Numerico

Whitepaper

Numerico

Numerico is here to shape the future of crypto trading.
Let's do it together.

Join the Numerico Community

Table of contents

Abstract

Numerico is a comprehensive ecosystem designed to empower users to seamlessly enter the cryptocurrency space, leverage professional trading strategies, and access a suite of AI tools. Formerly known as NewsCrypto, Numerico has evolved from providing educational content to offering an extensive suite of trading tools, AI-powered features, and a Layer 2 rollup.

A key part of Numerico's features is the Mercury Trade platform, which facilitates copy trading through APIs, allowing users to retain full control over their funds while connecting to multiple leading exchanges. This platform serves as a marketplace where traders can set their subscription fees, and users can automatically replicate trades while keeping 100% of the profits.

Numerico's ecosystem also includes a range of advanced trading tools, a Layer 2 optimistic rollup, and proprietary AI-powered tools. These tools, such as the automated AI audit and AI smart contract writing assistant, enable users to create custom trading strategies, efficiently write and deploy smart contracts, and ensure the security of their on-chain activities with automated audit systems.

The Numerico mobile app enhances the platform's capabilities by offering trading alerts, gamification, and easy access to all of Numerico's features on the go. Additionally, Numerico maintains the Stellar-Polygon bridge, facilitating the transfer of assets between these networks and leveraging the DeFi opportunities on Polygon.

As a leader in financial information and trading solutions within the global crypto market, Numerico caters to both beginners and experienced traders. The ecosystem is self-sustaining, with revenue generated through subscription payments and other services.

Central to Numerico's platform is the NWC token, initially launched on the Stellar blockchain and now also available on Ethereum, Binance Smart Chain, and Polygon. The NWC token is integral to the platform, providing access to premium features, enabling transaction settlements, and supporting users in building their personal brands within the Numerico ecosystem.

1. Introduction

1.1. Project Background

The idea behind the project goes back to 2015, when the founding team members got involved in the cryptocurrency markets. Coming mostly from a background in traditional finance, they noticed the lack of trustworthy information in crypto, especially for market participants without extensive programming knowledge (who are thus unable to verify the vast majority of information on their own).

This idea came to fruition in October 2019, when NewsCrypto was founded. Unlike most projects, NewsCrypto opted not to have an ICO, with all the initial funding coming from the founding members themselves. Given the nature of the project – namely becoming a reliable source of information in crypto, among other goals – this was considered crucial as it prevented any external investors from exerting an influence on the project's content. In brief, being self-funded was key for remaining unbiased. After the project was set up, the tokens were tradeable directly on the open market, meaning that market participants could freely determine the price rather than being constrained by the price set by the project, as is the case in ICOs. What's more, a significant portion of the tokens was airdropped to active community members and given out in various member rewards programs.

To reflect the project's growing vision and roadmap, NewsCrypto rebranded to Numerico in 2024, keeping the same ticker but overhauling the brand identity with a catchy name that is more compatible with the focus on AI, trading features and more.

2. Challenges

Cryptocurrencies are spreading rapidly, capturing the interest of an ever-larger audience. However, potential investors and users face significant hurdles that create anxiety and hesitation in entering the crypto space.

Firstly, the high volatility of cryptocurrencies creates a perception of financial instability, deterring many from investing.

Secondly, reliable and trustworthy information about cryptocurrencies—ranging from basic explanations of the underlying technology to trading-relevant data—is often difficult to find. Newcomers struggle to distinguish factual information from disinformation, particularly due to the proliferation of websites with manipulated content aimed at misleading investors and traders. This issue is compounded by lingering fears from the highly publicized market crash of January 2018, which painted the crypto space as perilous and filled with malicious actors.

Existing copy trading platforms exacerbate these challenges as they are mostly integrated with a single exchange, resulting in limited liquidity and a restricted user and trader base. This integration limits users' flexibility and access to a broader range of trading opportunities and increases their reliance on specific exchanges' liquidity.

The entry barriers become even more formidable in the rapidly expanding DeFi space, where users must piece together theoretical and practical knowledge from various sources without clear indicators of trustworthiness. Using DeFi protocols requires mastering numerous complex tools, further complicating the user experience and making it difficult for newcomers to effectively engage with DeFi.

3. Solution

Numerico addresses the challenges faced by new and experienced crypto users through a comprehensive ecosystem that integrates advanced trading tools, AI-powered features, and a secure, user-friendly environment.

Mercury Trade revolutionizes the copy trading landscape with its focus on security and interoperability. Unlike traditional platforms, Mercury Trade uses API keys without withdrawal permissions, eliminating custodian risk. This non-custodial approach has become increasingly important after the high-profile collapses of custodial platforms in 2022. By implementing state-of-the-art security measures, including cryptographic techniques and dedicated, isolated server storage, Mercury Trade ensures secure trade execution.

The platform's cross-exchange copy trading capability will be a significant technological breakthrough, as it will allow trades to tap into the liquidity of multiple exchanges. This feature not only enhances liquidity but also offers users a wider selection of traders to follow. For instance, a user on KuCoin can copy a trader on Binance, thus expanding trading opportunities and flexibility.

Additionally, Mercury Trade's non-custodial nature provides regulatory advantages. Since Numerico does not custody user funds, the requirements for KYC/AML measures are reduced, with individual exchanges handling these responsibilities. This simplifies compliance across major jurisdictions and enables Numerico to offer services to regulated and institutional clients.

Numerico's Layer 2 (L2) optimistic rollup solution brings fast transactions and Ethereum's security to the ecosystem. This environment is ideal for developers, even those with limited Solidity knowledge, thanks to Numerico's AI-powered smart contract assistant. The assistant enables users to efficiently write and deploy smart contracts, reducing the complexity typically associated with blockchain development.

The L2 rollup will also introduce on-chain staking, providing a new governance and incentive structure for the NWC token. This staking mechanism will offer users voting rights and access to exclusive benefits, further integrating them into the Numerico ecosystem.

The Stellar-Polygon bridge allows users to swap Stellar Lumens (XLM) to Polygon. This bridge caters to two main audiences: Stellar users who wish to maintain their XLM exposure while accessing Polygon's DeFi ecosystem, and DeFi users looking to gain XLM exposure without leaving their familiar blockchain environment.

Numerico's integrated approach combines the advantages of secure, non-custodial copy trading, a robust Layer 2 rollup for fast and secure transactions, and a versatile Stellar-Polygon bridge.

These solutions provide users with a comprehensive and user-friendly crypto ecosystem, empowering both beginners and experienced traders to navigate the cryptocurrency landscape with confidence and ease.

4. Products

4.1. Trading Tools and Education

Numerico provides a robust platform designed to support both new and experienced crypto traders with essential tools and reliable information. The platform consolidates crucial data on the crypto market, offering fundamental and technical analysis resources to guide informed trading decisions. The platform features a free Basic tier with essential tools, as well as a Professional tier with more advanced trading tools and indicators.

The Numerico Academy offers free courses designed by industry experts, covering everything from crypto basics to advanced topics in privacy, security, and DeFi. The Academy provides users with both theoretical knowledge and practical insights, ensuring a well-rounded education in cryptocurrency trading and investment. The mobile app offers all the educational and trading resources in a convenient format.

As security is a vital concern at Numerico, the team has also developed a native mobile wallet app for the NWC token. This enables users to safely store, receive and send their NWC tokens right from their phones, without having to rely on third-party wallet providers or exchange wallets. The wallet is non-custodial, meaning that only the users have access to their private keys, making this the most secure method for holding and using NWC, which also boasts a modern, smooth and user-friendly interface. PIN, face ID and fingerprint authentication methods provide the ideal mix of convenience and security.

The wallet is designed to give all NWC token holders a way to easily view their token balance and transaction history, send, receive and hold tokens without relying on any other app. It also includes a price tracker that displays both the current price of NWC and the total value of the user's NWC balance.

4.2. Layer 2

Numerico's Layer 2 (L2) solution leverages optimistic rollup technology to offer fast, secure transactions while maintaining the robust security of the Ethereum network. This advanced solution is designed to meet the needs of both developers and users, providing an ideal environment for building and using decentralized applications (dApps).

The L2 rollup processes transactions off-chain and settles them on the Ethereum mainnet, ensuring rapid transaction times without compromising security. It is designed to be accessible even to those with limited Solidity knowledge, thanks to Numerico's AI-powered smart contract assistant. This assistant simplifies the process of writing and deploying smart contracts, enabling more developers to create and launch innovative dApps.

With the launch of L2, Numerico will introduce on-chain staking for the NWC token. This new feature will offer a novel governance and incentive structure, providing stakers with voting rights and access to exclusive benefits within the Numerico ecosystem.

Numerico's L2 rollup not only enhances the user experience by offering fast and secure transactions but also fosters innovation by lowering the barrier to entry for developers. This makes it a cornerstone of Numerico's mission to create a comprehensive, user-friendly crypto ecosystem.

4.3. Mercury Trade

Mercury Trade is Numerico's innovative copy trading platform that stands out due to its focus on security and interoperability. By using API keys without withdrawal permissions, Mercury Trade eliminates custodian risk, ensuring that users retain full control over their funds. This approach is crucial in the wake of high-profile collapses of custodial platforms in 2022.

The platform's cross-exchange copy trading feature will be a significant breakthrough, enabling users to copy trades across multiple exchanges. This not only enhances liquidity but also provides a broader selection of traders to follow. For instance, a user on KuCoin can seamlessly copy a trader on Binance.

Mercury Trade's non-custodial nature also offers regulatory advantages, reducing the requirements for KYC/AML measures as these are handled by the individual exchanges. This makes it easier for Numerico to comply with regulations across major jurisdictions and to offer services to regulated and institutional clients.

With state-of-the-art security, multiple layers of protection, and advanced cryptographic measures, Mercury Trade provides a secure and flexible environment for users to engage in copy trading.

5. Stellar - Polygon Bridge

5.1. Introduction

While blockchains brought about a revolutionary way of creating decentralized databases with tokens that can be more secure than in any traditional monetary system, a major problem is that each blockchain is typically completely isolated, with no way to communicate with other chains.

In today's world, where there are many different blockchains with different use cases – some optimizing for institutional use, others for decentralization or speed – it's become necessary to bridge this gap and allow users of one chain to transfer tokens or data to another chain, and that's where the token bridge comes in.

What the bridge allows is for anyone that holds XLM tokens on the native Stellar blockchain to bring them over to Polygon in the form of wrapped XLM (wXLM), where they can be traded and used in Polygon's rapidly growing DeFi ecosystem. These wXLM tokens represent XLM tokens at a 1:1 ratio and can always be redeemed back for native XLM through the bridge.

The bridge utilizes a variety of security mechanisms, such as different nodes that transmit the transaction data from one chain to the other and Chainlink's Proof of Reserve feature, which constantly tracks the token balances on the swap wallets with an independent node. What follows below is a detailed technical explanation of the bridge, covering its architecture and functionalities.

5.2. Components

The bridge between the Stellar and Polygon platform consists of various components, which utilize AMQP to communicate between one another and execute transactions based on received messages. Data is preserved through the Redis database.

Finally, the appropriate Smart Contract (deployed on the Polygon network) as well as the Stellar SDK is used for withdrawing and depositing funds from one platform to another.

The project consists of the following components:
- The Smart Contract (SC)
- Polygon listener
- Stellar listener
- Token sender
- Stellar signer
- Web client

5.2.1. AMQP

AMQP (Advanced Message Queueing Protocol) is used by the components in order to communicate between one another and execute transactions based on received messages. The protocol is quite robust, as it can also process messages that happened during downtime.

The Polygon listener utilizes AMQP to publish messages to the transaction.stellar queue. Through the ethers library it connects to the deployed SC and listens for emitted withdrawal events. When a withdraw event is processed, Polygon listener publishes a message to the queue, passing along the recipient Stellar wallet address, the amount and the transaction memo.

The Stellar listener utilizes AMQP to publish messages to the transaction.polygon.deposit queue. Payments on the user's Stellar account get streamed through the Stellar SDK. When a new payment gets detected, Stellar listener publishes a message to the queue, passing along the recipient Polygon wallet address and the amount.

The Token sender utilizes AMQP to consume messages from the transaction.stellar and transaction.polygon.deposit queues. Depending on the message consumed, it either initiates payment to the Stellar side (through the Stellar SDK) or Polygon side (by calling the SC's deposit function).

5.2.2. Redis

Data is preserved through the Redis database, a simple key-value storing component. It is used for storing block numbers on the blockchain, Stellar payment cursors, transaction memos, transaction recipient addresses and transaction signatures. This is useful for syncing up the state of the listeners in case of downtime.

5.2.3. Downtime Handling

In order to prevent loss of user funds during component downtime, the protocol stores the last payment cursor (used to sync up and query through Stellar payments) as well as the last blockchain block number (this then gets compared to the actual block number and until the last block number matches the actual number, it loops through any events that might have happened during downtime and catches up on any missed payments) in the database. During the initialization, the administrator will have to provide the listener components with the last block number and last payment cursor arguments, respectively.

5.2.4. Smart Contract

The Smart Contract (SC) is a variation of the ERC20 token. It operates the withdraw and deposit transactions onto the Polygon network. It is secured through the AccessControl library, which assigns roles to various addresses. These roles can then be applied to the functions inside the SC to prevent users without them from calling various functions (e.g. the deposit function can only be called by a user, which has the depositor role). The depositor and administrator role get assigned on contract deployment (the deployer of the contract is assigned the administrator role, the 3rd deployment argument is the address of the depositor, which gets assigned the depositor role).

The SC utilises ChainLink requests to query the administrator's Stellar wallet balance and find out how many tokens are locked on the Stellar side. Based on the number of the locked tokens, the SC can prevent users from withdrawing funds from the contract. If the number of locked tokens is lower than the total supply of tokens on the contract itself, all further withdrawals will get rejected. In order to execute ChainLink requests, the contract itself needs to be supplied with LINK tokens, which are used to pay for the ChainLink requests. Additionally, the administrator of the contract can call a function for withdrawing an amount of LINK tokens to another address.

When a user withdraws a specified amount of tokens, a special withdraw event gets emitted, which is recorded on the blockchain and gets consumed by the Polygon listener to initiate the payment to the user's Stellar wallet. The project is provided with Hardhat unit tests, which test the functionality of role assignments, token deposits and token withdrawals.

5.3. Operations

5.3.1. From Stellar to Polygon

1. The user enters desired amount of tokens to be transferred.

2. The user enters destination address to where the tokens should be sent.

3. Based on the entered destination address, a memo gets generated and stored in the database, which is associated with the user's payment destination address.

4. The user then sends a payment to the provided Stellar public key and attaches the generated memo (if a wrong memo gets attached, it could lead to loss of user funds, since it will not get sent to the appropriate address).

5. The Stellar listener catches the payment and based on the memo reads the wallet address from the database.

6. Stellar listener publishes a message to the transaction.polygon.deposit queue.

7. Token sender consumes the sent message and calls the SC deposit function.
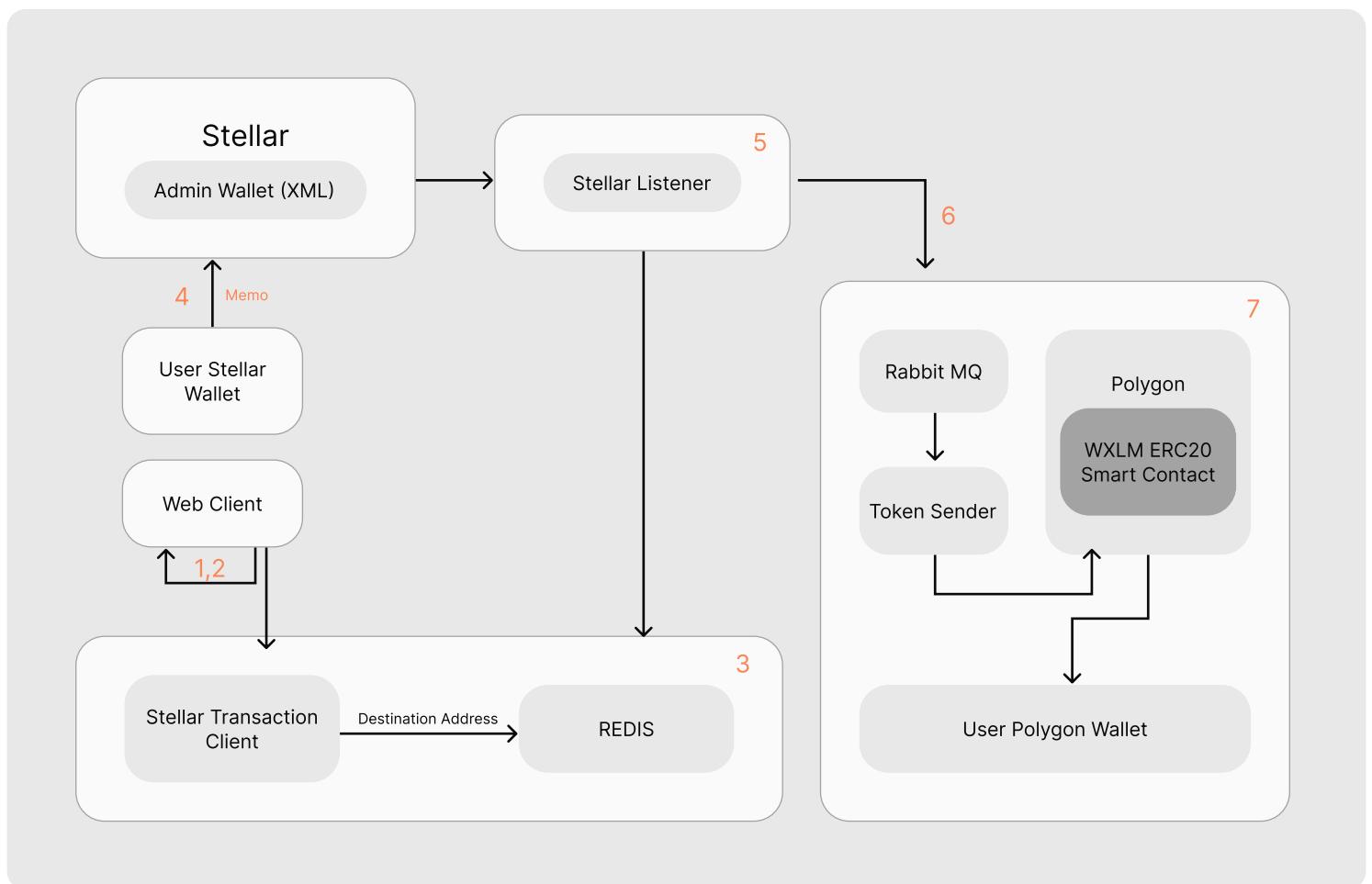
1. The user enters desired amount of tokens to be transferred.

2. The user enters their Stellar account public key and memo.

3. If the amount of locked Stellar tokens is lower than the total supply on the SC, the withdraw gets disabled (this is checked periodically by calling a ChainLink request, which provides information about the Stellar wallet balance).

4. If withdraw is enabled (i.e. there are no discrepancies in the token supply), then the tokens get withdrawn from the SC.

5. Polygon listener catches the emitted Withdraw event and publishes a message to the transaction.stellar queue name.

6. Token sender consumes the sent message and initiates the Stellar transaction.

7. It is required that the transaction first gets signed by all the operator accounts, until then, the transaction gets put on hold.

8. When all signatures are provided, the payment is executed.
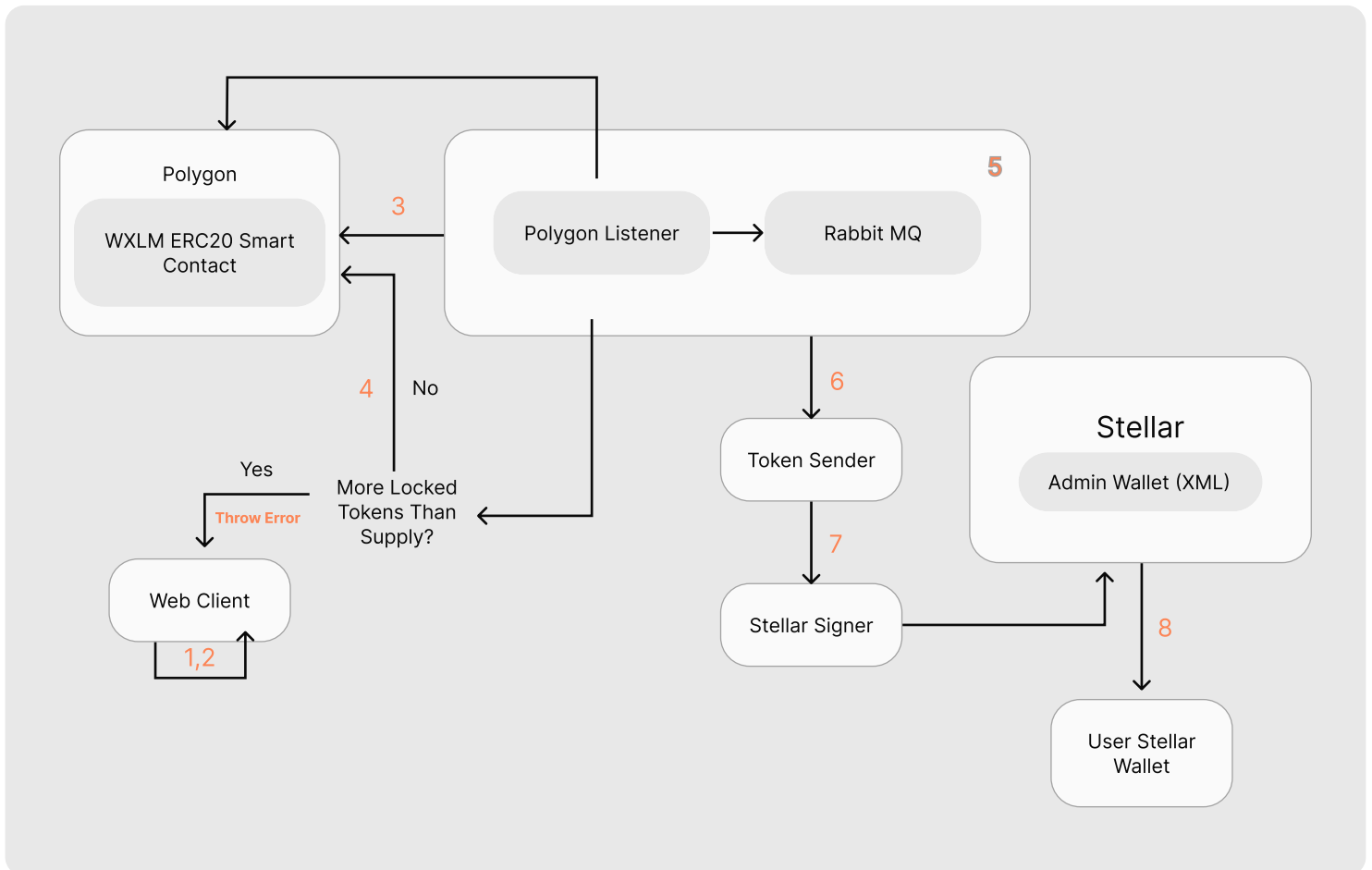
6. Numerico Token - NWC

6.1. Token Overview

NWC tokens are the basis of the internal economic system of Numerico and are used to access premium services implemented on the platform and various parts of the Numerico ecosystem. The token has a fixed supply with a burning mechanism, making it deflationary, while no new tokens can ever be minted.

6.2. Tokenomics

Token name: Numerico Token

Symbol: NWC

Total supply: Started at 280.000.000 which is being reduced due to automatic token burning

6.2.1. Token Allocation

Public sale	50,00 %	140 000 000
Team	32,09 %	89 852 000
Community Development	14,41 %	40 348 000
Reserve Funds	3,50 %	9 800 000

6.3. Token Burning

Numerico has a fixed supply of tokens

6.4. NWC Token Utility

6.4.1. Built-in-rights
Increased engagement and audience expansion

NWC token as a project services provider.
Users have to pay fees in NWC tokens and/or stake NWC in order to access premium features of Numerico's AI tools and other parts of the ecosystem.

Token as a governance tool.
Holding and staking tokens gives users the right to vote on governance proposals and decide on the future developments of the project.

Token as an incentive tool.
All incentive payments and user rewards will be made in NWC tokens.

6.4.2. The Structural Eelement of the Circulation System
Economy creation

Token as a measure of value. Prices for all products and services, rewards, and payouts are indicated in NWC tokens.

Token as a payment and exchange tool.
The token acts as a means of payment for any transactions within the platform.

6.4.3. Funding Instrument
Funding for the development of the project

Raising funding through the implementation of the initial emission of NWC tokens.

6.4.4. Management Tool
Stabilization of development and growth

The payment of bonuses and incentives for actions aimed at developing the platform (promotion, development, representation).

6.5. Stellar Blockchain

The Numerico token was originally built on the Stellar blockchain. Stellar is a decentralized payment network that runs on a distributed ledger. It primarily connects banks, payment providers, institutions and everyday users in order to enable nearly free and instant transactions.

7. Crosschain

Because different blockchains offer different capabilities (smart contracts, DeFi, etc.), Numerico decided to enable a cross-chain swap in order to facilitate the adoption of NWC in DeFi protocols and decentralized exchanges, as well as making it available to a wider user base. This is done by locking NWC tokens in a smart contract on one chain, while a corresponding token is minted on the destination chain. Because the different versions of the token are linked by a smart contract, it's possible to swap one version for another at any time.

NWC started out on the Stellar blockchain due to its very fast and cheap transactions. Eventually, the exponential growth of decentralized finance on other chains (particularly Ethereum and BSC) has created the need for Numerico to go cross-chain and make the token available for use in these new protocols.

Because of that, the team has implemented a version of NWC token on both Ethereum and BSC (with the Ethereum version also available on Polygon), making it possible for users to swap different versions of NWC with a single click.

As this is done automatically via a smart contract, any user can swap between the tokens at a 1:1:1 ratio at any time and at no cost (except for the network transaction fee). The token will of course also be available on the Numerico Layer 2 rollup.

Stellar was chosen as the native blockchain as it enabled us to offer the cheapest transaction fees available. Ethereum, on the other hand, is home to the vast majority of DeFi projects, and the popularity of this area is growing constantly. The Binance Smart Chain is relatively new, and it is focused on providing a fast, cheap and reliable blockchain for innovative decentralized finance projects. It also offers interoperability with Ethereum, so it is bound to grow as DeFi protocols gain more and more adoption.

7.1. Cross-Chain NWC Swap

The max supply of NWC started at 280,000,000 and this number is continuously being reduced due to the token burning mechanism. The supply was then divided into three chains: Stellar, Ethereum and BSC. There were 50,000,000 tokens minted on the Ethereum chain and 5,000,000 on the Binance Smart Chain. Consequently, the team has burned 55,000,000 tokens on the Stellar network to keep the max supply at 280,000,000. The automatic token burns will continue on the Stellar chain, where most of the supply is located.

The tokens can be swapped between the different chains in a 1:1:1 ratio at any time, and this feature is available on the official Numerico website.

This brings a number of advantages to Numerico's users, the most significant of which are the ability to hold NWC in their Ethereum or BSC wallets and to send the token to any Ethereum or BSC address. This, in turn, enables the use of NWC as an asset in DeFi products and dApps, NWC trading on decentralized exchanges and much more.

8. Roadmap

2024 Q3
- Announcement of the rebrand
- Launch of L2 blockchain testnet
- Introduction of our AI trading assistant

2024 Q4
- Launch of L2 mainnet with ecosystem incentives for developers
- Retroactive rewards for top testnet contributors
- Release of an AI-powered smart contract writing assistant
- Introduction of a smart contract audit system

2025 Q1/Q2
- On-chain staking on our L2 mainnet
- Introduction of new governance and incentive structures
- Release of our financial product

2025 Q3/Q4
- Expansion of our financial services user base
- Partnerships with crypto and non-crypto brands
- Enhanced revenue sharing for on-chain and in-app NWC stakers

2025 Q1/Q2
- Release of the demo version of our revolutionary GameFi product, setting new standards in cryptocurrency gaming with unparalleled engagement, ownership, and rewards.

Numerico is here to shape the future of crypto trading. Let's do it together.

Join the Numerico Community