



 **FINSTIECO**

BLOCKCHAIN

Blockchain is a transformative technology with immense potential to revolutionize industries. As a company committed to financial innovation, we are strategically leveraging this technology to enhance our services and support secure cryptocurrency transactions. Our first significant step in this journey is the creation of the **Finsteco token (FNST)** meticulously designed to seamlessly integrate and power our entire ecosystem.

Token Overview

Token Name	Finsteco
Token Ticker Symbol	FNST
Blockchain/Network	Ethereum/Polygon
Price per Token (for LP listing)	0,10 €
Tokens Minted	1 000 000 000
Soft Cap Target	8 300 000 €
Hard Cap Target	13 900 000 €
Token Type	Fixed Supply / Deflationary

Sale of FNST tokens

FinSystems will issue a total of 1 billion FNST tokens, **ensuring a fixed supply that will not be increased**. The FNST token employs mechanisms to manage the number of tokens in circulation, maintaining its role within the ecosystem. As a deflationary token, FNST is designed to support the platform's long-term sustainability by controlling supply. Tokens will be available for purchase at €0.10 upon listing. FinSystems aims to achieve a **minimum token sale of €8.3 million**. The FNST token is built on the Ethereum blockchain, utilizing the Polygon network, a robust platform trusted by companies like Disney, Meta, Stripe, Adidas, Prada, Adobe, Starbucks, Coca-Cola, and Reddit.

Token Sale

Tokens for sale	250 000 000
Sale Waves	4
Accepted Currency	EUR, USDC
Jurisdiction	Slovakia
Compliance	KYC, AML
Token Contract	Token Sale Agreement / Terms & Conditions

Of the 1 billion FNST tokens, 25% will be made available for sale across four rounds before the exchange listing. Tokens can be purchased using either Euros or USDC stablecoin.

To ensure compliance, participants are required to complete a token purchase agreement and undergo identity verification, in line with current regulations.

In the Initial Supporter Round, we offered 5% of the total tokens at an introductory price of three cents per token, representing a 70% discount from the planned listing price of ten cents. This initial round rewarded early believers with a unique early-bird advantage.

Initial Supporter Round	
Token allocation	50 000 000
Tokens for sale	50 000 000
Token price	0,1 €
Discount	70 %
Cap Target	1 500 000 €
Avg sale price	0,03 €

The second round, the Early Access Round, made 10% of the tokens available at five cents each, offering a generous 50% discount from the listing price. This important phase was aimed at significantly expanding our community by involving more participants eager to join early.

Early Access Round	
Token allocation	100 000 000
Tokens for sale	100 000 000
Token price	0,1 €
Discount	50 %
Cap Target	5 000 000 €
Avg sale price	0,05 €

The third round, the Community Growth Round, focused on broadening our reach by offering 8% of the tokens at seven cents each, reflecting a 30% discount. This round was created to encourage broader participation and to further strengthen our growing community.

Community Expansion Round	
Token allocation	80 000 000
Tokens for sale	80 000 000
Token price	0,1 €
Discount	30 %
Cap Target	5 600 000 €
Avg sale price	0,07 €

The final phase, the Final Distribution Round, will offer the remaining 2% of tokens at nine cents each, providing a 10% discount. This round provides a last opportunity for participants to purchase tokens at a slightly better price prior to the public listing.

Final Distribution Round	
Token allocation	20 000 000
Tokens for sale	20 000 000
Token price	0,1 €
Discount	10 %
Cap Target	1 800 000 €
Avg sale price	0,09 €

TOKEN DISTRIBUTION & FUNDS ALLOCATION

Distributing tokens across multiple rounds ensures **balanced allocation** among a diverse range of participants, promoting **fairness** and preventing any single entity from having undue influence over the market. Each round is governed by cliff and vesting periods to **encourage long-term commitment**, helping maintain **price stability** once the token is listed.

Token Distribution					
Type	% Allocation	Tokens	Daily Release	Cliff (Months)	Vesting (Months)
Initial Supporter Round	5 %	50 000 000		12	16
Early Access Round	10 %	100 000 000		12	16
Community Growth Round	8 %	80 000 000		12	16
Final Distribution Round	2 %	20 000 000		12	16
Growth & Development	10 %	100 000 000		24	18
Team	15 %	150 000 000		48	24
Advisors	5 %	50 000 000		12	24
Reserve	10 %	100 000 000		6	120
Staking Rewards	15 %	150 000 000		1	48
DEX Liquidity (Locked)	8 %	80 000 000			
Incentives/Rewards	12 %	120 000 000	0,05 %		
	100 %	1 000 000 000			



Growth - 10% of tokens are set aside for growth and potential collaborations with other projects. These tokens are locked and will be burned if unused.

Team - The FinSystems team retains 15% of the tokens. These will be distributed among team members and staff. Team tokens are locked for a long duration.

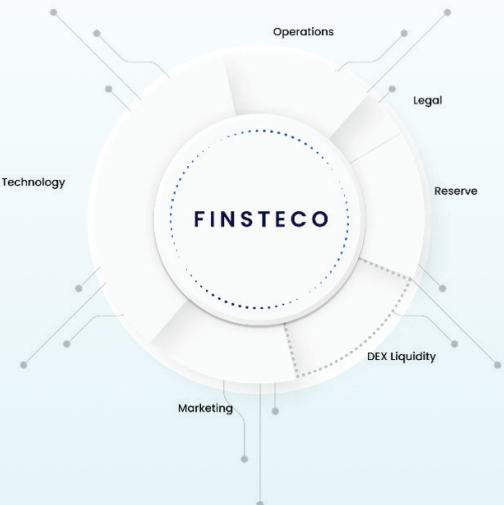
Advisors - As we develop the project, we work with experts in various areas. We reciprocate those who assist us with tokens. 5% of the tokens are allocated to them.

Reserve - The project retains 10% of the tokens for miscellaneous expenses. This amount will be released gradually and used for additional expenses, operations, liquidity, rewards, etc.

Staking rewards - 15% of tokens are reserved for staking, which will be distributed over several years. Staking allows token holders to benefit from holding their tokens.

Liquidity - 8% of the tokens are allocated for liquidity. When a token is listed on a decentralized exchange, we need to create a liquidity pool. A certain amount of tokens and another instrument, such as euros or dollars, are pooled to achieve an initial price of ten cents.

Incentive rewards - 12% of the tokens are reserved for this purpose. All those who contribute to the project will also receive tokens. It will also reach members of our community who don't have to buy them, but will need to earn them.



Fund Allocation from Token Sale		
Type	% Allocation	Value
Technology	55.0 %	7 645 000 €
Operations	5.0 %	695 000 €
Marketing	20.0 %	2 780 000 €
DEX Liquidity (Locked)	8.0 %	1 112 000 €
Legal	2.0 %	278 000 €
Reserve	10.0 %	1 395 000 €

Use of funds raised from token sale

The funds raised from the initial token sale rounds will be reinvested into the project. A significant portion is allocated to technology and development, which is critical to our success as a software company. Marketing is another key focus; we plan to launch a comprehensive marketing campaign across various channels before the product is released. A portion of the funds will also be used to replenish the liquidity pool. The remaining funds will cover operations and legal services. The reserve serves as a contingency, available to support any area requiring additional investment.

UNDERSTANDING TOKENOMICS: THE ECONOMICS AND UTILITY

Tokenomics, or token economics, involves the study of the parameters and properties of cryptocurrencies that determine their **functionality within a platform**. Before a crypto token is launched, its creators release a document detailing its tokenomics. These parameters are programmed into the token, guiding its creation and **functionality within the ecosystem**. The design of these properties significantly influences the success of the project by ensuring the token fulfills its **intended role within the platform**.

The economics of a token can be compared to the **complex mechanics** of a well-structured financial system. Just as **stable and well-considered policies** ensure the value and stability of a currency, well-designed tokenomics ensures that a token consistently serves its **intended utility within the ecosystem**. Various factors, including **market conditions, supply and demand dynamics**, and broader **economic influences**, play a role in determining the value of cryptocurrencies, similar to traditional currencies.

Factors Affecting Token Value

Money Supply and Inflation

To mitigate the effects of crises, **policymakers often address economic issues by printing money and increasing the money supply**. However, printing new money inevitably **devalues the existing currency**. **Crypto projects**, on the other hand, typically have a **predetermined amount of tokens** to be issued. The quantity is usually algorithmically programmed, and the issuance of new tokens, or the burning of existing ones, is predetermined and transparent. Projects can choose between **deflationary and inflationary tokenomics**. Deflationary tokenomics involves a **fixed supply of tokens** and employs various mechanisms to **reduce the supply**, thereby **increasing scarcity and enhancing the token's value**. In contrast, inflationary tokenomics allows projects to issue new tokens whenever they choose, which can **dilute the token's value**. Without proper protection mechanisms, this can lead to a **decline in the token's price** on the exchange.

Interest Rates

Central banks can influence inflation and exchange rates by adjusting interest rates. When a country raises interest rates, it becomes more attractive to deposit money there. **Higher interest rates lead to higher returns on deposits**, which increases demand for the country's currency and attracts foreign capital. As a result, the value of the country's currency typically rises. **In the cryptocurrency space, staking plays a similar role**. Staking allows users to contribute to the network's security, especially in **quality and stable projects**. By **locking tokens during staking**, the circulating supply decreases, supporting the token's utility and maintaining its importance within the platform.

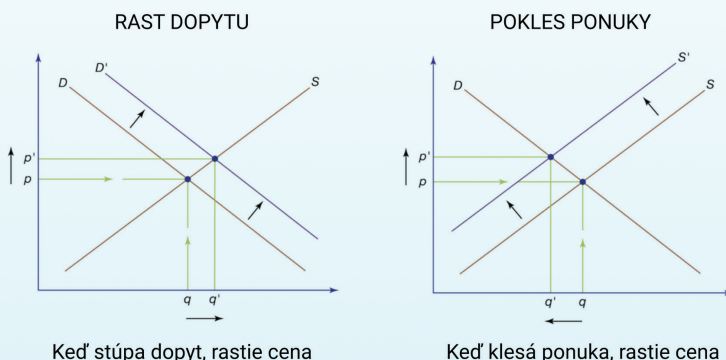
Government Intervention

Central banks often intervene in markets to manage currency value. When a currency becomes too strong, it can negatively affect a country's exports by making goods and services more expensive internationally. To address this, central banks might reduce their currency's supply by selling it and purchasing foreign currencies, effectively devaluing their own to support export growth. **In the cryptocurrency market, similar strategies are sometimes employed**. Companies may buy back their tokens to reduce the circulating supply, making the tokens rarer. This reduction in supply helps maintain the token's value and reinforces its essential role within the platform's ecosystem.

Political Stability and Economic Performance

The market often reacts to events that can affect a country's stability, such as **changes in government, conflicts**, or significant economic news like **GDP figures, retail sales, industrial output, or housing data**. Events like wars or sharp declines in GDP increase risk and can lead to a decline in a currency's value. Similarly, in the cryptocurrency world, **various events can significantly impact token values**. For example, market reactions to **major announcements or revelations** have previously led to sharp sell-offs and even the **collapse of certain tokens**, underscoring the **volatility and sensitivity** of the crypto market, where sudden shifts in sentiment can have dramatic consequences.

Tokenomics sets up the **economics of a crypto token** by creating mechanisms that enhance the overall **utility, or usefulness, of tokens**. **Utility is the primary factor driving demand** for tokens. The more valuable a token is to a broader range of people, the greater the demand for it. Projects issuing their own token should ensure it has **real use cases** to encourage people to buy it. Once people acquire the token, they need ongoing incentives to hold it rather than sell it. This can only be achieved if the token has a **genuine purpose within the project** or if holding it provides **additional utility** to the holders. **Natural demand** for the token will, in turn, lead to an increase in its value and price on exchanges.



When **analyzing the tokenomics** of a token, it's crucial to consider the **quantity of tokens**, their **allocation and distribution**, the token's **main functions**, the factors influencing holders to **retain the token**, and the various mechanisms **regulating and supporting** the token's **overall stability**.

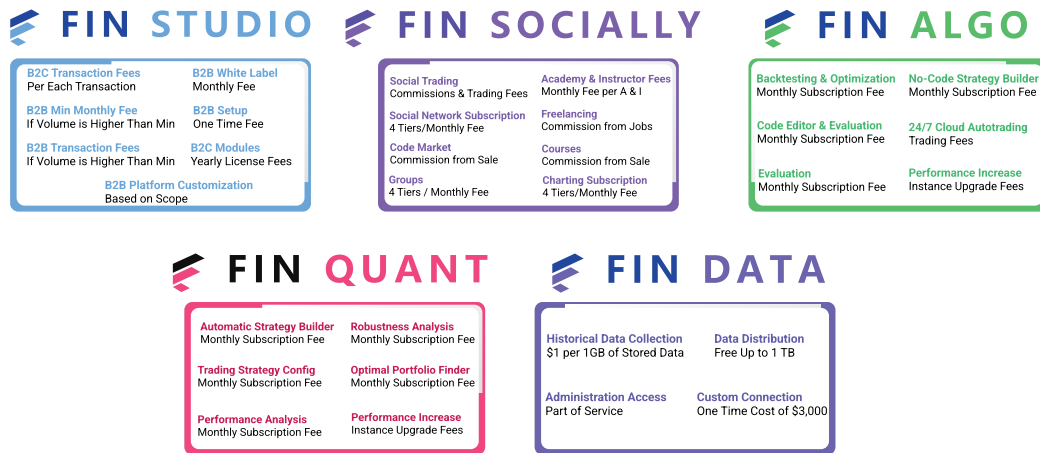
THE MAIN USE OF THE TOKEN

Method of Raising Funds for the Project

Our project is extensive, with dozens of people contributing to its development. **Funds raised through token sales** are directly reinvested into the project's growth and development. The token functions as a **key tool to secure the resources** necessary to complete and launch the ecosystem.

Payment Currency

Within our ecosystem, the token acts as the **exclusive payment method** for our products and services. Anyone interested in accessing our diverse range of offerings **will need to acquire tokens**, thereby naturally integrating token demand into our platform. The token holds **intrinsic utility** within the project, providing various benefits that actively encourage users to **obtain and retain it** over time.



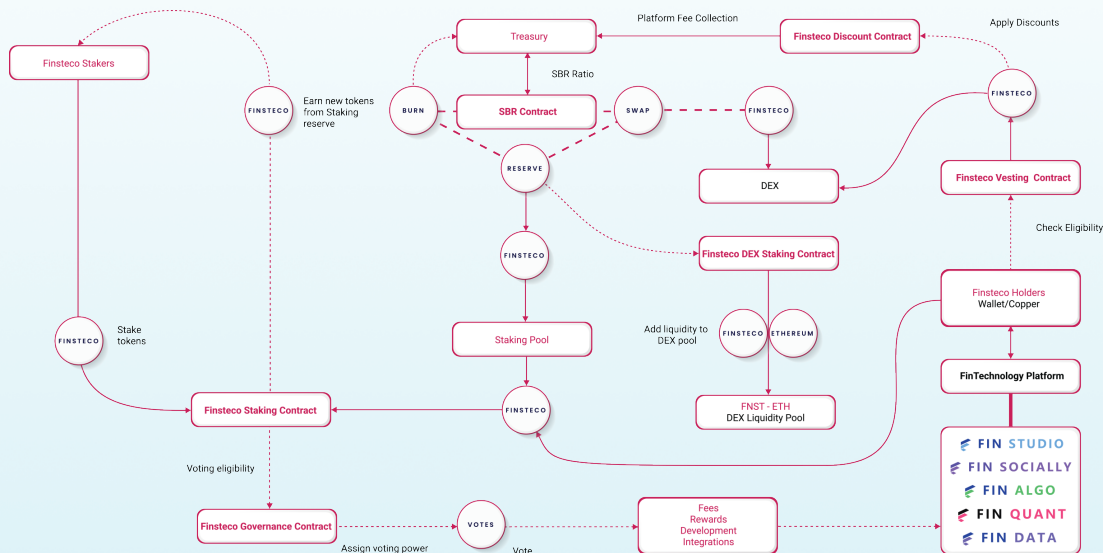
Smart Contracts

One of the **significant advantages** of tokens is their **programmability**, allowing for the **automation of processes** through smart contracts. These contracts can execute specific actions automatically when predefined conditions are met, ensuring efficiency and reliability.

For instance, our token will incorporate several **advanced smart contracts**, such as Fee and Discount Contracts, Vesting Contracts, Staking Contracts, DEX Staking Contracts, Governance Contracts, and SBR Contracts, all of which play a critical role in our platform. For example, if a trader initiates a trade, the smart contract for fees and discounts will **automatically calculate and apply** the appropriate fees and discounts based on the trading volume recorded on the blockchain, all without manual intervention. This level of automation clearly highlights the token's **practical value within our ecosystem**, demonstrating its effectiveness in managing complex transactions seamlessly.

Incentive Rewards

While not everyone will have the opportunity to purchase tokens in the initial rounds, users can still easily acquire them on exchanges at a later stage. Additionally, we actively encourage broader community ownership by offering tokens as rewards for valuable contributions to the project. For example, users can earn tokens by promoting our project on social media platforms. A user might receive 100 tokens simply for sharing a specific post, which not only rewards their efforts but also demonstrates our ongoing commitment to **community engagement** and fostering active participation from all users.



THE UTILITY AND BENEFITS OF HOLDING PURCHASED TOKENS

Staking

Staking is a mechanism that provides users with a **bonus** for holding our token over a specified period. To participate, users must lock their tokens, which means they cannot be used or traded during this time. This approach is somewhat analogous to term deposits in traditional banking. The longer users stake their tokens, the greater the **bonus rewards** they can earn. Staking provides users with added utility by allowing them to participate in governance and platform stability measures, receiving tokens as a means to enhance their user experience within the ecosystem. The increase in tokens is designed to enhance the user's engagement with our platform while contributing to its overall stability.

Staking also contributes to the health of the project by **reducing the number of tokens in circulation**. As tokens are locked and temporarily removed from the market, the reduced supply can lead to a more stable token environment. However, it's important to note that staking participants are not eligible for discounts on service fees within our ecosystem.

If a user decides to stake 100,000 tokens, the initial amount of tokens will remain untouched during the staking period. Over the course of staking, the user could earn an additional 30% in tokens as a bonus, resulting in 130,000 tokens in their wallet by the end of the staking period. This increase in token holdings through staking rewards reflects the user's commitment to the ecosystem and supports the overall stability of the platform by reducing the number of tokens in circulation.

EUR Amount	Tokens	Bonus	Total Tokens
1000 €	10 000	3 000	13 000
2000 €	20 000	6 000	26 000
3000 €	30 000	9 000	39 000
4000 €	40 000	12 000	52 000
5000 €	50 000	15 000	65 000
6000 €	60 000	18 000	78 000
7000 €	70 000	21 000	91 000
8000 €	80 000	24 000	104 000
9000 €	90 000	27 000	117 000
10 000 €	100 000	30 000	130 000

Liquidity Mining

In addition to classic staking, anyone who owns our token can also become a **liquidity provider**. They can add tokens to the **liquidity pool**, for which they will receive a **reward directly from the exchange**. The concept of rewards is similar to staking, offering an additional and attractive incentive for token holders to actively support the platform's liquidity and overall market health.

Rewards for Holding

Many users want to buy a token but prefer not to stake it, as they don't want to lock the token for a longer period of time. Instead, they use the tokens for **trading or other transactions within our ecosystem**, where the tokens must remain **available for immediate use**. The main advantage of holding our tokens is that our clients can get a **discount on all fees**. The fees for FinStudio depend on the **volume of transactions**. The higher the volume of transactions an institution makes, the lower the fees. If an institution purchases our tokens in a certain amount, it can skip several levels and move to the one with **lower fees**. Our clients will also be companies that handle high volumes, so they will need to purchase tokens at a higher value to obtain a discount and move into the **cheaper fee category**.

	\$ Fee	Min Volume p/M	Min Revenue p/M	Min FNST Balance	FNST Holding Value	Min Fee p/M & FNST Holding	Min Revenue p/M & FNST Holding
Volume Tier 1	0,5	10 000	\$5000	5 000 000	\$300 000	0,45	\$4500
Volume Tier 2	0,45	50 000	\$22 500	10 000 000	\$600 000	0,4	\$20 000
Volume Tier 3	0,4	200 000	\$80 000	15 000 000	\$900 000	0,35	\$70 000
Volume Tier 4	0,35	500 000	\$175 000	20 000 000	\$1 200 000	0,3	\$150 000
Volume Tier 5	0,3	750 000	\$225 000	25 000 000	\$1 500 000	0,25	\$187 000
Volume Tier 6	0,25	1 000 000	\$250 000	30 000 000	\$1 800 000	0,2	\$200 000
Volume Tier 7	0,2	2 500 000	\$500 000	35 000 000	\$2 100 000	0,15	\$375 000
Volume Tier 8	0,15	5 000 000	\$750 000	40 000 000	\$2 400 000	0,1	\$500 000
Volume Tier 9	0,1	10 000 000	\$1 000 000	45 000 000	\$2 700 000	0,07	\$700 000
Volume Tier 10	0,05	25 000 000	\$1 250 000	50 000 000	\$3 000 000	0,04	\$1 000 000

Governance

All our token holders who choose to stake will also receive **voting rights** in addition to the bonuses from staking itself. Voting rights allow users to vote and make decisions on selected parts of the project. This gives users the opportunity to **directly participate** in voting on new functionality, the amount of fees, the amount of rewards, or the settings of individual mechanisms.

MECHANISMS

Cliff and Vesting Period

These periods are **carefully designed** according to the specific groups among which we distribute tokens, ensuring a **structured and balanced approach**. Tokens purchased before listing on the exchange are **locked for a set period** and cannot be **sold or transferred** by users during this time. This mechanism ensures that early buyers, who may have acquired the token at a **significant discount**, do not immediately sell their tokens upon listing, which could potentially lead to **substantial price volatility** and destabilize the market. To maintain overall **market stability** and protect the value of the token, users are required to hold their tokens securely throughout the duration of the cliff period. Once the cliff period ends, the **vesting period** begins, during which token holders are permitted to gradually sell their tokens in a **controlled and systematic manner**, thereby reducing the risk of sudden market disruption and ensuring a **smooth transition**.

For example, if someone purchases 100,000 tokens during the pre-sale at a discount, these tokens will be locked for a **16-month cliff period** starting from the moment the tokens are created and officially listed on the exchange. During this entire time, the tokens will remain locked and cannot be used, sold, or transferred in any way. This ensures that the token supply remains stable and prevents any sudden influx of tokens into the market that could disrupt pricing. After the cliff period concludes, the vesting phase begins. During the vesting phase, token holders are permitted to sell a **portion of their tokens** each month, rather than all at once, which ensures a **gradual and controlled release** into the market. This carefully structured approach not only supports the project's long-term stability but also helps to maintain and potentially enhance the token's value within the ecosystem by avoiding sudden fluctuations and ensuring a more predictable market environment.

Amount in EUR	Initial Tokens	Monthly Vesting	Released per Month
500 €	7 143	16	446
1000 €	14 286	16	893
1500 €	21 429	16	1 339
2000 €	28 571	16	1 786
2500 €	35 714	16	2 232
3000 €	42 857	16	2 679
3500 €	50 000	16	3 125
4000 €	57 143	16	3 571
4500 €	64 286	16	4 018
5000 €	71 429	16	4 464
5500 €	78 571	16	4 911
6000 €	85 714	16	5 357
6500 €	92 857	16	5 804
7000 €	100 000	16	6 250
7500 €	107 143	16	6 696
8000 €	114 286	16	7 143
8500 €	121 429	16	7 589
9000 €	128 571	16	8 036
9500 €	135 714	16	8 482

SBR Ratio

The **SBR ratio** (Swap, Burn, and Reserve) is a key mechanism in our **tokenomics model**, designed to be **adaptable and responsive** to the needs of our ecosystem. A portion of our revenue is received in our token, and the SBR ratio determines how these tokens are **autonomously managed** within the system. The tokens we receive are handled in three ways: **Swap** (exchanging tokens for fiat to support liquidity), **Burn** (permanently reducing the total token supply to increase scarcity), and **Reserve** (storing tokens in a decentralized reserve pool to manage and control circulation).

Initially, our strategy involves retaining most of these tokens, burning a significant portion to reduce the overall supply, and allocating some to the reserve fund and liquidity pools. This mechanism is designed to **autonomously manage** the token supply in a way that supports the long-term **stability and utility** of our token within the **decentralized ecosystem**. Over time, the SBR ratio may be autonomously adjusted based on the evolving needs of the project and changing market conditions, **guided by smart contracts and decentralized governance protocols**.

This strategy is underpinned by our ability to generate revenue in fiat currency through our traditional market operations, which provides a stable foundation while ensuring the tokenomics model remains **flexible and adaptive**. As our decentralized platform grows, the demand for our token as a payment currency within our ecosystem is expected to increase. By leveraging the **SBR mechanism**, we aim to maintain a **balanced and sustainable** token supply, ensuring that it remains a **valuable and integral part of our decentralized platform**, driven by **community governance** and **smart contract automation**.

INVESTING IN CRYPTOCURRENCIES

Engagement with cryptocurrencies is a widely discussed topic due to the potential for **varied financial outcomes**. However, it's important to recognize that the primary focus of any cryptocurrency should be its **underlying utility** and the **value it brings to its ecosystem**. The success of a project is often tied to how well the token integrates into its platform, providing **real-world functionality** and benefits to its users.

While the cryptocurrency market has seen **substantial growth**, and some projects have experienced significant value changes, it's crucial to approach these opportunities with an understanding of the **risks involved**. Our project is built on a **strong foundation**, emphasizing the token's role as a **payment currency** within our ecosystem and the **governance rights** it provides to holders. We are committed to the **long-term development** and sustainability of our platform, ensuring that our token remains **useful and valuable** to our community.

FINSTECO

Finsteco operates with a strong commitment to **compliance with applicable regulations** in the jurisdictions where we do business. The company that sells the token is incorporated in Slovakia, and we are fully **compliant with local regulations** as well as the new **MICA legislation in the EU**. Finsteco is authorized to provide **virtual currency exchange services**, allowing us to exchange digital assets for fiat currencies like euros. Additionally, we are able to offer **virtual currency wallet services**, enabling us to securely hold, store, and transfer digital assets on behalf of our clients. As these activities are regulated, we **strictly adhere to all relevant legal requirements**, ensuring that our operations are fully compliant.

Finsteco advantages

Time-Limited Token Sales - In contrast to some projects that continuously issue new tokens, potentially diluting their value, Finsteco has implemented a fixed supply of tokens. Our token sales are time-limited, and after each round is sold out, the tokens can only be acquired on the exchange. This approach helps maintain the integrity and value of our tokens by preventing over-issuance.

Existing Product - Finsteco's token is backed by a nearly completed product, ensuring that our offering is more than just an idea or concept. While many projects release tokens during the early stages of development, which can lead to uncertainty and delays, our product is in the final stages of development and will be released soon. This provides a solid foundation for the token's utility within our ecosystem.

Ease of Access - We have designed our token purchasing process to be as straightforward as possible. Users do not need in-depth knowledge of financial markets or complex technologies to participate. The process is user-friendly and accessible, allowing anyone to engage with our platform easily.

Robust Tokenomics - Our tokenomics model is designed to support both the sales process and the long-term utility of the token within our ecosystem. Unlike many tokens that lack real-world applications, Finsteco's tokenomics are carefully crafted to enhance the token's value and ensure its usefulness within the platform.

Utility and Revenue Connection - The value of the Finsteco token is closely tied to the company's revenue streams. Our clients must use the token to access services within our ecosystem, creating a direct link between the company's success and the token's utility. As our company grows and generates more revenue, the demand for our token is expected to increase. This connection ensures that the token remains integral to our operations and reflects the value generated by our platform.

Opportunity for Early Adopters - Early adopters of the Finsteco token have the chance to acquire tokens at an initial price that will not be available later. This limited-time opportunity allows participants to engage with the platform from the ground up, positioning themselves to fully benefit from the token's utility as the ecosystem expands.

Global Purchase Process

Interested parties can purchase a token exclusively through our website, where we have simplified the process as much as possible. After registering on the website www.finsteco.com, the user clicks on the "Buy Tokens" button and enters the amount they wish to purchase. **The Token Purchase Agreement and Terms and Conditions** are included in our terms and conditions, so the user does not need to print, scan, or mail anything. Once agreed upon, the user must complete an **electronic identity verification, provided by SumSub**, and fill out a short questionnaire. This obligation is imposed on us by **Act No. 297/2008 Coll.** on the protection against the legalization of proceeds from crime and protection against the financing of terrorism.

After the successful completion of the process, we will send the interested party an email with instructions for the bank or crypto transfer. The interested party can then make a transfer to our bank account. **In addition to EUR, we can also accept payments in cryptocurrencies and payments to our virtual wallet.**

After some time, the client receives access to the back-office. Once the clients log in, they can check the status of the tokens, their current value, and other useful information. The token itself, with the **programmed smart contracts**, will be generated prior to listing on the exchange. The clients can choose where they want to keep the tokens. **We can send the tokens directly to the client's own crypto wallet, or the tokens can remain with our partner custody service Copper.** Swiss-based **Copper is a professional digital asset custody solution.** Assets are safe and insured up to €500 million. We will also use this service for our clients who pay for our services using the token.

Disclaimer

The FNST token is designed solely for use within the FinSystems ecosystem and is intended as a utility token to access and engage with platform services. FNST tokens are not intended for investment purposes and should not be purchased with the expectation of profit or speculative gains. The value of the FNST token may fluctuate based on its utility and use within the platform, and token holders assume the risks associated with platform engagement. Prospective users should fully understand the FNST token's utility and perform their own due diligence prior to purchasing. This document does not constitute financial or investment advice, and FinSystems makes no guarantees regarding token value or performance. FNST tokens are subject to applicable laws and regulations, and purchasers should consult with legal or financial advisors if needed.