the public.

2.6.4 Transaction Fees

Sienna Network is based on Secret Network - a Proof of Stake network featuring low transaction fees. At the time of writing, transactions on the Ethereum network are costing upwards of \$150 US, rendering smaller transactions or experimentation impractical. This is a huge barrier to entry for both new, curious users of DeFi - and of course for the large majority of users. Sienna Network has the goal of reducing barriers to DeFi adoption, and fees are an important aspect of making DeFi easy and an improvement over legacy systems.

3.0 Self Sovereign Identities

Sienna Network has an ambition to develop support for integration of self-sovereign identities (SSI), providing users unparalleled control over personal data, allowing them to decide exactly how that data is used. Users are empowered to decide which pieces of information they share, when they share it, and with whom. The data within the SSI remains encrypted, private and secure at all times.

Better still, the self-sovereign identity is engaged with a pseudonymous username or Decentralized IDentifier (DID). This pseudonym allows users to remain completely anonymous to other users while continuing to leverage their personal data within the network.

The user is able to connect useful information (metadata) to their DID which is then incorporated and encrypted into their SSI. Each DID have its own set of rules related to registration, regulation, modification and revocation.

One of the many potential use cases for this is the application of credit checks with credit score histories and credit worthiness assessments, which could e.g., enable under-collateralized loans. This data can then be fed into a smart contract so a loan agreement can be made. Other use cases include proving to a counterpart - such as a lending pool - that previously taken loans on Sienna Network have been repaid. Another could be demonstrating a history of active participation in the network, and the accumulation of positive user feedback on the platform.

In time Sienna Network predicts that growing regulations which govern exchanges and FIAT bridges will make some form of identification mandatory. As Anonymity and Privacy are two distinctly different matters, Sienna Network will help to future proof its users such that they do not need to act anonymously simply to preserve their right to privacy. But the distinctly different approach from Sienna is that the user, and not a 3rd party, should be the one deciding on what to share with whom.

4.0 Cross-chain Technology

Sienna Network is planned to consist of dual value driving elements which allow participants to gain the best from DeFi while staying completely private. These mechanisms are **Sienna Swap** and **Sienna Lend**.

Each of these core elements are designed with full privacy by default, with great scalability and minimal transaction fees.

Sienna Swap is a private decentralized Automated Market Maker (AMM) for private, seamless, p2p token swaps. It provides an instant swap of SNIP-20 tokens, which the user can get by bridging their existing ERC-20 or BSC tokens to SNIP-20 via the 3rd party provided bridges. It has a number of lucrative incentivization schemes which will encourage individuals to use the platform including for liquidity mining and governance token rewards.

5.0 Sienna Swap

The focus for the Sienna Swap AMM is privacy, scalability and ease of use. Minimal transaction fees will allow for more affordable trading.

If transacting with secret token equivalents e.g. secretETH, secretSCRT or native SNIP-20 tokens e.g. SIENNA or sSCRT then Sienna Swap will always execute the trades with full privacy, preventing front-running and maintaining user anonymity.

Unlike traditional centralized exchanges with order books which have to match and delay trades, Sienna Swap's Automated Market Maker (AMM) functions entirely on smart contracts, making it truly trustless, decentralized and censorship resistant.

Sienna Swap's AMM is implemented via a dual liquidity pool that is provided by the users of Sienna and the ecosystem itself. The dual liquidity pool allows functions via a dual deposit system, eliminating waiting times since the pool is always present and liquid. The efficiency of this system is in sharp contrast to order book exchanges in which users must wait for a matching bid in order to execute their trade.

Trades on Sienna Swap are executed via the liquidity pool reserved for relevant supported tokens. After the IBC upgrade of Secret Network, aka Supernova in November 2021, Sienna Swap will support a huge array of other Cosmos ecosystem tokens most likely incl. UST, Luna, Osmosis and more.

5.1 Pair Liquidity

Sienna Swap utilizes a market maker algorithm to maintain its reserves in relative equilibrium. Reserves are pooled together through a network of liquidity providers who supply tokens for the trading pair in exchange for a proportional share of the transaction fee.

Mathematically, the core of any AMM resides within its algorithm or relative price curve. From this, the price of the tokens involved can be determined. Sienna Swap's AMM is based on the same mathematical principle.

The variables of an AMM are the reserve amount x_i of each token i .

The formula for a generalized constant product market maker allows for the fluctuation of price while preserving liquidity:

$$\prod x_i = k \quad (1)$$

Where x_i relates to any token pair x_i & x_j and k is a constant. This means that the product of each token's reserve amount remains constant. Substituting x_i & x_j for A and B , (1) becomes

$$AB = k \quad (2)$$

The price is represented by $-dA/dB = A/B$ which denotes the change of reserves on both sides such that if either of the tokens' liquidity drops (i.e. token reserves running out from their respective pools), the respective token's price moves to infinity. Thus satisfying the liquidity problem even in extreme scenarios.

Equation 2 is only satisfied when the product of each token's reserve amount remains constant. Therefore in order to satisfy the need for a constant product, when a liquidity provider increases liquidity for one of the tokens, they must do the same for the other token at an equal amount.

However in order to overcome this limitation and provide greater flexibility to liquidity providers, a Balancer style AMM needs to be implemented. With this specific AMM, the price curve is a particular N-dimensional surface:

$$\prod x_i^{w_i} = k \quad (3)$$

where w_i is the normalized weight of x_i . When a liquidity provider adds to the token pool, the smaller the weight w_i , of the relative pool distribution ratio, the fewer tokens will need to be added. For example, the pool can be specified to have a 20/80 split which refers to the normalized weights of the two tokens being 20% and 80% respectively.

Sienna Swap's constant product market maker algorithm is taken a step further through a model which takes impermanent loss into consideration. Impermanent loss occurs when a liquidity provider needs to add tokens to both sides of the equation. Balancer AMM does allow a liquidity provider to add tokens to a single side but that only occurs through the buying of other tokens in the pool while simultaneously rebalancing the pool through an arbitrated effort. A balanced AMM is only but a band-aid solution to impermanent loss. In order to implement a solution for this, Sienna Swap's AMM uses an external price oracle, which then governs the AMM price curve. The price curve for a pool of a pair of tokens that comprise of a base and quote token is as follows:

$$P_{margin} = iR \quad (4)$$

The price curve consist of two parts:

$$R = 1 - k + (B/B_0)^2k \text{ when } B < B_0$$

$$1/(1 - k + (Q/Q_0)^2k) \text{ when } Q < Q_0$$

where

B_0 = aggregate number of base tokens deposited

Q_0 = aggregate number of quote tokens deposited

B = number of base tokens in pool

Q = number of quote tokens in pool

i = market price provided by an oracle

k = parameter in the range $(0, 1)$

Since this AMM isolates the price curve of each token, liquidity providers are able to deposit a certain token on either side without having to worry about impermanent loss.

5.2 Liquidity Pools

Liquidity providers can withdraw their liquidity from the pools they have deposited to. Tokens are then withdrawn at the current exchange rate, not at the rate of their initial deposit. The consequence of this is that value can be lost due to market fluctuations, arbitrage and impermanent loss. Sienna aims to introduce features that will mitigate impermanent loss later on.

5.3 Fees

When conducting a token swap, the user pays 0.3% to facilitate the transaction. From this, liquidity providers are allocated 0.28% for commissions, paid proportionally to their overall share of the liquidity pool.

The remaining 0.02% trading commission is automatically converted and paid in SIENNA.

The Sienna Network DAO does not intend to take any commission on trades conducted on the platform.

7.0 The Sienna Token

7.1 Token Overview

The native digital cryptographically secured utility token of the Sienna Network (**SIENNA**) is a transferable representation of attributed functions specified in the protocol/code of the Sienna Network, and which is designed to be used solely as an interoperable utility token with Governance rights for token holders.

SIENNA is a utility token which enjoys a dual function in the ecosystem, acting as the governance token and the incentivization mechanism to encourage positive behaviour from users, so they are each incentivised to contribute to and maintain the Sienna Network ecosystem. SIENNA is an integral and indispensable part of the Sienna Network, because without SIENNA, there would be no incentive for users to expend resources to participate in activities or provide services for the benefit of the entire ecosystem on the Sienna Network. Given that additional SIENNA will be awarded to a user based only on its actual usage, activity and contribution on the Sienna Network, users of the Sienna Network and/or holders of SIENNA which did not actively participate will not receive any SIENNA incentives.

SIENNA does not in any way represent any shareholding, participation, right, title, or interest in the DAO, the Distributor, their respective affiliates, or any other company, enterprise or undertaking, nor will SIENNA entitle token holders to any promise of fees, dividends, revenue, profits or investment returns, and are not intended to constitute securities in Singapore, USA or any other relevant jurisdiction. SIENNA may only be utilised on the Sienna Network, and ownership of SIENNA carries no rights, express or implied, other than the right to use SIENNA as a means to enable usage of and interaction within the Sienna Network e.g. for voting on governance proposals..

SIENNA can be earned by users who contribute to the Sienna Network, in particular

by providing liquidity.

Symbol: SIENNA

Decimals: 18

Contract Address: secret1rgm2m5t530tdzyd99775n6vzumxa5luxcllml4

Type: SNIP-20

Network: Secret Network

Total (fully vested) Supply:

10 million

Circulating Supply:

350,000 SIENNA at launch.

Distributed to:

300,000 SIENNA tokens locked for liquidity on our AMM once it launches.

200,000 tokens are allocated for the public sale on DAO Maker and Polkastarter, of which 25% will be unlocked at TGE (Token Generation Event).

7.2 Use Cases

7.2.1 Governance

In order to promote decentralised community governance for the network, SIENNA would allow holders to propose and vote on governance proposals to determine future features and/or parameters (such as interest rates, ratios, new rules, collateral limits etc) of the Sienna Network, Sienna Swap or other future applications, with voting weight calculated in proportion to the tokens staked. Users owning 1% of the total token supply are able to create proposals that anyone can vote on if they own at least one SIENNA. For the avoidance of doubt, the right to vote is restricted solely to voting on features of the Sienna Network Protocol; the right to vote does not entitle SIENNA holders to vote on the operation and management of the DAO, its affiliates, or their assets or the disposition of such assets to token holders, and does not constitute any equity interest in any of these entities. The arrangement is not intended to be any form of joint venture or partnership.

7.2.2 Protocol Incentivisation

36% of the governance token's total supply has been allocated to reward mechanisms via various interconnected incentivisation programs across the entire network.

The Sienna Network itself is simply a blockchain protocol which, by design, does not own or run any computing/storage servers, so third-party nodes are required for processing transactions and maintaining the blockchain. Providers of these services / resources (nodes) would require payment for the consumption of these resources (i.e. "mining" on the Sienna Network) to maintain network integrity, and SIENNA will be distributed to pay these providers.

Similarly, in order for the Sienna Network to function properly, users would need to be incentivised to play the role of liquidity providers and stake their digital assets into the market making pools. As compensation for opportunity costs, these liquidity providers which help to provide the core functionality of swaps on the Sienna Network

by staking or including assets to liquidity pools in exchange for liquidity provider tokens would be rewarded with SIENNA tokens (i.e. "liquidity mining" on the Sienna Network).

There will be various incentive programs for distribution of SIENNA token introduced over time to encourage positive or beneficial behaviour within the ecosystem, and in each case the reward will be distributed according to each user's relative contribution after various adjustment and correction parameters.

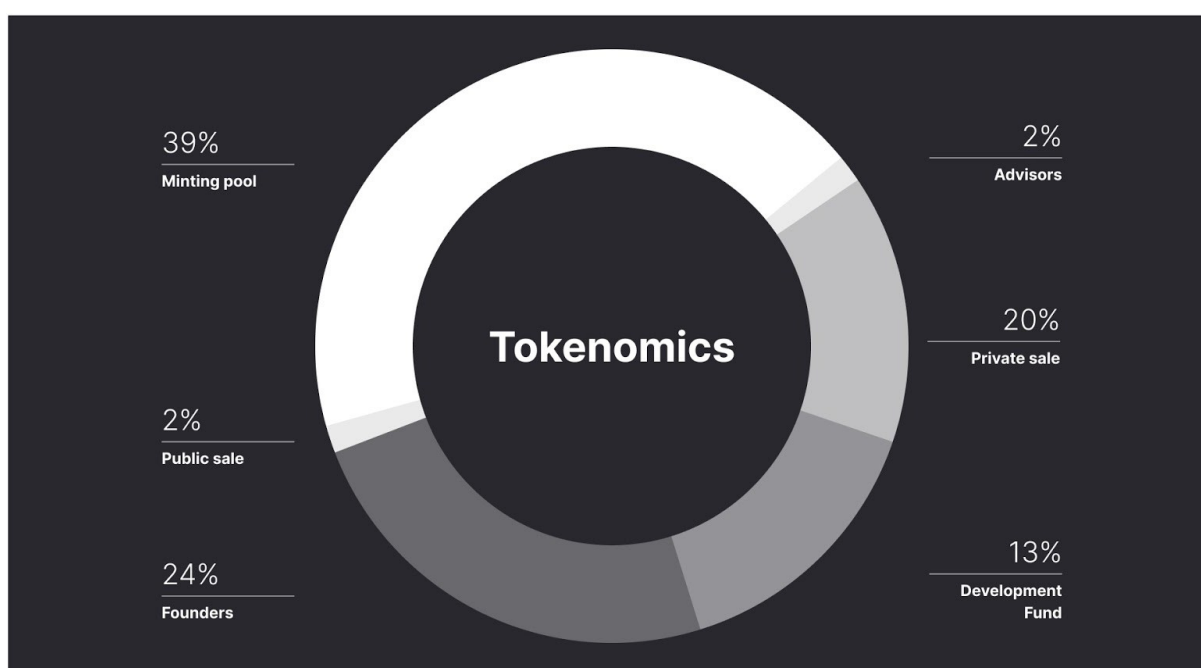
Sienna Network will gradually vest the SIENNA token for protocol usage, ensuring there is a proper and fair decentralized distribution of the token. This will help to create an optimal environment for true decentralized democracy and influence over the Sienna Network.

7.3 Token Launch and Allocation

The SIENNA governance token was launched via an initial dex offering (IDO) on Polkastarter and DAO Maker platform with liquidity added to Uniswap thereafter.

In total, 10M SIENNA will ever be minted with 350,000 tokens locked for liquidity on day one. The total number of tokens to be released for sale during the IDO event will be 400,000 at Polkastarter and 800,000 at DAO Maker, with each token valued at \$6.

SIENNA will thereafter follow a gradual vesting strategy with the bulk of the tokens allocated to the minting pool. The full breakdown of token allocation is as follows:



39% Minting Pool

The largest block of SIENNA tokens is earmarked to the minting pool. 2,500 SIENNA will vest per 24 hours and will be allocated for LP-pool rewards as follows:

SIENNA (staking) 400

SIENNA / sSCRT 400

SIENNA / sBNB 100

SIENNA / sETH 200
SIENNA / sUSDT (ERC20) 150
SIENNA / sUSDC (ERC20) 150
SIENNA / sXMR 200
SIENNA / WBTC 200
SIENNA / SEFI 100
SIENNA / sRUNE 25
sXMR / sUSDT (ERC20) 150
sXMR / SSCRT 100
sSCRT / sETH 100
sSCRT / sUSDC (ERC20) 75
sXMR / sWBTC 75
sSCRT / sWBTC 75

24% Founders

Vesting: Locked for 6 months, then released daily over 20 months.

20% Private sale

Vesting: Locked for 3 months, then released daily over 16 months. Participation condition of approved KYC/KYB.

2% Public Sale

200,000 tokens are allocated for the public sales on DAO Maker & Polkastarter.

13% Development fund

Vesting: Locked for 12 months, then released daily over 24 months.

2% Advisors

Vesting: Locked for 6 months, then released daily over 16 months.

In particular, it is highlighted that SIENNA:

(a) does not have any tangible or physical manifestation, and does not have any intrinsic value (nor does any person make any representation or give any commitment as to its value);

(b) is non-refundable and cannot be exchanged for cash (or its equivalent value in any other digital asset) or any payment obligation by the DAO, the Distributor or any of their respective affiliates;

(c) does not represent or confer on the token holder any right of any form with respect to the DAO, the Distributor (or any of their respective affiliates), or its revenues or assets, including without limitation any right to receive future dividends, revenue, shares, ownership right or stake, share or security, any voting, distribution, redemption, liquidation, proprietary (including all forms of intellectual property or licence rights), right to receive accounts, financial statements or other financial data, the right to requisition or participate in shareholder meetings, the right to nominate a director, or other financial or legal rights or equivalent rights, or intellectual property rights or any other form of participation in or relating to the Sienna Network, the DAO, the Distributor and/or their service providers; (d) is not intended to represent any rights under a contract for differences or under any other contract the purpose or pretended purpose of which is to secure a profit or avoid a loss; (e) is not intended to be a representation of money (including electronic money), security, commodity, bond, debt instrument, unit in a collective investment scheme or any other kind of financial instrument or investment; (f) is not a loan to the DAO, the Distributor or any of their respective affiliates, is not intended to represent a debt owed by the DAO, the Distributor or any of their respective affiliates, and there is no expectation of profit; and (g) does not provide the token holder with any ownership or other interest in the DAO, the Distributor or any of their respective affiliates.

Notwithstanding the SIENNA distribution, users have no economic or legal right over or beneficial interest in the assets of the DAO, the Distributor, or any of their affiliates after the token distribution.

To the extent a secondary market or exchange for trading SIENNA does develop, it would be run and operated wholly independently of the DAO, the Distributor, the distribution of SIENNA and the Sienna Network. Neither the DAO nor the Distributor will create such secondary markets nor will either entity act as an exchange for SIENNA.

7.4 Wrapped SIENNA on other chains

1. wSIENNA (wrapped SIENNA)

wSIENNA is an ERC-20 version of the native SIENNA token. It's available on the Ethereum network.

wSIENNA contract address: 0x9b00e6E8D787b13756eb919786c9745054DB64f9

The total and circulating supply will always be the same regardless of how many wSIENNA or SIENNA are traded. If, for example 100,000 wSIENNA are circulating, then 100,000 SIENNA are already locked; hence, it is a zero sum balance.

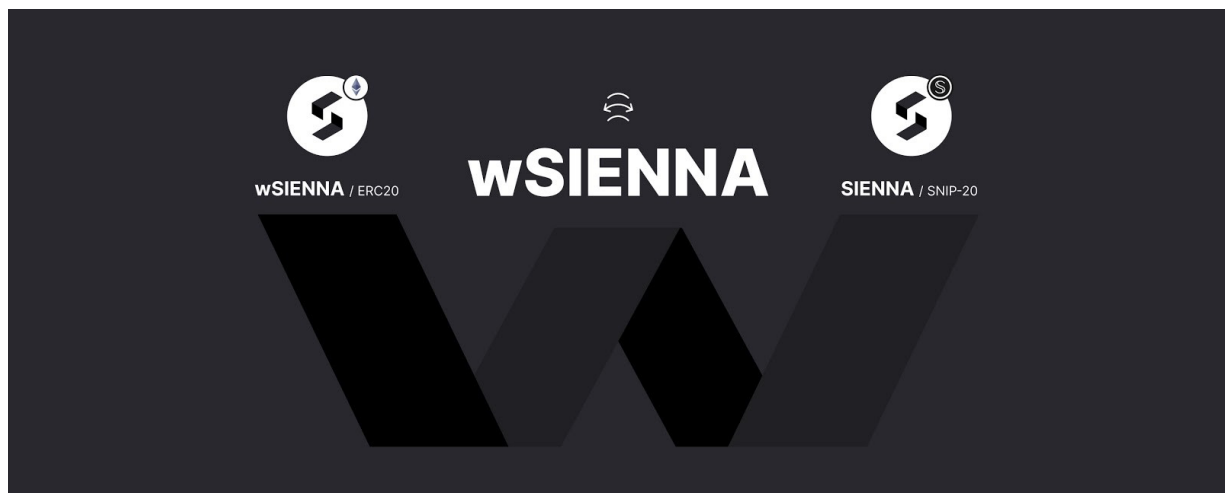
2. SIENNA (BSC)

SIENNA. (BSC) similarly is a Binance Smart Chain wrapped SIENNA, available at the contract address below.

SIENNA (BSC) contract address: 0x130f6e4d338bfd8304f5342d759abe5c6bd7ba9b

Locking SIENNA on the bridge mints wSIENNA/SIENNA (BSC). When a user wants their SIENNA back all they need to do is to send it to the bridge, which then burns the wrapped SIENNA and releases SIENNA from its smart contract.

It is important that users remember that while SIENNA is a privacy token, wrapped versions of SIENNA are not. Furthermore, to vote at the Sienna Network protocol, users must swap their wSIENNA into SIENNA.



8.0 Compliance

As crypto regulation develops, various organisations are developing standards to support regulatory obligations that authorities and industry organisations are installing.

The Sienna Network DAO and the contributors have a thorough understanding and experience working with regulatory frameworks and have taken steps to ensure compliance with regulations which apply and have sought legal advice resulting in Legal Opinions.

To assist users of Sienna comply with their obligations, and to enable products that are compatible with regulatory regimes, Sienna Network support or will support in the future the following concepts:

- Sender and receiver information are encrypted and sent as part of a transaction if the Originator choose to include the info in the memo of the transactions – e.g. by obtaining a digital signature of the ok to transact from the Benefactor for the transaction.
- The encryption supports user issuing of viewing keys thus allowing relevant parties with these keys to view transaction information details.
- The (future) support of Decentralized ID would help ensure that real world IDs could be used as part of the sender (Originator) and receiver (Benefactor) information.
- Decentralized, self-sovereign, IDs could be sourced from organisations that are developing in line with the sector, and satisfying the quality requirements that would be expected to fulfill the legal purpose.

The base framework for these concepts is embedded in Secret Network protocols, preserving privacy to protect users, and incorporating ‘privacy by design’ as called for under data protection legislation.

9.0 Roadmap

Sienna Network roadmap is prioritized to accelerate adoption via access to assets on other chains, by removal of barriers for entry into DeFi, and with not-yet-seen in DeFi product innovation.

Most likely DeFi could require functionalities that allow regulated institutions, including businesses, crypto custodians and exchanges, to interact, and support for their needs is a key objective. Identity and KYT thus are key priorities.

Adding tokenized assets to Sienna Network is also a roadmap priority – for this Sienna plans to develop a Token Launch Pad.

With the speed of change in the crypto environment, we may change this roadmap, but we will only do this if better options are available that support our core values.

2021

Q3

- TGE and launch of Sienna Network
- Polkadot Bridge Support
- Binance Smart Chain bridge support
- Fiat gateway for incoming funds from retail users

Q4

- Lending
- Decentralized Identities
- Pools utilizing decentralised identities, allowing Know Your Transaction (KYT) for transaction analysis

2022

- Tokenized Assets - initial support
- A secret

10.0 Closing Statement

Decentralized finance brings a great many benefits to its users, allowing transactions to occur without the need for intermediaries and without third party interference. There are, however, some lingering issues which the sector must now address. Chief among these is the transparency and immutable qualities of Blockchain which have created a DeFi sector with a severe deficit of privacy. At the same time, current protocols are prohibitively expensive to use.

Until now, users have therefore had to choose between the personal financial freedom of decentralized finance, or the personal financial privacy of centralized finance. Never were both achievable at the same time - Sienna Network solves for this core problem.

Sienna Network is a course correction for the industry, delivering all of the many benefits within the space, while at the same time protecting users from the unwanted prying of third parties. Sienna Network's users can freely interact with powerful DeFi products in peace of mind, enjoying the same levels of privacy, or even greater, as in centralized finance,

In the simplest terms possible, Sienna Network is the best of both worlds.

Sienna Network will spur the sector on to new frontiers, providing trading, borrowing and lending tools that are wholly private. These protocols will be used in combination, and interacting with, self-sovereign identities, which will allow users to leverage their personal data without ever compromising their security.

These factors place Sienna Network at the vanguard of privacy-first decentralized finance. Now is the time to unlock the full potential of DeFi.

11.0 Glossary of Terms

DeFi

An abbreviation for decentralized finance, a term which refers to financial and banking services which operate through the application of blockchain technology without the requirement of centralized authorities or intermediaries.

Sienna Network

A privacy-preserving DeFi DAO with robust tools built on the Secret Network blockchain.

Sienna (SIENNA)

A governance and utility token which serves Sienna Network and confers voting rights and privileges to token holders.

Secret Network

Secret Network is the first blockchain with privacy-preserving smart contracts. Applications built on Secret Network such as Sienna Network utilize encrypted data without exposing it to anyone - even the nodes in the network.

Cosmos

A network of independent blockchains which can easily communicate with each other through the Cosmos Hub.

Sovereign zone

An independent blockchain within the Cosmos network. This includes the Secret Network and by extension, Sienna Network.

Tendermint

The technology on which Cosmos, and by extension, Sienna Network is built.

IBC

Inter-blockchain communication.

12.0 Risk

Sienna Network platform does not differ from others. A number of significant areas of risk exist with new technology platforms, and in the worst case, the surfacing of these risks can result in the loss of assets entrusted to the platform or other users.

These include, but are not limited to:

12.1 Smart contract exploits

Programming or logic errors in smart contracts can render them vulnerable to attack vectors or even to failure. SiennaNetwork will submit all smart contracts to audit by Certik, a well known crypto auditing DAO. Their findings are then fed back to the developers. This work will be continued on an ongoing basis. Separately Sienna Network has introduced a bug bounty program designed to encourage our community to report issues they discover in a timely and responsible manner. Nevertheless, smart contract exploits represent an area of potential risk.

12.2 Manipulation of oracles

Oracles gather data from the external world and supply this information to smart contracts. If this information is incorrect, incomplete or manipulated, the smart contract may return unintended results. Oracles will be subject to the same audit and bug bounty program as smart contracts, but remain an area of potential risk.

12.3 Manipulation of Pricefeeds

Accurate and reliable price-feeds are essential for a well-functioning decentralized exchange and automated market maker such as Sienna Swap. Whilst Sienna Networks build redundancy and security protocols into the core architecture, there is risk that an error in coding or logic could cause price-feeds to be used incorrectly, and there is a possibility that systematic attacks on multiple price sources could cause the pricing used by SiennaNetwork to differ from the correct pricing. Such an event could lead to losses, and unwanted arbitrage possibilities.

12.4 Hacks

In common with all other systems of this type, hacks and exploits may occur at any time and with unknown attack vectors. The consequences of these can be significant for both the individual user and Sienna Network. Users should be aware of this risk and ensure that their own operational security and resilience reflects their risk tolerance

12.5 Data loss

Sienna Network does not store Personally Identifiable Data. The nature of blockchains means that certain information about transactions and wallet identities is exposed in public. As explained below, Secret Network is designed in such a manner that all information is cryptographically secure. Nevertheless, there is a chance that future breakthroughs in quantum computing, or exploits to the encryption algorithms could reveal information. The user of the network explicitly understands and accepts any consequences of such exposure. The use of the network is conditional of acceptance of this risk.

12.6 Audit

All significant smart contracts, oracles and bridges will be subjected to independent audits. Audit reports will initially be circulated within the teams responsible for the appropriate code or systems design. It is anticipated that reports will be made public in the fullness of time. The community will be encouraged to participate in audit work, and funds in the form of Sienna Governance Tokens will be made available for audit findings and audit work. Sienna Network is audited by [Certik](#) and being audited by Halborn.

12.7 Bug Bounty Program

Bounty hunters who discover bugs in any aspect of Sienna Network, Secret Network or interactions with other systems are encouraged to submit their findings to an independent bug evaluation and monitoring *service* on bugs@sienna.network These

will be reviewed in confidence, prioritized for fix and any emergency deployments begun. The service will determine bug rewards, paid in SIENNA tokens or Secret Tokens, and will also coordinate with the reporter any community recognition that is mutually decided. We believe that this is an important part of Sienna Network community, and will ensure that the scheme is promoted and is achieving the desired outcome.