KOMA CHAIN

Industry White Paper

Blockchain solutions for
WEB3 application ecosystem

KOMA Foundation
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Content

Preface

This article mainly introduces the product architecture, technical features and advantages, and industry application cases of KOMA CHAIN. The core value of blockchain lies in building a trusted multi-center system, which has become the infrastructure for building a value internet. KOMA is committed to developing blockchain products in the financial industry and providing industry solutions. It has developed a high-performance and highly scalable blockchain basic services platform, which has the ability to quickly build upper-layer application business and meets the application scenarios of large-scale user numbers.

Aiming at the operational capability of productization in the financial field, KOMA CHAIN has achieved multiple technological breakthroughs and innovations, forming a series of technical features and advantages in performance, scalability, security, and operation and maintenance. Based on in-depth exploration of blockchain application scenarios with industry partners, KOMA CHAIN has been applied in areas such as government services, digital assets, trade finance, business alliances, equity bonds, supply chain traceability, joint credit reporting, public notarization, IoT sharing, and data security. With multi-center trust as the core, KOMA CHAIN is building a new generation of value circulation network, allowing digital assets to flow freely.

A、Value Internet

Today's internet has almost perfectly solved the problem of information transmission, allowing people to transmit information in a very convenient and low-cost way. However, the current Internet technology cannot achieve point-to-point value transmission. Unlike the replicable characteristics of information transmission, value transmission requires guaranteeing the uniqueness of ownership. Therefore, the current transfer of value still needs to rely on centralized organizations to assume the accounting function. Simply put, after information transmission, both the sender and the receiver can own the information. However, after the transmission of value, only the recipient can own the value, and the transferor cannot own it again. Currently, the ownership record of this transfer process is realized through centralized accounting. Therefore, if the network itself can provide reliable accounting functions, it will make the value transmission no longer completely rely on central institutions, enabling point-to-point transfer of value.

Distributed Ledger Technology (DLT), such as blockchain, can allow participants to establish trust on a technical level and has the potential to become the infrastructure for constructing a future value-free circulation network, namely the Internet of Value. Although the exact time for the widespread arrival of the Internet of Value is unknown, some local value networks have gradually formed according to current development status. In

fact, in some specific fields, several partners or industry chain participants are jointly establishing a blockchain trust network. This value local area network has already been implemented in practice, rather than just a concept. A possible evolutionary path from a value local area network to an Internet of Value is similar to the development process of the internet. In the early stages, there are independent partial value circulation networks formed by individual industries according to their own demands, and later, driven by cross-industry value exchange demands, gradually form large-scale shared value freely circulated networks.

The core value of blockchain lies in constructing a trusted multi-center system, which elevates the dispersed and independent individual centers to a unified multi-center system with multiple participants, thereby improving the efficiency of trust transmission and reducing transaction costs.

B、Our Mission

At present, blockchain products can be roughly divided into two levels: one is the blockchain underlying technology, and the other is the blockchain upper-layer application. KOMA CHAIN's product positioning is to provide commercial-grade blockchain infrastructure services, mainly including: first, building a blockchain basic platform ("blockchain underlying technology"), and second, building an application business support system with high

scalability on it (between "blockchain underlying technology" and "blockchain upper-layer application").

KOMA is dedicated to enhancing the product-level of blockchain, which is demonstrated in the following aspects:

1. Rapid application construction: the multi-mode ledger structure and business model allows for fast application building.

2. Scalable user support: efficient transaction validation and synchronization supports millions and even billions of users.

3. Visualized operation and maintenance management: providing visualized operation and maintenance management from network, system, and business layers.

4. Privacy permission policy: rich permission policy configuration for privacy protection according to application needs.

5. Built-in smart contract: supports programmable contract development and provides standardized contract templates.

6. On-chain asset issuance: supports the connection of authenticated funds, options, property rights, and other financial products.

7. Blockchain-as-a-Service: targeted towards various industries, providing configurable blockchain cloud services in the financial field and on-chain exchange services.

8. Cross-chain service: enables trusted connection and interaction of data between multiple platforms and chains, effectively improving data connection efficiency in business scenarios, breaking blockchain isolation to achieve full network interconnection, and promoting unobstructed circulation of asset transfer, exchange, trade, and bartering.

9. Data statistics and analysis: supports data statistics and analysis to meet more business scenario applications.

C、Common Questions

In the past few years, through in-depth exchanges and explorations with multiple public institutions and enterprise organizations in various industry sectors, KOMA realized that blockchain, as an emerging technology, cannot be directly applied to various complex business application scenarios. The following are some common questions during the commercial application process:

How to achieve rapid application integration?

In many discussions and exchanges, although the implementation side often delves into the underlying technology of blockchain, most enterprise organizations are still more concerned about the application integration cost (including time and manpower cost) and the risks (security and reliability risks) when it comes to actual integration and usage.

2. Can it support massive user usage?

Many large enterprise organizations currently have hundreds of millions of users. When considering whether or not to switch to a new technology, an important consideration is whether or not the technology can smoothly support the import and usage of massive numbers of users, including issues such as performance, scalability, and mass data access.

3. How to ensure secure access to private keys?

The security of private keys is a highly concerned issue. In practical business applications, users cannot directly use a string of random characters as their username and password. This requires blockchain platforms to provide a secure private key access solution in conjunction with upper-layer applications.

4. Blockchain is a black box for upper-layer applications

Traditional enterprise operations and maintenance personnel are accustomed to using visual management tools, where they can directly view the health of the entire system and perform operations and management by logging into the system. However, the blockchain system is jointly built and maintained by various participants, and for operations and maintenance personnel, the entire system is a black box, unlike traditional situations.

5. Can it meet privacy protection and permission control?

Data sharing and transparency, as proclaimed by blockchain technology, are sensitive terms in many commercial fields. While blockchain establishes multi-centralized trusted technology, how to achieve business privacy protection and operation permission control is one of the most common questions in commercial applications.

These performance, scalability, security, and operations-related issues are important considerations for KOMA during the design and development of blockchain products.

D、Product Architecture

In order to solve various obstacles that may occur during the application of blockchain technology, the KOMA CHAIN (KMC) platform adopts a two-tier structure:

1) The bottom layer KMC provides basic blockchain services;

2) The top layer Application is encapsulated internally and modeled and adapted externally, providing a series of interfaces that are suitable for application scenarios to reduce the complexity of application docking.

The architecture of the KOMA CHAIN (KMC) product system is composed of the following components: certificate services, distributed ledger services, policy and management, and encryption and decryption services. Most components are implemented from scratch, some components use

certain standard open-source components, and some are optimized and improved on mature frameworks.

Certificate services include public and private key generation, public key writing, private key signing and management, mapping of user information at the application layer to blockchain addresses, and support for regulatory requirements for real-name authentication and auditing.

Distributed Ledger Service: Based on P2P protocol for underlying networking, each node distributes messages through P2P protocol. It provides the definition of ledger structure and storage of ledger data. The pluggable consensus module ensures strong consistency of underlying data while resisting attacks from "malicious" nodes. It includes modeling and implementation of various objects such as assets, records, transactions, and contracts for application modeling and adaptation.

Encryption and Decryption Service: It provides the generation and management of encryption keys, data encryption on-chain, and further ensures data security and privacy protection.

Policy and Management: It provides a complete solution for data privacy security and access policy control. It includes various visualization management tools, such as health monitoring of underlying blockchain, system parameter configuration, data analysis, and blockchain browser.

4.1 Certificate Services

Under the public-private key system inherent in blockchain technology, the account center is responsible for public and private key generation, public key writing, private key signing, and management. It saves the mapping relationship of application layer user information and blockchain addresses, and supports real-name authentication and audit supervision requirements. It provides two types of interfaces for the application adaptation layer: non-managed interfaces and managed interfaces.

Non-managed interfaces are suitable for enterprise organizations with the ability to implement high-level private key generation and usage security at the application side. For example, in the field of finance, private key generation and management can be combined with existing security client systems such as U shield and electronic signatures.

Managed interfaces are suitable for highly internet-based application scenarios. For ordinary users, using public and private keys directly as usernames and passwords incurs high memory costs and a poor user experience. Most users are accustomed to using mobile phone numbers, email addresses, nicknames, and other user names. Therefore, in the managed interface, through a secure system for private key generation and management, the mapping of user information from the application layer and blockchain addresses is ensured, and the user's private key cannot be touched by both the upper-layer application and the underlying blockchain platform.

The managed interface uses an account center architecture, consisting of three parts: the authentication service (AuthServer), the data locker for private keys (DataLocker), and the blockchain account tree (Address).

Authentication Service:

The authentication service primarily addresses security issues between third-party applications and the account center. By adding random numbers and blind signature technology during the interaction process, the key security is enhanced, and the possibility of brute force cracking is reduced. At the same time, white-box encryption technology is used to strengthen the access security for the client-side.

DataLocker:

The writing and reading of private keys are transmitted and stored in the form of ciphertext in the locker system. The users correspond one-by-one with the key. The key is generated on the client side and does not need to be saved on the client. Whenever the private key signature is needed, the client can get the encrypted private key and decrypted key through the blind signature process.

Blockchain Account Tree:

The complete account tree is stored on KOMA CHAIN (KMC), and each leaf node records the asset information and optional identity information of an account. Each account can support the use of multiple-dimensional assets.

KMC supports multiple encryption and decryption algorithms, which can be selected according to different scenarios.

Digital Identity:

KOMA CHAIN (KMC) has established a distributed digital identity platform that complies with W3C standards based on blockchain technology. It provides unique identification and verifiable digital credentials for subjects and abstract subjects. By innovatively connecting data, it ensures that data is autonomously controllable, protects the privacy and legitimate rights and interests of subjects, and conforms to the development trend of data marketization. With the authorization of subjects, the identity can be linked to different systems and chains, and efficient data aggregation can be achieved.

Distributed Ledger Service:

The underlying service of KOMA CHAIN (KMC) consists of three parts: P2P networking, distributed ledger, and consensus service. In addition, to facilitate application-layer understanding and integration, application components are abstracted in the distributed ledger service adaptation layer.

Underlying Architecture:

P2P Networking: The peer-to-peer protocol (P2P) provides the basic networking and communication implementation, and each node maintains a neighbor list to achieve a dynamically self-organizing network. It can also be

used in conjunction with existing security protection facilities to ensure the security of commercial networks.

Distributed Ledger: The distributed ledger solves problems related to data format, data recording, and data storage; colloquially speaking, it is about "what to record and how to record it." Therefore, the design of distributed ledgers determines the ability of the underlying blockchain to provide services outwardly.

Consensus Service:

The consensus service is the core of the blockchain and the biggest difference between blockchain and traditional distributed systems. It guarantees strong consistency of underlying data while being resistant to the influence of "malicious" actors. KOMA CHAIN (KMC) provides a set of abstract consensus interfaces that connect consensus algorithms and other Hyperledger modules. It is responsible for accepting and processing transactions and providing consensus results. The consensus service uses an open framework and can support different types of consensus algorithms. KOMA CHAIN (KMC) has developed the KoMaBFT (KBFT) consensus algorithm and supports other consensus algorithms such as PBFT. Different algorithms can be selected according to the performance, security, and fault tolerance requirements of the upper-level applications.

Application Components:

To facilitate application-layer understanding and integration, various components are abstracted in the distributed ledger adaptation layer, including assets, records, transactions, and contracts.

Assets: Supports currently digitized assets, as well as assets that can be securitized and digitized.

Records: Scenarios that require the authenticity and trust of information records to be increased using blockchain technology, such as credentials in the financial sector and traceability information in supply chains.

Transactions: Atomic-level operations that interact with the blockchain's underlying layer. An upper-level application can correspond to a transaction, which can also be completed by a group of transactions.

Contracts: Two types of contracts are provided - standardized contracts and programmable contracts. Standardized contracts are primarily intended for business needs with relatively simple scenarios, high degree of standardization, and high execution efficiency requirements. For example, transaction consistency guarantees during asset exchanges, asset transaction pending and matching, etc. Standardized contracts can be generated by configuration and directly deployed on the chain without programming or virtual execution, reducing the cost of upper-layer application usage and improving contract execution efficiency. In order to meet users' complex business logic needs, KOMA CHAIN (KMC) also supports user programming

and provides rich components for users to quickly build applications for specific needs, such as encryption components, permission management components, etc. At the same time, KOMA CHAIN (KMC) provides corresponding templates for generic scenarios such as assets and certification, so users do not need to write code from scratch. They only need to change the key parameters of the template and add their business characteristics to establish mature contract applications.

4.3 Strategy and Management

The security and strategy mechanisms provided by the KOMA CHAIN (KMC) platform can both manage and maintain the configuration and security of the blockchain system itself, as well as manage the access policies and privacy security of data stored on the blockchain.

The underlying blockchain provides two basic functions for security and strategy, while the application adaptation layer provides a series of visual management tools that include configuration management (Config), health monitoring (Monitor), data analysis (Analysis), and blockchain browser (Browser).

Security:

The underlying security service is responsible for solving security problems such as system networking, interface access, consensus algorithms,

and data privacy. Currently, most industry applications are consortium chains and private chains.

System networking security: traditional security measures can be used to strengthen networking, such as access IP control, dedicated lines, node authorization, and node trust lists.

Interface access security: CA mechanism can be introduced at the interface layer, so that only authorized institutions can access the interface of the blockchain platform.

Consensus Algorithm Security:

Different consensus algorithms have a security margin. For example, in the case of KBFT, the security problem of N/3 is determined by the configuration, and security and fault tolerance are maximized at the 2/3 threshold. If in pursuit of consensus algorithm security, some fault tolerance ability can be sacrificed by setting the voting threshold at 90% or even higher. Malicious node discovery and handling, black and white list setting, etc. can also be added to strengthen the security of the consensus algorithm.

Data Privacy and Security:

As a data storage solution, blockchain can provide privacy protection with little difference from traditional databases, such as symmetric encryption and asymmetric encryption. Common technologies include homomorphic

encryption and RSA. The balance between privacy protection and trust in data sharing on the blockchain is determined by business scenarios.

Strategy:

In addition to providing the above security strategies, the strategy service also includes node deployment strategies, data access permission policies, multi-signature (Multisign) joint control policies, compliance policies, and performance policies.

Configuration Management (Config):

Configuration Management Service provides visual configuration operations for flexible settings of security, strategy, permissions, blockchain nodes, distributed ledger structure, consensus algorithms, system parameters, etc. The configuration itself can also be a blockchain transaction, which is determined to take effect by joint voting of nodes.

Health Monitoring (Monitor):

The KOMA CHAIN (KMC) blockchain health monitoring platform provides monitoring in three dimensions: physical layer (CPU, memory, disk, etc.), network layer (latency, disconnection), and business layer (block generation, transaction verification). It also provides a complete alert, log, and message notification mechanism system, which is convenient for the operation and maintenance of commercial systems.

Data Analysis (Analysis):

Most of the data stored in the distributed ledger is raw data, with a small amount of standardized relationships. In order to meet the various complex data analysis needs of upper-layer applications, the data analysis service not only provides standard data query interfaces but also supports two types of customized interface services: batch export and subscription.

Blockchain Browser (Browser):

Without involving privacy concerns, the blockchain browser can provide real-time access to the underlying storage information of the entire blockchain, including block information (Block), account information (Account), transaction information (Transaction), smart contract information (Contract), and more.

E、Technical Features and Advantages

Through extensive data testing and analysis of business and application models, KOMA CHAIN (KMC) can achieve high performance in terms of: verifying tens of thousands of transactions per second, storing massive amounts of data, high throughput, and rapid synchronization of node data. In terms of scalability, KMC can meet the requirements of multiple business block structures and permission control policies. KMC also provides secure private key access services and privacy protection solutions.

5.1 Performance Advantages

Fast Transaction Verification

Through optimization of key processes such as signature algorithms, ledger structures, data operations, serialization, consensus mechanisms, and message diffusion, KOMA CHAIN (KMC) can achieve second-level fast transaction verification, providing users with an optimized experience in the vast majority of blockchain application scenarios.

Massive Data Storage

In the multi-accounting mode of blockchain ledger, historical data accumulates over time. KOMA CHAIN (KMC) adopts traditional financial system mechanisms such as storage separation of hot and cold data and table separation storage to effectively store massive amounts of data. Older transaction data and non-active asset data can be stored using big data storage platforms such as Hadoop, IPFS, and other PB-level data storage technologies.

High Throughput

The essence of blockchain technology is a distributed shared ledger, and its distributed features mainly manifest in distributed consistency rather than distributed concurrent processing. To ensure data consistency and prevent the Byzantine General's problem, some specific processes can only be executed in serial rather than parallel. Through long-term testing and

optimization practice, KOMA CHAIN (KMC) has achieved processing performance that can meet the throughput demand of tens of thousands of transactions per second.

Rapid Synchronization of Node Data

KOMA CHAIN (KMC) supports a snapshot mechanism where it can periodically make a copy of the local ledger, implementing a convenient rollback mechanism. Under unified consensus, it is possible to designate snapshot labels for a rollback. In addition, KMC shortens the period for newly-added nodes to join the operation by only synchronizing the latest snapshot and a small set of recent transaction collections, allowing for immediate participation in network consensus and verification.

5.2 Scalability Advantages

Meeting the Block Structure Needs of Multiple Businesses

KOMA CHAIN (KMC) has a block structure that can meet the requirements of different business fields, thereby improving the system's scalability and maintenance efficiency. KMC can be used for marking assets and asset transfers, provide immutable multi-dimensional event records, and can also be used for tracking the flow process of items.

Permission Control Strategies

Providing two types of permission control strategies for data information writing and reading. For data information writing permission,

multiple users can be set up under a single account, and corresponding permissions can be set for different operations to meet the usage scenario of multi-signature control. For data information reading permission, users can grant or revoke data operation permissions for single users or user groups, and user groups can be flexibly configured by users. The data includes user account information, transaction information, etc., with granularity refined to each attribute field of transactions or accounts.

5.3 Security Advantages

Secure Private Key Access (Nodes)

To facilitate user access of blockchain product services, besides the traditional client-generated and saved mechanism, KOMA CHAIN (KMC) provides two additional solutions for network hosting access and hardware private key access. Network hosting access refers to mapping usernames and passwords into private keys via specific algorithms, and storing them on the server. The private keys stored on the server are encrypted data and can only be decrypted on the user end, and hardware private keys are designed to meet the usage needs of the financial and IoT industries.

Multiple Privacy Protection Solutions

Multiple privacy protection features are provided. First, the underlying of the blockchain provides homomorphic encryption, with all user data stored encrypted and only visible to the user.

5.4 Operations and Maintenance

Full Platform Deployment

All code of KOMA CHAIN (KMC) can be cross-platform compiled and executed, and platform-related code is encapsulated into a basic library, allowing for quick deployment of business logic on cloud platforms.

Visual Operations and Maintenance

Visual tools for operation and maintenance management are provided. The system monitoring service (MonitorAgent) on the blockchain node supports the monitoring of data information related to businesses (blocks, transactions, contracts, consensus, etc.), network (networking, latency, throughput, etc.), and system-level (CPU, memory, disk, etc.). It also provides comprehensive log, alert, and notification mechanisms, facilitating the maintenance of commercial systems.

Low-Cost Access Method

KOMA CHAIN has abstracted API interfaces that are applicable to various business scenarios, such as assets, traceability, and certification. These interfaces are directly available for use by businesses related to these scenarios. In a new business scenario, KOMA CHAIN (KMC) can quickly customize interfaces for users based on existing frameworks to meet business functionality demands. Additionally, pre-packaged SDK software development kits that support multiple popular programming languages are also provided.

Currently, KOMA's blockchain technology services mainly consist of two types: one is to build a blockchain infrastructure, provide standardized APIs, and make them available for usage by developers to integrate applications; the other is to solve industry pain points by working with upper-layer applications, and embed the distributed ledger into existing application systems. Blockchain is an emerging technology, and only by continuously meeting business needs can it mature. Therefore, we have encapsulated the underlying distributed ledger and reduced the threshold of upper-layer applications through optimization and improvement during the integration and usage process, making it more suitable for commercial demands.

F、Industry Application Cases

6.1 Issuance and Circulation of Digital Assets

Compared to traditional centralized systems, the advantages of using blockchain in the field of digital assets are that, once assets are issued in the blockchain, subsequent circulation links no longer depend on the issuing party's system. During circulation, assets are transformed from being controlled by a single center to being socially disseminated, with any resource-rich channel potentially becoming a catalyst for asset circulation. Therefore, blockchain can greatly improve the efficiency of the circulation of digital assets, achieving true "multi-party issuance and free circulation."

Traditional asset services require corresponding intermediaries, such as asset owner certification and authenticity certification, which all require the involvement of third parties to complete. Only by involving the asset issuer, asset recipient, and circulation platform can assets complete the entire circulation process. In the current tripartite model, there are several pain points:

(1) After assets enter circulation, they still rely on the asset issuer's system to complete usage and transfer, which restricts the circulation scope of assets to the user group within the issuer's system.

(2) Traditional asset circulation channels are limited and almost entirely dependent on large channels. Due to their monopolistic position, industry large channels significantly increase costs, leading to a significant increase in circulation costs, making it difficult for small channels and individuals to play a role in the circulation process.

In the network for the issuance and circulation of digital assets, blockchain is used for asset registration, transaction confirmation, record reconciliation, and settlement. The blockchain digital asset network includes various upstream and downstream organizations, such as asset issuers, asset traders, exchanges, and circulation channels, who can conduct their own business on the chain based on their respective roles.

Any digitizable asset can be registered and issued on the platform, and various entities (individuals, institutions) can register and issue their own digital assets on the platform. Asset registration enables public disclosure and facilitates the tracking and query of digital assets, effectively reducing asset dispute issues.

The core of asset circulation is the channels, and blockchain technology transforms asset circulation from a single center control to social circulation, with any resource-rich channel potentially becoming a catalyst for asset circulation, promoting circulation and improving efficiency.

The basic feature of "transaction is settlement" in blockchain makes real-time settlement possible, significantly improving the efficiency of post-transaction processing and achieving real-time query functionality for asset circulation.

Digital assets can be digitized assets, and can be used as the entry point for asset securitization and digitalization, allowing real-world assets to be mapped to digital assets for issuance and circulation on the chain.

KOMA CHAIN (KMC) is being applied in commercial point systems, e-coupons, insurance card vouchers, asset securitization, and more.

6.2 Supply Chain Finance

Multiple parties naturally collaborate within the supply chain and trade finance fields. By leveraging blockchain technology, decentralized and

independent systems can be transformed into a unified, multi-center platform with multiple participants, linking together all the links of the trading supply chain, enhancing trust transfer efficiency, reducing transaction costs, and promoting the healthy ecosystem of trade finance.

In the field of trade finance, information is scattered throughout the various independent systems of the supply chain, resulting in duplicate verification during circulation and financing processes, and low efficiency. SMEs and financial institutions have limited options in both directions due to restrictions on the flow of information within the supply chain. The lack of a unified and reliable SME credit system makes risk management difficult for financial institutions, and the costs are all transferred to financing enterprises. Blockchain technology can enable supply chain participants to create and maintain a universally recognized certificate for all links, ensuring its authenticity, validity, and tamper resistance. In addition to certificate sharing, the process of project/contract execution can be fully recorded and tracked, reducing the difficulty of risk management for financial institutions, improving the feasibility of financing for SMEs, and lowering financing costs. Supply chain circles can be de-emphasized and the range of certificate credit can be expanded, becoming the entry point for asset securitization and digitization, enhancing liquidity. The recording and accumulation of information on the blockchain is also the process of corporate self-credit. Based on these credit data, various financial services can be provided.

Universal certificates ensure unique authenticity and greatly reduce verification costs. Process visualization enhances contract transparency and improves financing management capabilities. Data recording promotes credit system construction and reduces risk management costs. KOMA CHAIN is currently being applied in areas such as warehouse receipt pledge financing, accounts receivable financing, bill custody discount, consumer finance management, and commodity trading.

G、KOMA Foundation Economy

When building the ecosystem, KOMA Foundation adheres to the following principles:

KOMA Foundation will always adhere to its non-profit mission.

Efficient and sustainable development.

Open source and sharing.

Financially, KOMA Foundation seeks financial balance between sustainable operations, community development, and promotion. In addition to the initial funds raised during the token sale, the foundation will obtain digital assets through various operational activities within the ecosystem. The foundation will also return all net profits to the community in an open and transparent manner under the audit and supervision of trusted third-party institutions.

KOMA Foundation has established a dedicated financial management team to manage its finances and digital assets. The financial management team reports directly to the foundation's strategic decision-making committee, and regularly drafts the foundation's financial reports and completes information disclosures. In addition, a third-party investment bank is introduced to co-manage the foundation, providing guidance on fund allocation and financial auditing.

The foundation's revenue mainly comes from two sources:

Non-operating income, including funds raised during the initial token sale and returns from digital assets.

Operating income, including R&D revenue, product sales revenue, patent licensing or authorization fees, academic exchanges, foundation's external investment income, and contribution income, etc.

In the process of building the ecosystem, KOMA Foundation will act as a provider of public services on the KOMA blockchain and charge a certain amount of digital assets or funds. For example, KOMA Foundation can provide professional services to traditional enterprises, assisting them in streamlining the process of business development, extension, maintenance, and transformation through the KOMA blockchain. In return, KOMA Foundation will collect a certain service fee in the form of digital assets (such as KMC).

Focus on research and ecological development: a large portion of the budget will be used for technological and ecological development, promoting the development of the KOMA ecosystem.

Driving value: The Foundation not only raises startup capital through token issuance to establish an ecosystem and create commercial value for the community, but also generates revenue by providing various blockchain services within the system. The KOMA Foundation is committed to ensuring a balance between income and ongoing operating expenses.

Adhering to the non-profit principle: The Foundation promises not to distribute profits or dividends to the founding team, Foundation managers, or other stakeholders. All revenue generated by the Foundation's operations, apart from basic expenses, will be invested in the construction of the community and ecosystem.

Restrictions on the Use of Funds

The use of funds is based on the principles of openness and transparency. KOMA will establish a series of independent accounts and digital asset wallets according to allocation principles and budgets to regulate the use of digital assets. Funds will be used for the development and application of blockchain technology, as well as for the construction of the KOMA ecosystem. Relevant information will be disclosed to the community on a regular basis.

Financial Plans and Implementation Reports.

The financial team will regularly draft financial reports, which include financial plans and summaries of the previous period's financial performance. After approval by the head of the financial department of the operating committee, the report will be disclosed to the public. The financial report should be submitted to the strategic decision-making committee for review.

H、Disclosure matters

Every year, the KOMA Foundation will disclose to the community its progress, status, and future plans in the areas of ecological expansion, technological development, and operations. In terms of finance, quarterly financial reports will be drafted and released, and the status of the annual report audit work will also be disclosed to the public. The KOMA Foundation has established a public relations committee as its external window, holding regular and irregular press conferences to disseminate important news of the Foundation to the public.

I、Legal affairs

The KOMA Foundation has entrusted a reputable third-party organization to establish a legal entity in Hong Kong. All operational activities comply with local laws, regulations, and regulatory requirements. If there are

matters that require legal advice, such as business agreements, contracts, disputes, etc., confirmation should be obtained through local lawyers.

J、Disclaimer clause

The KOMA Foundation adheres to the non-profit nature of the operation and development of the KOMA ecological system. Users of the KOMA community have the right to hold or waive KOMA token, regardless of whether they have obtained KOMA token or not. For token holders, the possession of KOMA token ensures their right to execute token transactions and smart contracts on the KOMA blockchain platform. Investors and token holders should be aware that within the scope of the law, the KOMA Foundation will not make any express or implied guarantees or promises of profits. Additionally, buyers should be aware that after token issuance/trading, the KOMA Foundation is not responsible for refunds.

clause 10.1 Dispute Resolution:

Once a dispute arises, relevant parties should resolve it through negotiation based on the agreement. If there is no result from negotiation, the dispute may be resolved through legal means. The judicial jurisdiction of the relevant dispute belongs to the registration location of the KOMA Foundation, which is Hong Kong or Hong Kong.