

#### Stalwart

# Stalwart Ecosystem White Paper

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### Brief overview of Stalwart

Stalwart is an innovative cryptocurrency product that merges the convenience of stablecoins with the stability of traditional assets, such as gold, bonds, lowvolatility stocks, and ETF funds. This solution broadens the scope of traditional cryptocurrency investments, offering users access to a wide range of assets and investment tools to diversify their portfolio and minimize risks as much as possible.

A groundbreaking aspect of the product is the use of Artificial Intelligence (the STALWART AI module) for the automatic rebalancing of assets within Stalwart. The AI module continually analyzes market conditions and adjusts the asset allocation in the portfolio timely, ensuring an optimal mix of stability and growth potential. This enables more precise risk management and real-time market adaptation.

Overall, Stalwart represents a comprehensive cryptocurrency ecosystem with a variety of financial management and online payment tools: secure wallets, staking options, a transaction explorer, payment modules, and universal codes.

## Revolutionary capabilities of Stalwart AI in sentiment analysis

Advances in Artificial Intelligence (AI) and Machine Learning (ML) have dramatically changed portfolio management methods, especially concerning cryptocurrencies. In the last two years, technologies based on advanced language models have made significant progress. They can now accurately identify emotions in texts – a task previously deemed very challenging.

#### Transforming the analytical process through AI

Modern language models like GPT (Generative Pre-trained Transformer) and their equivalents can now effectively analyze vast amounts of textual information, accurately identifying the emotional tone of individual messages and the overall sentiment of publications. This significantly enhances the accuracy and depth of market sentiment analysis.

In the past, analyzing thousands of news articles, blog posts, and social media messages required substantial human effort and time. Today, thanks to automation and the use of artificial intelligence, this process has been significantly simplified and accelerated. Machines can process huge data sets in the shortest possible time, freeing up analysts to focus on more complex tasks.

Unlike humans, artificial intelligence provides greater objectivity and consistency in sentiment evaluation, avoiding biases and fatigue that could affect human analysis.

#### How the AI Module helps save time and resources

Our system leverages AI technologies for the automatic analysis of the news environment related to cryptocurrencies, significantly reducing the need for manual information processing. Thanks to the system's ability to quickly process and analyze data, users can timely receive current information about market sentiment, facilitating faster and well-informed investment decisions.

Automated portfolio management based on sentiment analysis provides the opportunity to optimize investment strategies without constant human intervention, saving time and resources.

#### Analytical approach: Detailing sentiment evaluation

Within our portfolio management system that's based on cryptocurrency sentiment analysis, a key component is the high-precision analytical mechanism. This mechanism is built on the principle of in-depth analysis of the emotional tone of news related to cryptocurrencies. Utilizing artificial intelligence, we analyze and evaluate the degree of negativity or positivity of each piece of news, assigning it a score on a scale from -10 to +10.

#### Sentiment evaluation methodology

News items are assessed on a scale where:

- -10 indicates the most negative sentiment,
- O represents a neutral sentiment,
- +10 signifies the most positive sentiment.

Our scale is unique in that it accounts for both negative and positive aspects of sentiment, allowing for precise determination of each news item's position within the spectrum from extremely negative to extremely positive emotional tone.

#### Features of sentiment evaluation

The artificial intelligence algorithms analyze the text of each news piece, extracting key words and phrases that may indicate emotional tone. These data are used to calculate the final sentiment score. Our cryptocurrency sentiment analysis-based portfolio management system includes not only detailed analysis of the emotional tone of the news but also deep contextual analysis that considers a broad spectrum of factors affecting cryptocurrency market behavior.

In addition to news analysis, our system examines the network activity of each cryptocurrency, including the movement of large sums between wallets. This allows for the identification of potential indicators of market manipulation or upcoming significant price changes.

We also integrate the analysis of key fundamental technical indicators, such as the 200-day moving average, which helps identify long-term trends and potential market reversal points.

## Additional fundamental techniques for analyzing the global trend

Fear and Greed Index: This index is a complex indicator based on various data sources, including market volatility, trading volumes, social sentiments, Google search trends, and others. It helps assess the overall mood among investors and potential shifts in market behavior.

Trading Volume Analysis: Examining changes in trading volumes can reveal growing interest in a specific cryptocurrency or, conversely, a decline in activity that may signal upcoming price movements.

Market Dominance Assessment: Analyzing the market share of a particular cryptocurrency in the total market capitalization provides insights into its influence and stability in the market compared to other assets

## Additional fundamental techniques for analyzing the global trend

Depth of Market Understanding: The integration of various analysis methods allows for a comprehensive and multifaceted understanding of the market situation. Increased Forecast Accuracy: Combining emotional and contextual analysis with fundamental indicators significantly enhances the accuracy of market movement predictions.

Adaptability: The system is capable of adapting to rapidly changing market conditions, providing users with up-to-date data for making informed investment decisions.

### **Data Sources**

The foundation of our sentiment-analysis-based cryptocurrency portfolio management system is a deep understanding of the importance of data sources. We aim to aggregate information from a broad spectrum of channels, including social networks, news websites, specialized blogs, videos on popular platforms, and Telegram channels. This diversity of sources enables us to gain a comprehensive view of market sentiment that accurately reflects the current state of the cryptocurrency market.

#### Quality and Selection of Sources

We do not merely aggregate data; we meticulously analyze the quality of each source. It is crucial that the information is precise, up-to-date, and comes from reputable platforms and authors. This eliminates the risk of using unreliable or distorted information in our analysis.

In the process of analysis, we continuously review our sources, excluding those that show a tendency to disseminate unverified or erroneous information. This ensures high reliability and quality of analytical data.

Our preference for sources with established reputations guarantees that sentiment analysis is based on verified and authoritative data. This includes both major news portals and specialized cryptocurrency platforms known for their reliability and accuracy of information.

## Portfolio management through Index Coins

Within our sentiment analysis-based portfolio management system, two types of index coins play a pivotal role: Stalwart Coin and Stalwart Index. These coins represent an innovative tool that allows automatic adaptation to changing market conditions, optimizing the portfolio in line with current trends and sentiments.

#### Stalwart Coin: Stable coin

Stalwart Coin is based on stablecoins and digital gold, ensuring stability and protection against market volatility. The coin is designed for investors aiming to preserve capital and minimize risks.

Thanks to its pegging to stablecoins and digital gold, Stalwart Coin provides a reliable level of stability, making it an ideal choice during periods of high volatility in the cryptocurrency market. This helps protect the portfolio from sharp price fluctuations.

#### Stalwart Index: Volatile coin

Stalwart Index encompasses volatile assets such as Ethereum and Bitcoin. This coin is intended for investors seeking opportunities for active capital growth and who are prepared to take on a higher level of risk.

Considering the growth potential of volatile assets, Stalwart Index enables investors to maximize the returns on their investments in periods of positive market sentiment. This strategy is especially effective when the market shows a stable upward trend.

By integrating these index coins into a portfolio management strategy, investors can balance their risk and return preferences more effectively, tailoring their investments to match their individual risk tolerance and market outlook.

#### Automatic portfolio rebalancing

The portfolio is automatically rebalanced based on sentiment analysis: assets associated with low sentiment are sold, while those with high sentiment are acquired. This enables investors to adapt to market changes, minimizing losses and maximizing profits.

## Goals

The primary goal is to provide investors with tools for an optimal balance between risk and potential return, in line with current market conditions and sentiments.

Automatic rebalancing eliminates the need for constant market monitoring by the investor, allowing them to focus on long-term strategy while the system takes care of short-term adaptations.

Thus, our approach to portfolio management through index coins like Stalwart Coin and Stalwart Index offers investors a unique opportunity to optimize their investments, effectively responding to changing trends and sentiments in the cryptocurrency market.

## Creating custom Index Coins for StWART token holders

In our ecosystem, those in possession of our StWART internal token are granted a unique opportunity to craft their own index coins, mirroring the likes of Stalwart Coin and Stalwart Index. This feature ushers in new vistas for tailored portfolio management, equipping every long-term holder with the means to forge a potent investment strategy.

#### Benefits of custom Index Coins

**1. Portfolio Customization:** Users can create index coins that best align with their investment goals, preferences, and risk tolerance. This allows for the formation of a portfolio optimized for personal strategies and market expectations.

**2. Diversification:** By crafting their own index coins, users can effectively diversify their investments, spreading capital across various assets and sectors of the cryptocurrency market. This reduces risk and enhances the potential for returns.

**3. Automated Management:** Custom index coins can be configured for automatic rebalancing according to predefined parameters and sentiment analysis algorithms. This ensures flexibility and adaptability of the portfolio to market changes without constant investor intervention.

**4. Access to Advanced Analytical Tools:** Utilizing StWART to create index coins grants access to sophisticated analytical tools and data, which can be used for in-depth market analysis and refinement of investment strategies.

## A unique opportunity for long-term holders

The ability to create custom index coins through StWART represents a revolutionary innovation in the realm of crypto investing, offering long-term holders unique tools for the development and implementation of personalized investment strategies. This approach not only maximizes potential profit and minimizes risks but also provides investors with flexibility and control over their investments, making the portfolio management process more intuitive and effective.

### Social trading mechanism

Within your project, a social trading mechanism could become a key feature that promotes the exchange of knowledge and strategies among users, as well as strengthens the community around your product.

Here's how this idea can be implemented:

**1. Portfolio Results Sharing:** Users can voluntarily share the outcomes of their portfolios, including asset structure, historical returns, and adopted risk management strategies. These data are anonymized to preserve confidentiality.

**2. Rating System:** A rating system is established, based on profitability, stability, and other key performance indicators of portfolios. The top-10 portfolios are published in a dedicated section of the platform, updated in real-time.

**3. Copy Portfolio Feature:** Users reviewing the top portfolios can choose any of them and automatically replicate its structure in their own portfolio. This allows for the adaptation of the chosen portfolio to individual needs and investment sizes.

**4. Purchasing a Portfolio Index Coin:** Alternatively, to simplify the process, users can simply buy an index coin that automatically replicates the structure and asset distribution of a top portfolio. This eases entry for beginners wishing to invest based on successful strategies.

#### Advantages of the Social Trading Mechanism

**Learning and Engagement:** Beginners and less experienced investors gain access to successful strategies and can learn from the examples of leading traders, which enhances their engagement and educational level.

**Community and Competition:** An active community is built around the platform, where users can communicate, exchange tips, and strategies. The element of competition encourages users to improve their performance.

**Democratization of Investing:** The social trading mechanism makes the investment process more accessible and understandable to a broad audience, lowering the barriers to entering the cryptocurrency market.

**Automation and Simplification:** The ability to copy portfolios and buy index coins simplifies the investment process, making it accessible even to those who do not have in-depth knowledge of cryptocurrencies.

### Stalwart ecosystem

#### 01 Web Wallet

**User-Friendly Interface:** Manage your assets, view transaction history, and track real-time balance with our intuitive web wallet.

**Security:** Your funds are securely protected with state-of-the-art security technologies, including multi-factor authentication and data encryption.

**Transparency:** Full transaction history is always available, ensuring transparency and control over your finances.

#### 02 Browser Wallet Plugin

**Fast Payments:** Make payments for goods and services in one click using our browser wallet plugin.

**Enhanced Security:** The browser plugin utilizes the same advanced security technologies as the web wallet to protect your funds.

**Convenience:** The plugin is always accessible, making online payments extremely convenient.

#### 03 Staking Dashboard

**Additional Income:** Earn passive income by staking your Stalwart utility coins (stWART).

**Ease of Use:** Manage your stWART with our convenient staking dashboard; transfer coins to other users, buy new coins, and more.

#### 04 Transaction Explorer

**Transparency:** Track all transactions in the Stalwart network, including your own.

**Search Information:** Find any transaction by hash, address, or other parameters.

**Analytics:** Use the explorer for transaction data analysis and to gain insights about network status.

#### 05 Payment Module

**Accept Payments:** Receive payments for goods and services in Stalwart cryptocurrency with our payment module.

**Expand Your Business:** Attract new customers by offering them the option to pay with cryptocurrency.

**Boost Competitiveness:** Stay ahead of competitors by offering modern payment options.

#### 06 Universal Codes

**Boost Sales:** Create unique Stalwart codes and offer them to your customers as discounts, bonuses, or gifts.

**Increase Loyalty:** Attract new customers and retain existing ones with a loyalty program based on Stalwart codes.

**Expand Your Audience:** Use Stalwart codes to promote your brand and generate interest in your business.

## Overview of unique features and offerings

#### "Gold-Backed" assurance

Stalwart Coin is a cryptocurrency that's secured by various stablecoins, providing it with unparalleled stability and reliability in the volatile crypto market.

#### Artificial Intelligence for asset balancing

Stalwart AI is engineered to optimize the balance between gold assets and stablecoins. This contributes to superior risk management by dynamically adjusting the portfolio in response to market conditions.

#### Flexible fees

The project offers competitive and flexible fees, making it accessible to a broad range of users, from casual investors to high-stake traders.

#### Community participation in voting

Stalwart empowers its users by allowing them to participate in votes, influencing key decisions within the project. This enhances community engagement and ensures that the project evolves in line with user interests.

#### Economic efficiency

Stalwart aims to transform traditional business models by offering improved economic efficiency and reducing transactional costs. This initiative seeks to streamline operations and enhance value for all participants in the ecosystem.

#### High-level security and transparency

Adhering to high standards of security and transparency is fundamental for the project. It is critical for building trust and safeguarding user assets against threats.

#### Liquidity and exchange convenience

Stalwart ensures easy access to currency exchange and maintains high asset liquidity. This is pivotal for users who seek to swiftly and efficiently manage their portfolios or react to market opportunities.

## Stalwart principles

We actively harness blockchain technology in our Stalwart Coin to ensure transparency, security, and innovative capabilities for our users. The following principles form the foundation of our system:

**Stability and Transparency:** Stalwart Coin is grounded in blockchain, guaranteeing transparency and a definitive record of all transactions. This allows users to easily verify and confirm each operation, fostering trust in the system.

**Stablecoins and Reserves:** We employ blockchain to back our coin with stablecoins such as USDT, USDC, PaxGold, and DAI, ensuring the coin's value stability and additional protection from market volatility.

**Decentralization and Security:** By embracing blockchain's decentralization principles, we mitigate risks associated with centralized structures. This also enhances security levels since data is stored and validated by a network of nodes, making the coin less susceptible to fraud.

**Integration with 1Inch:** Integration with the leading DEX aggregator, 1Inch, facilitates swift exchanges of Stalwart Coin for over 4,000 other crypto assets. This is achieved within a secure and decentralized blockchain environment.

**Reserve Management through DAO:** We leverage smart contracts and DAO (Decentralized Autonomous Organization) governance mechanisms to ensure flexible reserve management. Decisions regarding the adjustment of reserve compositions and asset proportions are made according to community voting.

## Details of the collateral mechanism associated with stablecoins

The collateral mechanism of Stalwart Coin, tied to stablecoins, involves a sophisticated system designed to ensure the stability and reliability of the digital asset. Here's a more detailed explanation:

**Selection and Proportions of Stablecoins:** The system automatically selects stablecoins (USDT, USDC, DAI, Pax Gold) to form reserves. The proportions among these stablecoins are determined by considering the stability of each asset, allowing for risk diversification.

**Purchasing and Exchanging Process:** When a user purchases Stalwart with a cryptocurrency not listed among the reserve stablecoins, the system automatically conducts operations on decentralized exchanges (DEXs). It sells the received cryptocurrency on a DEX and buys the selected stablecoins in a specific proportion. This process ensures the coin's price stability.

**Decentralized Management (DAO):** Decisions regarding the reserve structure and stablecoin proportions are made through Decentralized Autonomous Organizations (DAOs). Stalwart Coin holders can participate in votes and make proposals to change the reserve composition.

**Analysis and Adjustment of Reserves:** The mechanism includes a system for analyzing stablecoin rates. If one of the stablecoins behaves unstably, the system automatically adjusts its weight in the reserve, replacing it with a more stable asset. This ensures the resilience of the reserves.

**Development and Decentralization:** Stalwart Coin represents an ecosystem that evolves with the increasing number of users and transactions. The system aims for full decentralization, improving the collateral mechanism and expanding the choice of stablecoins for risk diversification.

## **Transaction fees**

Stalwart is committed to ensuring transparency and loyalty to its users through a flexible fee rate grid. The fee for incoming transactions depends on the volume of the operation. For instance, for an incoming transaction of up to 100 coins, the standard fee is 1%, while for transactions of 100,000 coins, this fee decreases to 0.1%, offering favorable conditions for larger operations.

Special rates are provided for stakeholders holding more than 1,000 stWART. For example, for an incoming transaction of 100 coins, the fee will be 0.85%, and for transactions of 10,000 coins - only 0.15%. This system aims to promote participation and staking by providing additional benefits to more substantial stakeholder holders.

For a more detailed look at the transaction fee grids, we provide the following scheme:

Percentage fees for simple wallet users:

- For incoming transactions of up to 100 coins 1%
- For incoming transactions of up to 500 coins 0.9%
- For incoming transactions of up to 1,000 coins 0.7%
- For incoming transactions of up to 10,000 coins 0.5%
- For incoming transactions of up to 100,000 coins 0.2%
- For incoming transactions of over 100,000 coins 0.1%

Percentage fees for stakeholders with a balance of over 1,000 Stalwart:

- For incoming transactions of 0 coins or more 0.9%
- For incoming transactions of 100 coins or more 0.85%
- For incoming transactions of 500 coins or more 0.65%
- For incoming transactions of 1,000 coins or more 0.45%
- For incoming transactions of 10,000 coins or more 0.15%
- For incoming transactions of 100,000 coins or more 0.05%

Stalwart aims for fairness and openness, providing users with ease of understanding the costs associated with fees and creating incentives for active participation in the ecosystem.

## Innovative solutions for asset protection

Our innovative solutions for protecting Stalwart Coin assets incorporate the efficient use of cutting-edge technologies and methods, including:

**Access Control:** We have implemented advanced access control mechanisms that provide strict and flexible control over who has access to the system. This includes a variety of authentication and authorization methods to protect against unauthorized access.

**IPS/IDS (Intrusion Prevention and Detection Systems):** We have deployed systems that actively monitor network traffic, identify anomalies, and, in the case of detecting a potential threat, take steps to prevent or isolate it. This enhances the level of security and response to external attacks.

**TLS 1.2+ (Transport Layer Security Protocol):** We utilize TLS protocol version 1.2 and above to ensure data encryption and protect it from unauthorized access while in transit. This guarantees the confidentiality and integrity of information between transaction participants.

**AES-256 (Advanced Encryption Standard):** We use the AES-256 standard for encrypting data at rest. This high level of encryption provides powerful protection against cryptographic attacks and unauthorized access to sensitive information.

## Functionality and advantages of the balancing tool

The balancing tool in Stalwart coin plays a crucial role in ensuring stability and flexibility of the system, maintaining equilibrium among various cryptocurrencies. Here are its key functionalities and benefits:

**Even Distribution of Reserves:** The balancing tool effectively distributes reserve assets among different cryptocurrencies, ensuring stability and a diversified portfolio. This helps mitigate risks associated with market condition changes.

**Automatic Response to Market Changes:** The tool actively monitors market conditions and automatically responds to fluctuations by reallocating reserves in line with current demands and community preferences.

**Flexible Reserve Management:** Users have the opportunity to propose and vote on changes in the reserve structure through a decentralized autonomous organization (DAO). This provides flexibility and community participation in strategic decision-making.

**Reduction of Volatility Risk:** Balancing among cryptocurrencies contributes to the reduction of price volatility risk, making Stalwart more resistant to sharp market swings.

**Transparency and Accessibility:** The tool ensures transparency of the balancing process and accessibility of information about the current state of reserves, allowing users to monitor system activity.

## Examples of use for investment optimization

Examples of using the balancing tool with Stalwart coin for investment optimization include:

**Risk Diversification:** Investors can utilize the balancing tool to diversify their portfolio by spreading assets among different cryptocurrencies. This aids in mitigating the risk of a single cryptocurrency impacting the overall portfolio value.

**Market Change Reactions:** With changes in market conditions, investors can use the balancing tool to quickly reallocate reserves and adapt to new trends. This allows for effective response to market volatility and maximizing profitable investment opportunities.

**Participation in Decision Making through DAO:** Investors participating in the Stalwart coin community can propose changes in reserve structure and partake in voting through a decentralized autonomous organization (DAO). This offers the chance for active involvement in management and optimization of reserves in alignment with the community's collective preferences.

**Passive Income from Staking:** Investors holding Stalwart coins can earn passive income from staking by locking their tokens in the network. This presents an opportunity to earn additional income while contributing to network security.

## Liquidity provision mechanisms

The Stalwart coin ensures liquidity through an active presence on decentralized exchanges (DEX), facilitating continuous access to trading and exchange. Additionally, integration with the leading decentralized exchange aggregator, 1inch, simplifies instant swaps of Stalwart for over 1800 other cryptocurrencies, providing a high degree of liquidity for users.

## Real-time exchange capabilities

Stalwart Coin provides real-time capabilities for instant exchange on decentralized exchanges (DEX) and through the 1inch aggregator. This means that users can quickly and easily swap Stalwart for other cryptocurrencies within a matter of seconds, ensuring maximum flexibility and convenience in real time.

## **Roadmap** Q2/2024 - Q2/2025

#### Stalwart Blockchain Testnet

Development and launch of a test blockchain network

IN PROGRESS – 67%

#### Keplr browser extension

Adding a test network to the Keplr wallet (Chrome, EDGE, Firefox)

IN PROGRESS – 50%

#### Q3/2024

#### Stalwart Staking App

Staking management dashboard

IN PROGRESS – 26%

#### Block Explorer testnet

Blockchain explorer for the test network

IN PROGRESS – 60%

#### Stalwart DAO

Voting system among stake holders for network governance based on DAO principles

IN PROGRESS – 17%

#### Q4/2024

#### Stalwart Stable Index Coin

A coin backed by assets in the form of a basket of stablecoins

IN PROGRESS – 9%

#### Stalwart Liquidity Pool

Creating liquidity pools on a decentralized exchange (DEX)

TO DO

### Stalwart Security audit

Security system audit process

🔵 TO DO

#### Q1/2025

## External block Explorer for mainnet

Adding Mainnet and Testnet networks to the Atomscan block explorer

TO DO

#### Stalwart AI MVP

An adaptive AI module that conducts a deep comprehensive analysis of the current market situation, automatically gathering information from a wide range of sources: from social networks to blogs and specialized niche websites.

TO DO

#### Launch Stalwart Mainnet

The launch of the Stalwart Mainnet

🔵 TO DO

#### Keplr Mobile

Adding Mainnet and Testnet networks to Keplr's network list to enhance usability on mobile devices (iOS, Android)

🔵 TO DO

#### Promo codes testnet

Stalwart Promo is a unique system that allows you to create promotional codes for replenishing OVG accounts, tailored to the needs of your business

TO DO

#### Q2/2025

### Stalwart AI v.2

The new version of the Stalwart AI module analyzes not only textual information but also audio and video content, including context and emotions in the analysis.

#### Stalwart Pay App

A business payment module for accepting payments in various cryptocurrencies

TO DO

#### Stalwart Exchanger

Exchange of cryptocurrencies across different networks from Stalwart

🔵 TO DO



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