White paper of the secured token

Declaration

of the project for the issuance of a secured HUMO tokens

Issuer: HUMO DIGITAL LLC

Jurisdiction: Republic of Uzbekistan

Version date: 30.06.2025

Annotation

This document is the official declaration of the project for the issuance of a secured HUMO tokens (hereinafter referred to as the HUMO token, or secured token) based on the current legislation of the Republic of Uzbekistan. The purpose of the release is to create an innovative tool backed by tangible assets using distributed ledger technology (blockchain).

Secured HUMO token is a crypto asset backed by government bonds of the Republic of Uzbekistan. The token is not denominated in a foreign currency and is not linked to the exchange rates of foreign monetary units. It is not an electronic money or an alternative to it, a stable token or an investment with the expectation of an increase in value.

This document describes the properties of the token, the mechanisms of its issuance, circulation, provision and redemption, as well as the functions of the participants involved in the infrastructure of its maintenance.

Information about the issuer

The issuer of the HUMO token is the "HUMO DIGITAL" Limited Liability Company. The Issuer issues, records and redeems the HUMO token within the framework of the regulatory legal acts of the Republic of Uzbekistan. The issuer's activities are based on the principles of compliance with the requirements for the turnover of crypto assets, including licensing and registration rules provided for by current legislation.

Basic information about the issuer:

- **Full name of the legal entity:** "HUMO DIGITAL" LLC
- **OKED:** 63.99.0 Other information service activities not included in other categories
- **Activity:** Providing of payment services, issuance and administration of digital payment instruments
- **Manufactured goods and services provided:** secured HUMO token
- **Legal address:** 100047, Republic of Uzbekistan, Tashkent, st. Makhtumkuli, 178/1
- **Contact information:** +998 94 660-27-00, info@humo-token.uz

Information about the developer

The developer of the smart contract for the secured HUMO token in the Mirasmanda distributed data registry is Broxus, a multidisciplinary IT holding specializing in the comprehensive development of systems including a distributed data registry for corporate and government needs.

Basic information about the developer:

- **Full name of the legal entity:** Broxus Services FZ LLC
- **Type of activity:** Software development, consulting services
- **Products and services provided:** Tycho distributed data registry, ChainConnect inter-network communication protocol
- **Legal address:** Yas Creative Hub, Yas South Podium 1, PMI Unit ID Number: C40-P1-0104-HDJ6, Community Hub, Building C40 Abu Dhabi, Abu Dhabi United Arab Emirates
- **Contact information:** +971507016598, hello@broxus.com

Glossary

AML/KYC (Anti-Money Laundering/Know Your Customer) is a set of anti—money laundering and customer identification procedures that are mandatory for financial institutions.

API (Application Programming Interface) is a standardized interface for interaction between software components and systems.

DAG (Directed Acyclic Graph) is a directed acyclic graph, a mathematical structure used in a distributed data registry for organizing and validating transactions.

DeFi (Decentralized Finance) is a decentralized financial services and tools based on distributed data registries.

The FATF (Financial Action Task Force) is an international organization established to develop and implement international standards and recommendations for combating money laundering and terrorist financing.

HUMO is the name of the issued secured token, as well as the short name of the corresponding ecosystem of projects based on the use of the token.

TVM (TON Virtual Machine) is a virtual machine for executing smart contracts in the distributed TON data registry and its compatible distributed data registries, in particular Tycho.

EVM (Ethereum Virtual Machine) is a virtual machine for executing smart contracts in the Ethereum distributed data registry and compatible networks.

Tycho is a sixth—generation distributed data registry designed to solve government and corporate tasks. It is based on a directed acyclic graph (DAG), provides instant transaction finalization and is capable of processing more than 30,000 transactions per second per shard.

UZS is the code of the national currency of the Republic of Uzbekistan (Uzbek sum).

A crypto asset is a property right that is a collection of digital records in a distributed data registry that has value and an owner.

A crypto depository is a legal entity resident in the Republic of Uzbekistan that provides an electronic platform and (or) a set of technical and software tools for the provision of services for the issuance of crypto assets, their primary placement and storage.

NAPPA (National Agency for Advanced Projects) is a government agency responsible for regulating, licensing, and implementing licensing procedures in the areas of crypto asset turnover, capital market, insurance, and e-commerce.

A non-custodial wallet is a crypto wallet for storing crypto assets, in which the user fully controls his private keys and funds, without the mediation of third parties. It allows transactions to be carried out outside the regulated financial system, but imposes on the user full responsibility for the safety of keys.

A smart contract is an agreement in electronic form, the fulfillment of rights and obligations under which is carried out by performing digital transactions automatically.

Secured token is a token secured by any tangible or other property.

A token is a type of crypto asset that is a unit of account in a distributed data registry that serves to certify an obligation or ownership of a certain asset, which is managed on the basis of a smart contract.

Sharding is a method of scaling a distributed data registry by dividing it into interconnected subnets (shards).

Issuer is a legal entity or individual entrepreneur who is a resident of the Republic of Uzbekistan, issuing crypto assets and bearing obligations established by the White Paper declaration and (or) the agreement on them to their owners.

The terms are used in accordance with regulatory documents and laws of the Republic of Uzbekistan. Individual terms may not be listed in the glossary of the document if they are specified in the National Agency for Prospective Projects of the Republic of Uzbekistan Order No. 3397 dated November 28, 2022.

Mirasmanda is the name of the distributed data registry of the cryptodepository, on the basis of which the issue of the secured HUMO token is issued and registered.

Introduction

With the development of distributed ledger technologies (blockchain), it has become possible to effectively account for rights to crypto assets. Secured tokens allow you to represent property rights to assets, with automated fixation of issue, ownership and transfer between users.

The HUMO token was created as a form of accounting for property rights secured by government bonds of the Republic of Uzbekistan. It serves as a convenient tool for accounting, transferring and paying off obligations, without being a monetary surrogate, a means of payment or an alternative to cash or electronic money.

The HUMO project aims to issue a secured token denominated in Uzbek sum (UZS), secured in the form of government bonds. The key objective of the project is to provide the market with a stable, regulated and transparent financial instrument, accessible to both corporate clients and individuals.

The HUMO token is not an investment asset and is not intended to make a profit by changing its value. Its nominal value is maintained through a 100% reserve mechanism and the possibility of redemption in the national currency within the framework of approved procedures.

Problem

A financial system based on classical banking technologies **faces a number of limitations** that can increase costs and reduce the convenience of payments:

- **Limitations on the speed of payments** – despite modern technologies, the execution and final confirmation of transactions in some cases can take up to several days, especially for transfers from abroad.
- **Additional costs** – Transaction processing costs are often included in total business costs and can amount to up to 5% of the volume, which can affect final prices for consumers.
- **Limited transparency of financial flows** – classical systems do not always allow you to quickly track transactions and provide full control over the movement of funds.

Decision

Secured HUMO token, it is a secured new generation token, developed taking into account both global best practices and the needs of the financial system of Uzbekistan. It is backed by low-risk instruments denominated in the national currency, such as government bonds, which eliminates currency risks and ensures sovereign control over the instrument. The technical architecture secured HUMO token eliminates unnecessary intermediates, reduces transaction costs and ensures fast transactions. At the same time, the cost of a transaction in a distributed data registry is not tied to the transaction volume, unlike traditional bank transfers.

Thus, secured HUMO token combines stability, flexibility and economic efficiency, creating a solid technological foundation for a new financial ecosystem in Uzbekistan.

1. The concept and features of the HUMO token

Secured HUMO token is a crypto asset, the registration of which was carried out on the territory of the Republic of Uzbekistan. It is secured by government bonds. The token is designed to conduct convenient, transparent and secure transactions in the absence of regional risks from pegging to foreign currencies.

1.1 Main features

Component	Functionality
Country of issue	Republic of Uzbekistan
Issuer	"HUMO DIGITAL" LLC
Provision	Government bonds of Uzbekistan
Distributed data registry	**At launch:** based on Tycho with limited access **Expansion prospects:** EVM-compatible based on Hyperledger - Besu
Nominal value	1000 Tokens to 1 Government bond (the base value of the bond is 1,000,000 UZS, in case of a value other than the base value, equate 1000 tokens to the base value)

1.2 Comparison of a secured token and electronic money

The secured HUMO token is not electronic money or an alternative to it. Electronic money, as a familiar tool with a low entry threshold, provides convenience and accessibility, cash remains an easy payment method that does not require commissions.

Criteria	Electronic money	Secured Token
Provision	Cash resources	Tangible or other property
Issuer	Central Bank, banks	Legal entity, Sole proprietor
Regulator	Central Bank	National Agency for Prospective Projects of the Republic of Uzbekistan
Sphere of circulation	Issuer's ecosystem	Issuer's ecosystem, electronic platforms of national and foreign service providers in the field of turnover of crypto assets
Use in calculations	As a means of payment	As security for the operation
Transparency	Low	High

Integration with the ecosystem of the distributed data registry	Not available	Built-in
A tool for raising capital in government bonds	No	Yes
Access to new markets/products	Limited	Yes
Expansion to other countries	Limited	Yes

Thus, secured HUMO token has a much greater potential for application in the tasks of accessing new markets and products, being provided with a token. In particular, it provides greater financial flexibility, security and transparency, contributing to the development of innovative solutions and integration into global financial ecosystems.

1.3 Organizational structure of the token ecosystem and the functions of key participants

The ecosystem secured HUMO token is built with a delineation of areas of responsibility between the participants. Management in the system is distributed, but at the same time the necessary level of regulatory control and financial reliability of the secured token are maintained.

The relationship model in the ecosystem united by the HUMO token involves the integration of the following functional elements, each of which is involved in ensuring the integrity of the system:

1. **The issuer of the token is "HUMO DIGITAL" LLC (a subsidiary of NMPC HUMO):** A key node that performs the functions of primary and additional issue, token redemption, asset management in order to maintain parity with collateral, transaction monitoring and compliance with the requirements of the legislation of the Republic of Uzbekistan in this area.

2. **Principals**:
   On the basis of an agreement with the issuer, they receive the right to distribute tokens. They have the right to initiate the process of additional issuance and redemption of secured tokens in accordance with the issuer's procedures. The exchange with the principals takes place at the nominal price of the HUMO token, ensuring the operation of the stabilization mechanism in relation to collateral.
   If legal entities registered in the Republic of Uzbekistan become principals, they must have a license from a crypto asset turnover service provider for further token distribution.

3. **Crypto-depository**:
   Supports an electronic platform for the issuance, registration and storage of tokens (including secured HUMO token). The crypto depository verifies the accuracy of information about the issue of tokens, the compliance of the specified information with the legislation, verifies the availability of collateral, makes information about the issue publicly available and ensures that the rights to tokens are taken into account. The crypto depository is a key element of the infrastructure that guarantees compliance with regulatory requirements and transparency of operations with HUMO tokens.

4. **User segment** (clients of the principals): The end users of the ecosystem who get access to secured HUMO token for financial calculations. They have the ability to perform conversion operations through authorized providers, as well as interact with a distributed data registry through interfaces that do not require specialized technical knowledge.

1.4 Methodology for estimating the value of products issued by secured HUMO token

Depending on the circumstances, the value of the secured token means different entities: the nominal rate, the rate on the secondary market, the unit value of assets secured by one token. Let's look at them in more detail:

1. **Nominal rate:**

The HUMO token is issued **with a nominal exchange rate of 1000:1 Government bond at par value (1,000,000 sum).** The nominal exchange rate is fixed, does not depend on external and internal factors, and also does not change over time.

2. **Token exchange rate on the secondary market:**

HUMO token exchange rate on the secondary market is **formed by natural market demand and supply.** At the same time, a **significant deviation of the token price from the nominal one is prevented by the binding mechanism** (for more information, see Chapter 1.5, the Stabilization Mechanism). The ability to initiate an additional issue or redemption of tokens at a nominal price creates an opportunity for stabilization operations, which creates an economic incentive to balance supply or demand.

3. **Value of assets in security:**

When the secured tokens are issued, the corresponding amount of money in the national currency is secured. 100% of the nominal volume of the issue is provided by low-risk instruments in the form of government bonds of the Republic of Uzbekistan and bank deposits.

In the event of an oversupply (exceeding the value of assets in securing the total nominal volume of output), these funds may be allocated to other investment instruments permitted by law.

The valuation of assets in collateral is carried out according to the methodology approved by the issuing company. In particular:

- The assessment of the volume of funds in bank deposits is based on the nominal volume of funds in the accounts and is confirmed by a bank statement.
- **The value of government bonds** (and any other bonds denominated in Uzbek soums) is calculated at the nominal value recorded in the depository.

In case of a change in the investment strategy, the methodology may change and be updated. In order to ensure the transparency and reliability of the system, the full up-to-date methodology may be published on the information resource of the issuing company.

A **regular internal and external audit mechanism** has been implemented to confirm the transparency and sufficiency of the provision. The reports on the results of the inspections are published in the public domain.

1.5 Stabilization mechanism

Each issued token corresponds to the volume of security assets, eliminating the possibility of an excess of issued tokens and providing an irrevocable monetary redemption obligation. The assets in security are subject to mandatory audit. This guarantees the stability and predictability of the amount of funds in securing the token.

The key principle of asset value stabilization is the possibility of additional issuance of new tokens or their redemption. Coupled with the availability of collateral for the full volume of the nominal issue, this makes it possible to stabilize the token's exchange rate in the secondary market with any balance of supply and demand.

If the token price deviates from the nominal value by an amount exceeding the commission of the exchange platform and the issuer, there is an economic incentive for stabilization operations. Let's look at some examples:

Example 1: A secured token project is being successfully implemented and demand in the secondary market exceeds supply. The price of the token on the secondary market is growing and starting to exceed its nominal value. Let the token price reach 1100 sums for one secured HUMO token, the exchange's commission is 2%, and the issuer's commission for issuing tokens is 0.1%.

Then the principal or the issuer has the opportunity to invest their own funds for an additional issue (let's say 100 billion sums) and sell the issued tokens on the exchange. Then his profit will be:

$$\frac{\text{Вложенные средства}}{\text{Номинальная цена токена}} * (\textit{Price of the token on the exchange is the nominal price of the token}) * (100\% - \textit{the exchange's commission} - \textit{the issuer's commission}) = \textit{Profit from the stabilization operation}$$

$$\frac{100.000.000.000}{1.000} * (1.100 - 1.000) * (100\% - 2\% - 0{,}1\%) = 9.790.000.000 \textit{ sums}$$

Thus, thanks to the stabilization operation, additional tokens are released onto the market, balancing supply and demand to the nominal price of the token.

Example 2: Negative media coverage of another crypto project influenced people's decision to withdraw from the token. Supply exceeded demand and the price of the token dropped below the nominal value. Let the token price reach 900 sums for one secured HUMO token, the exchange's commission is 2%, and the issuer's commission for issuing tokens is 0.1%.

Then the principal or the issuer has the opportunity to invest their own funds to buy tokens from the exchange (let's say 100 billion sums) and repay them from the issuer at the expense of funds secured at face value, then its profit will be:

$$\frac{\text{Вложенные средства}}{\text{Цена токена на бирже}} * (\textit{Nominal price of the token} - \textit{price of the token on the exchange}) * (100\% - \textit{Exchange commission} - \textit{Issuer's commission}) = \textit{Profit from the stabilization operation}$$

$\frac{100.000.000.000}{900} * (1.000 - 900) * (100\% - 2\% - 0{,}1\%) = 10.790.000.000$ *sums*

Thus, through stabilization operations, additional tokens are withdrawn from the market, equalizing the balance of supply and demand to the nominal price of the token.

Result:

Based on these examples, it can be seen that **users and owners of the secured token do not bear the risk of asset loss due to low demand for the asset**. The chosen approach eliminates the possibility of inflation or oversupply. This approach makes secured HUMO token resistant to market speculation and guarantees users a predictable circulation model.

The key risk factors remain reduced liquidity or default on government bonds. However, the probability of these events occurring corresponds to the same for cash. Thus, **focusing on low-risk instruments as part of the collateral reduces the likelihood of significant fluctuations in value** and ensures a stable financial base of the token.

1.6 Rights of the token owner

The HUMO token certifies the right to use it for issuance and redemption in accordance with the established procedure of the issuer, purchase, sale and exchange for other crypto assets on the platforms of service providers in the field of turnover of crypto assets.

The issue of **new tokens** is the exclusive right of the principal on the basis of an agreement with the issuer and the issuer itself. It is initiated on request in relation to the issuer of the secured token. Security assets in the national currency are provided for the issue, after which the issue procedure is started. The issuer has the right to set the conditions for interaction with the principal within the framework of the freedom to conclude contractual relations, in particular, the minimum and maximum limits for the issue of tokens. (More details in Chapter 1.7 Token Issue Process)_qtwp7ck259xe

Purchase, sale and exchange on the secondary market is carried out in accordance with the legislation of the Republic of Uzbekistan.

The redemption of tokens is the exclusive right of the principal on the basis of an agreement with the issuer and the issuer itself. It is initiated on request in relation to the issuer of the secured token. Secured tokens are provided to the issuer's accounts secured HUMO token for redemption, after which the redemption procedure is started and the equivalent amount of funds in the national currency is paid in accordance with the nominal value of the token. The issuer has the right to set the conditions for interaction with the principal within the framework of the freedom to conclude contractual relations, in particular, the minimum and maximum limits for the redemption of tokens. (More details in Chapter1.8, the Token redemption process)

In this context, the issuer acts solely as an infrastructure provider for issuing and burning tokens, as well as a security holder.

1.7 Token release process

As part of the life cycle of a secured token, it implies the process of its issuance by the crypto depository at the request of the principal through the issuer, or by the issuer itself as part of the rebalancing of assets in the collateral.

The principal, as the person initiating the issue, provides collateral commensurate with the volume of HUMO tokens being issued. The transfer of assets securing the issue of tokens is carried out in favor of the issuer on the basis of an agreement between the issuer and the principal.

1.8 The Token redemption process

As part of the life cycle of a secured token, the process of its redemption is implied at the request of the principal, followed by the burning of tokens, or by the issuer itself as part of the rebalancing of assets in the collateral.

The process of redemption of secured HUMO tokens is carried out through a multi-step protocol that meets the requirements of the crypto depository and guarantees the security and reliability of operations. Upon receipt of a redemption request, the issuer verifies the sufficiency of available funds in the collateral. In case of a positive result, tokens are burned in a distributed data registry, followed by the calculation of the total amount to be issued, taking into account commission fees. If there is a shortage of available funds in the collateral, the protocol for rebalancing the portfolio of assets in the collateral is activated, initiating the sale of part of the assets.

The final stage of the procedure is the transfer of funds to the principal's account. The entire procedure is performed in compliance with the principle of atomic transactions, which eliminates the risk of loss of funds and ensures transparency of operations for all participants in the ecosystem secured HUMO token.

The crypto depository verifies the accuracy of information about the redemption of tokens, verifies the availability of collateral, and makes information about the redemption publicly available.

1.9 Transfer of rights to the token

The issuer makes an initial issue of HUMO tokens, and the crypto depository ensures registration of the initial issue. According to the requirements of the National Agency for Prospective Projects of the Republic of Uzbekistan Order No. 3397, the issue of crypto assets is considered registered from the moment the relevant information is entered into the register and the serial number is received.

Applications for the issue and subsequent redemption of secured tokens may be submitted only by the principals with whom the relevant agreement has been concluded, within the framework of freedom of contractual relations.

The transfer of rights to secured tokens at the request of the principal in case of additional issuance is carried out on the basis of an acceptance and transfer certificate only after the relevant entry on the issue has been entered into the register by the crypto depository in accordance with the established procedure in accordance with the National Agency for Prospective Projects of the Republic of Uzbekistan Order No. 3397. For other

persons, this process is possible only through contacting the principal. As part of this process, the principal exchanges the secured HUMO tokens for the national currency, as well as the reverse exchange as part of its token distribution activities. In the secondary market, the transfer of ownership rights is carried out by recording the corresponding transaction in the distributed data registry or the corresponding platform of the principal and displaying it on the balance sheet of the owner of the secured token.

The owner of the secured HUMO token gets the right to use it to exchange some crypto assets for others in accordance with the law, as well as to burn the token in accordance with the established procedure. The token holder also has the right to request and receive information on completed transactions from the crypto depository within the scope and scope of its concerns, in accordance with the National Agency for Prospective Projects of the Republic of Uzbekistan Order No. 3397.

The process of redemption of secured tokens is also carried out on the basis of an application submitted by the principal, in accordance with the concluded agreement with the issuer. The issuer receives secured tokens, incinerates them in accordance with the established procedure and enters information into the relevant registers on the part of the crypto depository. The principal is then given funds in the national currency equivalent to the nominal value of the tokens transferred for burning.

Disputes between the crypto depository, issuers and owners of secured tokens are resolved by agreement of the parties or in court.

2. Technological basis

In the current implementation, secured HUMO token works on the basis of Tycho's private TVM-compatible distributed data registry. It is also planned to launch an additional EVM-compatible distributed data registry to simplify interaction with existing solutions and increase the reliability and fault tolerance of the entire system.

The security of the issue and redemption is provided by a multi-signature scheme (4 out of 6), decentralized node management and intelligent monitoring systems.

2.1 Architecture of the Tycho Protocol

The Tycho protocol is a sixth–generation high-performance protocol designed specifically for government and corporate tasks. The platform is based on a directed acyclic graph (DAG), which provides almost instant transaction completion and does not require traditional mining. The Tycho architecture allows processing more than 20,000 transactions per second per shard.

Key technical specifications:

- Throughput: > 20,000 TPS
- Typical transaction completion time: < 3 seconds
- Technology stack: Rust, Protobuf, QUIC, TVM, DAG

Key components of the platform:

- **Consensus mechanism**: The innovative DAG protocol ensures almost instant transaction finality while maintaining a high level of decentralization. The absence of the need for traditional mining significantly reduces the energy consumption of the system.
- **Sharding system**: Dynamic load sharing between shards allows you to efficiently scale the system to meet the growing demands of the network, while maintaining optimal performance.
- **TON Virtual Machine (TVM)**: A specialized virtual machine guarantees the safe and efficient execution of smart contracts. Asynchronous transaction processing ensures maximum utilization of computing resources.
- **Data Management**: Tycho implements a comprehensive approach to data management in distributed systems, combining cost-effectiveness with technical reliability, where inactive accounts and outdated data are automatically archived to optimize the use of network resources. At the same time, the complete transaction history is stored on archived nodes, providing the ability to restore data if necessary.

2.2 Smart contract security

The Tycho security system is based on multi-level protection of smart contracts and includes the following measures:

- **Verification through static analysis and testing** (including Locklift) detects errors at an early stage.

- **Multi-stage auditing,** including static analysis, expert review, OWASP methodology, and Bug Bounty, further reduces the likelihood of errors and vulnerabilities.
- **The T-Sol language**, developed for Tycho, minimizes possible vulnerabilities through strong typing, built-in restrictions, and integration with the JetBrains IDE for automatic debugging.
- **Execution in an isolated TVM environment** with limits and a sandbox, protects against DoS attacks.
- **Real-time monitoring** automatically blocks suspicious activity.

All these measures together ensure the safety and stability of the system.

2.3 Integration layer and API

For the convenience of interacting with a distributed data registry, Tycho offers integration tools that include cross-platform SDKs and flexible APIs. REST and WebSocket APIs provide secure access to platform functionality, supporting two-factor authentication for additional data protection.

For the development of smart contracts in the ecosystem, a specialized programming language T-Sol is provided, adapted for fast implementation and secure operation. Extensive documentation and efficient compilers allow developers to easily adapt existing solutions to the Tycho protocol.

Tycho provides a multi-platform infrastructure for secure storage and management of crypto assets.

2.4 Crypto Wallets and Key Management

Tycho provides a multiplatform infrastructure for the secure storage and management of crypto assets. All private keys are stored exclusively on the user's side — the system does not have access to seed phrases or key material, which ensures a high level of decentralization and confidentiality.

Multi-signature mechanisms have been implemented for corporate users to flexibly distribute control over assets. The ability to automatically update security protocols and additional security measures makes the ecosystem resilient to hacks and cyberattacks.

2.5 Integrated ecosystem security

Tycho is designed with advanced cybersecurity and fault tolerance standards in mind. Decentralization of nodes and dynamic load distribution guarantee stable network operation, eliminating the possibility of failures due to overloads. Infrastructure protection is provided through cryptographic methods, consensus mechanisms, and monitoring implemented at the network architecture and application level.

The ecosystem's regulatory compliance meets FATF recommendations, and built-in AML filters and programmable access policies ensure compliance with financial monitoring standards. Distributed data storage and cryptographic encryption methods prevent the risks of information leaks.

Continuous updating of security protocols and adaptation to changing threats make the Tycho protocol one of the most reliable solutions for government and corporate applications.

3. Regulation

The introduction of a commercial secured token into the financial system of Uzbekistan requires strict compliance with applicable regulations. Linked by a stabilization mechanism to the nominal value of government bonds, this secured token is integrated into the existing financial infrastructure. Its release, circulation and use are under the supervision of regulatory authorities, which implies strict compliance with AML/KYC standards, tax accounting, transparency, and issue control.

3.1 Legal status and supervision of the secured HUMO token activities

The key document regulating the turnover of crypto assets is the "Regulation on the procedure for Issuing, registering, and circulating crypto assets by residents of the Republic of Uzbekistan." Registered by the Ministry of Justice of the Republic of Uzbekistan on November 28, 2022. Registration number 3397. It establishes the concepts, interaction of market participants, and classification of crypto assets, including secured tokens.

Additional requirements are imposed by the following **regulatory documents of the Republic of Uzbekistan:**

- The Law of the Republic of Uzbekistan "On countering the legalization of proceeds from criminal activities, the financing of terrorism and the financing of the proliferation of weapons of mass destruction";
- Resolution of the President of the Republic of Uzbekistan "On the organization of the activities of the National Agency for Advanced Projects of the Republic of Uzbekistan";
- Decree of the President of the Republic of Uzbekistan "On measures for the development of the digital economy and the sphere of turnover of crypto assets in the Republic of Uzbekistan";
- Resolution of the National Agency for Project Management under the President of the Republic of Uzbekistan and the Department for Combating Economic Crimes under the Prosecutor General's Office of the Republic of Uzbekistan "On approval of internal control rules for countering the legalization of proceeds from criminal activities, financing of terrorism and financing the proliferation of weapons of mass destruction for persons engaged in activities in the field of turnover of crypto assets";
- Resolution of the National Agency for Advanced Projects of the Republic of Uzbekistan and the Ministry of Finance of the Republic of Uzbekistan, the State Tax Committee of the Republic of Uzbekistan "On approval of the Regulation on the establishment of fees for activities in the field of turnover of crypto assets, the procedure for their payment and distribution";
- Resolution of the Ministry of Internal Affairs of the Republic of Uzbekistan, the National Agency for Advanced Projects of the Republic of Uzbekistan and the Prosecutor General's Office of the Republic of Uzbekistan "On approval of instructions on the procedure for the seizure, storage and transfer of crypto assets identified during the pre-investigation check and investigation of crimes";
- Order of the Director of the National Agency for Advanced Projects of the Republic of Uzbekistan "On approval of the Regulation on the procedure for licensing the activities of service providers in the field of turnover of crypto assets";

- Order of the Director of the National Agency for Advanced Projects of the Republic of Uzbekistan "On approval of the Rules for Trading Crypto Assets;
- Order of the Director of the National Agency for Advanced Projects of the Republic of Uzbekistan "On approval of the Regulation on the procedure for registration of participants in the Special Regulatory Regime in the sphere of turnover of Crypto Assets (Special "Regulatory Sandbox" Regime)";
- Order of the Director of the National Agency for Advanced Projects of the Republic of Uzbekistan "On approval of the Regulations on the procedure for issuing, Registering the issue and circulation of Crypto Assets by residents of the Republic of Uzbekistan";
- Order of the Director of the National Agency for Advanced Projects of the Republic
- Order of the Director of the Agency for Advanced Projects of the Republic of Uzbekistan "On determining the amount of the state fee for issuing licenses for the activities of service providers in the field of turnover of crypto assets".

Regulatory restrictions:

- **The activities of service providers in the field of crypto asset turnover** require obtaining appropriate licenses, with the exception of sandbox projects. Providing services for transactions with crypto-assets without an appropriate license is prohibited.
- **The use of government terms and symbols** in the name and branding of the token is prohibited.

3.2 Anti-Money Laundering (AML) and User Identification (KYC)

When withdrawing tokens to a non-custodial wallet, the user gets out of control of regulated platforms. This standard feature of a distributed data registry gives the owner full control over assets, but complicates compliance. However, in case of violations or at the request of law enforcement agencies, the issuer can freeze HUMO tokens on a crypto wallet, saving citizens' funds from theft by intruders and restricting their access to the ecosystem of the HUMO token. This ensures a balance between decentralization, security and compliance with the law.

To prevent illegal financial transactions, HUMO users undergo KYC (Know Your Customer) verification. This means that:

- **Every user** receiving services from service providers in the Republic of Uzbekistan related to the HUMO token **must be identified through licensed financial platforms.**
- **Transactions are checked for suspicious transactions** in accordance with international anti-money laundering standards.
- **Large financial transactions** (for example, the exchange of the HUMO token for cash) on the territory of the Republic of Uzbekistan **may require additional verification** in accordance with regulatory requirements.

Anti-money laundering and terrorist financing requirements:

- All market participants are required to comply with the established standards for anti-money laundering and terrorist financing (Law 660-II, Resolution 3309 as amended).

3.3 Control and audit of assets in collateral

Secured HUMO token is fully secured by low-risk assets in accordance with the asset management strategy for securing the HUMO token, determined and approved by the issuer. Such assets may include government bonds of Uzbekistan and funds in the national currency. The strategy may allow the use of other types of assets in the event that the total cost of securing the total nominal volume of the issue exceeds (the scenario of re-securing the token).

Control over the availability of the collateral stated in the white paper specification is carried out during the initial issue and each subsequent additional issue of secured tokens in accordance with the National Agency for Prospective Projects of the Republic of Uzbekistan Order No. 3397. The crypto depository verifies the availability of assets as part of the consideration of an application for registration of a crypto asset issue.

In addition, in order to maintain the trust of users and regulators in the crypto asset, the following security controls are carried out:

- **Assurance audit** – regular audits by an external company licensed to conduct an audit. They confirm that the nominal value of all issued HUMO tokens does not exceed the value of the secured assets.
- **Issuer Security Monitoring** – the issuer monitors the status of the asset portfolio to reduce the risks of token decoupling and timely portfolio rebalancing

These measures ensure transparency and predictability of monetary circulation, preventing possible abuse and speculation.

3.4 The Role of the crypto depository and local acts

Operations performed with the HUMO token may be regulated by local acts of the crypto depository, which define additional requirements for the placement, advertising and turnover of the token.

- **Control over advertising and marketing of the HUMO token** — token advertising must comply with established standards, contain no promises of profitability and take into account possible risks.
- **Listing and trading operations** — the crypto depository can set additional conditions for trading the HUMO token, including requirements for transparency of the issue and compliance with AML/regulatory standards.
- **Transaction Monitoring** — in order to prevent illegal use and fraudulent schemes, transactions may be subject to additional verification.
- **The ability to freeze assets at the request of law enforcement agencies** — the HUMO issuer can block specific wallets if violations are detected or at the request of the relevant authorities.

4. Risks and measures to reduce them

The launch and use of a crypto asset in the form of a secured token carries a number of potential risks that may affect its stability and market acceptance. The HUMO token was developed taking these factors into account, and its structure provides mechanisms for minimizing possible threats.

4.1 Risks mitigated by the Issuer

Financial risks:

1. **Imbalance of collateral and quantity of tokens:** Sudden fluctuations in demand for the HUMO token can lead to a temporary imbalance between its turnover and collateral.
2. **Collateral risks**: The conversion rate of government bonds may affect instant liquidity in the event of a massive exchange request.
3. **Financial difficulties of banking institutions:** The risk of accounts being frozen or blocked in banks where the issuer's secured deposits are located. In this scenario, there is a high risk of the token rate decoupling from the nominal one.

Risk reduction mechanisms:

1. To stabilize the balance, a system of operational additional issuance and burning of tokens is used at the request of the principals.
2. To diversify risks, the collateral management strategy involves the use of several independent investment tools.

Technical risks:

1. **Cyber attacks and hacks:** Any information system is susceptible to potential cyber attacks aimed at hacking the distributed registry of data, compromising user wallets or unauthorized access to smart contracts.
2. **Errors in the code:** Possible vulnerabilities in smart contracts can lead to failures, leakage of funds, or disruption of the logic of operations.
3. **Network failures:** High load or technical malfunctions may limit the speed of transaction processing or temporarily suspend the operation of individual nodes.

Risk reduction mechanisms:

1. Secured HUMO token runs on the private distributed data registry Tycho, which is designed with high security and scalability in mind.
2. Smart contracts are audited and tested before deployment.
3. Decentralized data storage mechanisms are used to protect the network from attacks and failures.

4.2 Risks related to force majeure circumstances

1. **Default of government bonds:** Since government bonds are given priority in managing the security of the token, bankruptcy under bond obligations can significantly affect the HUMO ecosystem.
2. **Natural or man-made disasters:** In case of disasters, infrastructure may be affected, including data centers, banking system, Internet connection, etc.
3. **Changes in the regulatory framework:** Changes affecting a possible ban on the use or release of crypto assets in the jurisdiction of the issuer or users may have an impact on the issuer's work and the functioning of the ecosystem.
4. **Malicious actions by competitors:** Competitors in the market may try to discredit the project or manipulate the market in order to harm the HUMO ecosystem.
5. **AML/KYC Requirements:** Increased control over crypto assets may lead to additional requirements for users.

5. Economic model

The economic model of the secured HUMO token is designed to ensure the long-term sustainability of the system and maximum efficiency for market participants. The model is based on two fundamental mechanisms:

1. **Returns from asset management in collateral.** The HUMO system supports the token backing through a diversified portfolio of low-risk assets, a significant proportion of which are government bonds of the Republic of Uzbekistan. Income from managing these assets is directed towards developing the infrastructure and ensuring the operational activities of the system.

2. **Transparent commission fee system.** To maintain the efficiency of the ecosystem, commission rates on issuance and redemption are regulated by the issuer and can be adjusted according to market developments and ecosystem needs.

6. Development plan and roadmap

The HUMO Secured Token project has two goals:

1. **To create a competitive commercial solution** in the form of a crypto asset backed by assets denominated in the national currency, as opposed to tokens pegged to the dollar.
2. **To build a technological basis for the further development of the crypto industry in Uzbekistan,** using the example of the potential of a distributed registry of these instruments in a modern financial ecosystem.

Achieving the goals includes the introduction of the token into the circulation of crypto assets in the market of the Republic of Uzbekistan, building an agent network as part of this process, and long-term support for the token, including marketing support.

Let's look at the stages of project development on the way to achieving the goals in more detail:

1. Implementation and adaptation

The first stage focuses on the technical implementation of the project, system testing and the launch of main services.

Main tasks:

- **Deployment of the distributed data registry infrastructure** and launch of the issue of the secured HUMO token.
- **Testing of the mechanisms** of emission and asset management in collateral.
- **The first integrations** with financial institutions to ensure accessibility of the secured HUMO token.
- **Pilot projects** with key market participants to demonstrate the capabilities of the secured HUMO token.

2. Scaling and infrastructure development

At the second stage, the main goal is to increase the volume of use and expand the HUMO ecosystem.

Main objectives:

- **Expansion of the network of principals** – attracting new financial institutions, integration with payment services and businesses.
- **The development of the liquidity model** is the introduction of mechanisms for automatic regulation of emissions, balancing supply and demand.
- **Development of services** that ensure the convenience of working with the secured HUMO token.
- **Optimization of AML/KYC** processes to make payments using the secure HUMO token as convenient and secure as possible.
- **Achieving output volumes that ensure the breakeven** of the project due to the profitability of asset management in providing

3. Integration into the global financial system

At the third stage, secure HUMO token can go beyond national payment systems, becoming an important tool for transfers from abroad and new financial products. It is worth noting that the full implementation of the token as a tool for transfers from abroad is possible in the absence of appropriate restrictions from the legislative regulation in the Republic of Uzbekistan.

Main objectives:

- System for receiving transfers from abroad – integration with payment platforms and expansion of exchange options.
- **Creation of liquid financial products** – search for new directions of application of the secured HUMO token and development of innovative approaches to its use;
- **The flexibility of the token model in accordance with regulation** is the adaptation of the secured HUMO token to new market requirements and the development of international partnerships.

7. Conclusion

HUMO token is a secured token created with the ambition of building a foundation for the development of Uzbekistan's financial system. Its concept is based on reliability, transparency and convenience of transactions, which makes it an effective tool for businesses, government agencies and private users.

HUMO token is issued by "HUMO DIGITAL" LLC (a subsidiary of NMPC HUMO) and is fully backed by government bonds of Uzbekistan. The token is issued on Tycho's private distributed data registry, which guarantees the security and transparency of transactions. In subsequent stages, expansion to a private EVM-compatible distributed data registry is envisaged to increase compatibility with the existing public ecosystem and further increase the overall security of the system. The nominal exchange rate of the token is linked to the nominal value of the bonds by a market stabilization mechanism.

The HUMO token provides the following advantages:

- **Integration into the financial ecosystem**

- **Transfers from abroad:** Fast and cheap transactions for citizens of the Republic of Uzbekistan working abroad;
- **Expansion of financial instruments:** Possibilities of asset tokenization, DeFi development, and smart contract automation;
- **Crypto asset:** A secured token that supports the economy of its own state, unlike stable tokens that are directly backed by foreign currencies.

- **Investment attractiveness**
  - **Attracting foreign capital:** Building a financial infrastructure for international investors;
  - **Development of innovative industries:** Support for startups, professional development and increased trust in the fintech sector.

Thus, the introduction of the HUMO token opens up new opportunities for trade growth, simplification of calculations, increase in tax revenues and increase the investment attractiveness of the country. Due to transparency, reliability and compliance with the regulatory acts of the Republic of Uzbekistan, secured HUMO token creates a solid foundation for the innovative future of the financial ecosystem.

Gaybulla Khashimov
CEO of "HUMO DIGITAL" LLC _____ / _____ "June" 2025.
Signature *Date*

O'ZBEKISTON RESPUBLIKASI TOSHKENT SHAHRI MASULIYATI CHEKLANGAN JAMIYATI
HUMO DIGITAL