

# **ONEROOT PROJECT**

## **Whitepaper**

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All contributions will be applied towards the Foundation's objects, including without limitation promoting the research, design and development of, and advocacy for a new set of digital asset infrastructure based on agreed-upon protocols, which is able to create a shared economy ecosystem which achieves consensus with every co-builder in the digital asset ecosystem, to co-create an equal and open blockchain data platform, for each and every user to list its digital asset.

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- (b) none of the Foundation, its affiliates, and/or the ONEROOT team members shall be responsible for or liable for the value of RNT, the transferability and/or liquidity of RNT and/or the availability of any market for RNT through third parties or otherwise.
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## **1 Summary**

### **1.1 Background**

Since Satoshi Nakamoto put forth the concept of BitCoin in 2009, encrypted digital assets based on blockchain technology have developed rapidly, estimated to reach a total market value of USD 200 billion by the end of 2017. The blockchain is not merely a technological innovation – its core underlying concepts of decentralisation, disintermediation, and trustless transactions reveal the possibility of building entirely new economic models. From computer geeks to corporations and governments, more and more organisations are carrying out research about, and attempting to implement, blockchain technology. In the fields of value empowerment and transfer, due to the factors of openness, transparency, and traceability, blockchain technology has already shown its clear and significant advantages. Ultimately, it is predicted that blockchain technology will enable us to realise digitalisation of all assets, and allow full control of personal wealth.

### **1.2 Current situation**

The key features of centralisation are possession and monopoly, which makes traditional economic models unable to adapt to asset digitalisation. This impedes the flow of resources within the industry. As a technology-oriented emerging industry, basic infrastructure is lacking, industry norms and common technical knowledge have yet to be established, and technical friction is high, making the industry unfriendly to outsiders and impeding the inflow of external funds.

### **1.3 Vision**

The Foundation's vision is to create a new set of digital asset infrastructure based on agreed-upon protocols, which is able to create a shared economy ecosystem which achieves consensus with every co-builder in the digital asset ecosystem, to co-create an equal and open blockchain data platform, for each and every user to list its digital asset, and which will be better suited for the blockchain industry. The Foundation aims to create "win-win" situations in the projects which it undertakes. At the same time, on the basis of agreed-upon protocols, the Foundation will focus on asset digitalisation infrastructure, providing information, purchasing solutions, transaction, and liquidity solutions for users. This will make it simpler for outside funds to enter the blockchain industry, creating a sustainable win-win blockchain ecosystem.

To achieve the vision stated above, the Foundation has planned to set up a complete set of solutions, including the creation of technologically supported infrastructure and economically-drive eco-model. Chapter 2 will focus on infrastructure creation and Chapter 3 will discuss the eco-model.

## **2 Building Technologically Supported Infrastructure**

The basic infrastructure comprises two tiers: underlying standardised protocols and application-layer products & services.

### **2.1 Underlying standardised protocols**

As a channel for circulation of value, transactions and transaction data have an important meaning to the entire ecosystem. Therefore, the Foundation is currently focused on accelerating the sharing of transaction data. Based on commonly used Ethereum smart contracts, the Foundation has already completed the protocol

framework of decentralised exchanges, effected interactions of transaction data, and is currently planning development of a public blockchain to enable flash trading across all platforms which will support decentralisation of financial derivative transactions. In addition, standardised smart purchase contracts have already been completed and launched on the ICOROOT Platform.

## 2.2 Application-layer products and services

On the foundation of standardised protocols, the ICOROOT Platform strives to establish application-layer digital asset infrastructure, providing users with modularised utility services and customised solutions based on each user's specific needs. Core functional modules include: purchasing solutions, decentralised exchange construction solutions, and digital asset management solutions.

### 2.2.1 Purchasing solutions

#### 2.2.1.1 Information and project analysis report

Although encrypted digital assets are the way of the future, the market is still in its infancy, lacking comprehensive rules and effective supervision. Broadly speaking, this is an information market dominated and controlled by the major players – a characteristic which will remain for quite some time. In recent years, there have been too many examples of false information triggering dramatic rises and slumps in stock prices. Along with the universalisation of WeChat and Telegram groups, the amount of resources required to spread information (and misinformation) has fallen steadily. At the same time, the majority of the public lacks a reliable method for obtaining truthful information or the ability to distinguish truthful information from the false. These conditions contribute to asymmetry of information in the market.

To address the need for information and reports in the industry for issuance of token currencies, the Foundation has established a systematic and quantifiable analysis and evaluation system, which it has continuously adjusted and optimised over the past half year. The system is currently upgraded to the 3rd generation. Based on the above-mentioned system, the system has carried out sufficient due diligence and proactively communicated findings to the ONEROOT team, which collectively has produced nearly 100 specialised, fact-based reports. This enables users to make better decisions when purchasing tokens currencies, and has earned the Foundation a top-notch reputation across the industry. The Foundation will continuously improve these evaluation modules and provide free analysis reports to the users of ICOROOT Platform. Meanwhile, the Foundation will make efforts to develop ICOROOT Platform into a platform where developers and users can interact, helping users better understand the system and enable developers to cultivate a cadre of core users – ultimately creating a harmonious win-win community atmosphere.

#### 2.2.1.2 Smart contract-controlled purchasing channels

Along with increased prominence of “the wealth effect,” the amount of token currencies issued has increased, together with the number of groups interested in the purchase of token currencies. However, for the majority of popular token currency issuance events, minimum purchase quantity thresholds are continuously increasing, or the total crowd sale is completed during the private offering/pre-sale stage. Small and mid-sized purchasers find it difficult to participate. The market today is crowded with third-party sale agencies.

Purchasing tokens by consignment through these agencies requires funds to be held by middlemen most of the time, imposing high creditability costs on both purchasers and developers. Cases of third parties disappearing with purchasers' funds are not uncommon. Further, being motivated by sales commissions, these third party agencies / middlemen may engage in false advertising – after purchasers authorise transfer of funds, purchasers may discover that the information provided by these agencies / middlemen is false, leaving purchasers with no means to retrieve funds.

The ICOROOT Platform provides tools for standardised smart contract-based purchasing, and the entire purchase process is controlled by smart contracts. Funds are securely held within the contract and related parties may check the purchases at any time, lowering the cost of creditability required for the transaction. Any time before the deadline of the crowd-funding event, purchasers may retrieve their funds by means of the smart contract, giving them sufficient time to carefully consider prior to purchasing. Compared with making purchases through 3rd party institutions, which are by their nature labor-intensive, the method adopted by ICOROOT Platform is safer, more efficient, and more transparent, contributing to standardisation of the purchase process and continuous improvement of the purchasing environment.

#### 2.2.2.1 Technological solutions

Based on smart contract technology, the Foundation's goal is to build a full set of technology solutions for decentralised exchanges, providing users with point-to-point digital asset transaction services. The transaction system is based on the Ethereum open source smart contracts, making the process public and transparent, and eliminating the risk of deceitful practice by centralised exchanges holding vast amounts of user data. Funds are kept only within a user's digital wallet or within the transaction contract, which means that third parties are not granted access, hence greatly raising the level of external security. As planned, users would not be required to register or verify their details. Using the address of their current digital wallet, it is envisaged that users may freely conduct transactions globally, connecting them with vast sources of liquidity and avoiding centralised and regulated systems.

#### 2.2.2.2 Transaction access solutions

The blockchain industry is still in the early stages, requiring an influx of new users and external funds. Through a variety of communication methods, traffic providers such as information content providers, content publishers and personal media have helped the industry obtain considerable attention and resources. However, the aforementioned traffic providers do not differentiate between information relating to blockchain industry from other types of information. They have difficulty monetizing on the traffic they generate and can some are only able to monetize via complex methods (which are sometimes harmful to community interests), creating zero-sum or negative-sum outcomes for the community.

The Foundation intends to assist traffic providers to quickly and legitimately monetize the traffic which they generate, making them more passionate about their work and more focused on promoting blockchain-related information, which will bring additional users and external funds into the industry. Transaction fees

are one of the most reliable sources of income; however high technological requirements and exorbitant development costs makes it very difficult for the vast majority of traffic providers to become information trading agencies.

As designed, the ICOROOT Platform is intended to provide customisable transaction subcontracting, user terminals, and software applications for the co-builders in the ecosystem. This assists traffic holders within the ecosystem to overcome technological barriers and create proprietary transaction channels. All fees generated from subcontracts will go directly to the traffic providers, enabling them to monetize traffic both conveniently and quickly – they only need to focus on their core role of servicing their users and acquiring traffic. Fans and followers would not be negatively affected, they will simply be able to enjoy a faster and more convenient transaction experience.

#### 2.2.2.3 Liquidity solutions – open and equal transaction data sharing platform on ICOROOT Platform

The Foundation believes in the concept of shared development and is committed to building a digital asset ecosystem around the principle of win-win. The ICOROOT Platform data engine consists of "prime contracts" and subcontracts, with prime contracts setting the transaction rules for each transaction. Prime contracts are fully open sourced. Both prime contracts and fully customisable subcontracts are open to all co-builders.

Transaction data is accessible through subcontracts, which are aggregated and reconciled within prime contracts. Prime contracts serve as both the information exchange platform and the shared data engine. Each co-builder has equal access: all data are shared among co-builders and can be accessed through any of the subcontracts. By sharing their own transaction data, co-builders can benefit from the liquidity of the entire ecosystem. Along with the constant increase in co-builders, both the level of liquidity and size of ecosystem will also increase, thus bringing benefits to all of the co-builders.

Through continuous R&D, ICOROOT Platform is envisaged to migrate from an Ethereum-based platform to its own native public blockchain, eventually achieving compatibility with different public blockchains. The scope of shared information will expand from simple transaction information. On the basis of shared protocols, co-builders on the ICOROOT Platform will ultimately develop a blockchain-compliant shared economic ecosystem.

#### 2.2.2 Digital asset management solutions

Some purchasers may be able to effectively deploy virtual assets; however, among the many mainstream digital wallets, only a small number are able to display prices in real time, making it difficult for users to comprehensively track their assets. If a user wants to understand industry dynamics or check market prices while carrying out transactions, they must utilise several programs and switch between various interfaces far too frequently.

The Foundation has already developed a fully-featured open source digital wallet known as ROOTOKEN. As a compatible digital wallet, ROOTOKEN enables users to handle all of the ERC-20 token currencies, and the future development plan supports various digital assets under different public blockchains, thus removing the need for users to switch between different digital wallets. Users will have real time



access to market information covering the vast majority of encrypted assets, enabling them to directly observe and understand the values and fluctuations of the digital assets through the wallet interface. As a central feature, ROOTOKEN carries the digital asset smart sales contracts and a functional interface for transactions. Within the wallet, users can use the information, purchase, and transaction features to enjoy fast and convenient one-stop digital asset services.

### 2.2.3 Development status

- 1) Purchasing solutions have already been launched. Among them, ICOROOT Platform has already published nearly 100 professional analysis reports and a large quantity of industry news reports, attracting many loyal users. Standardised digital asset smart sales contracts have been launched, helping several project developers sell token currencies to aid with the development of their projects.
- 2) The protocol framework for a decentralised exchange has been completed, with basic transaction features completed. The decentralised exchange based on these protocols, ROOTREX, has entered internal beta phase.
- 3) With respect to digital asset management solutions, internal testing on the digital wallet ROOTOKEN has already been completed and it will be launched soon.

## **3 Economically-driven Eco-model**

### 3.1 Ecosystem architecture

At present, the main types of co-builders of the ecosystem on ICOROOT Platform include the followings:

Purchaser: Purchaser of token currencies and potential user of ICOROOT Platform

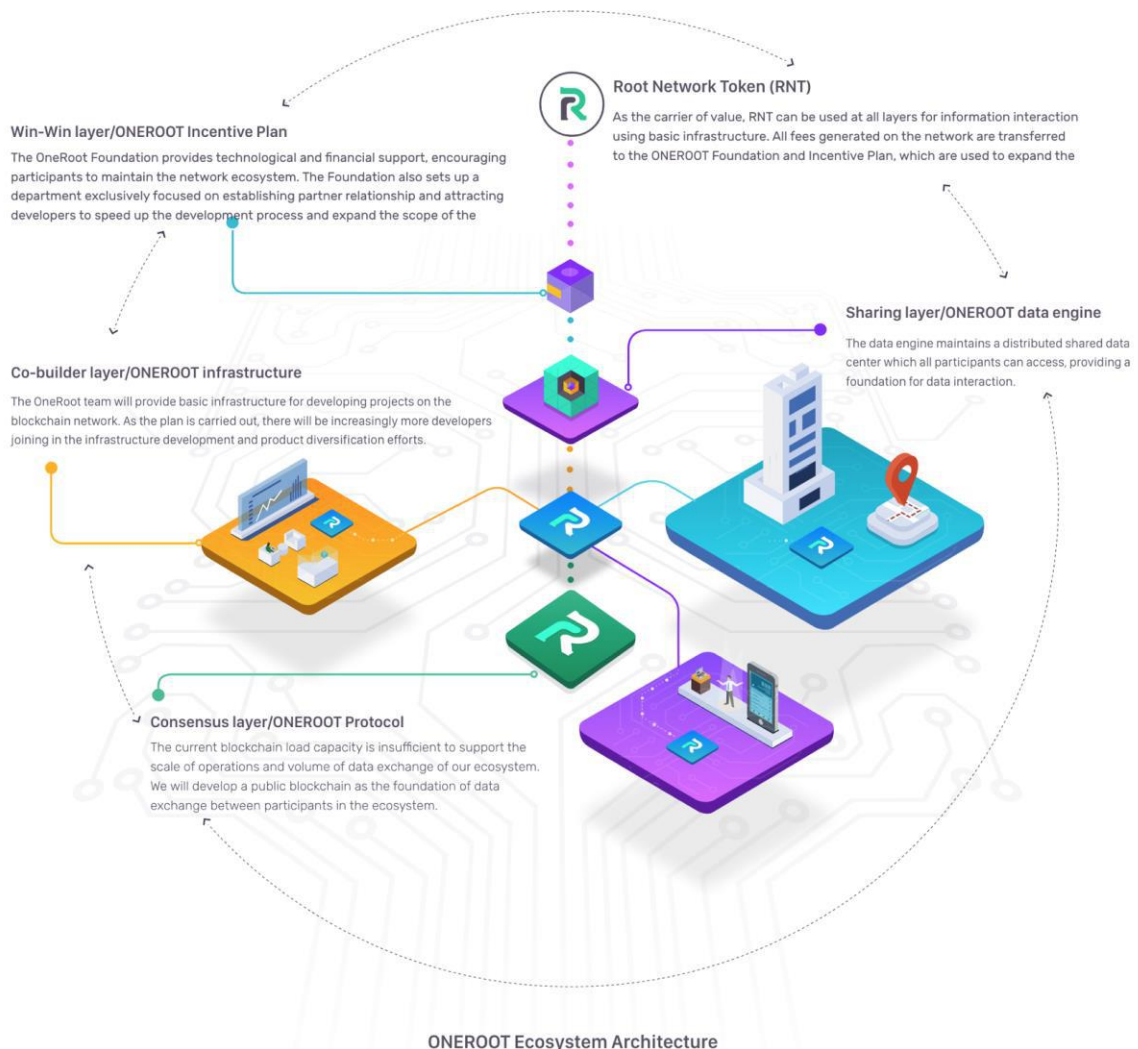
Developer: Project development and technology innovation

Trading agency: Venue for value exchange

Traffic providers/holders: Hold a large quantity of audiences both inside and outside the industry

The Foundation: Ecosystem advocate whose mission is to promote and develop the ecosystem on the ICOROOT Platform.

The ecosystem on the ICOROOT Platform can be divided into four layers: consensus, co-building, sharing, and win-win.



**Consensus:** Broad-sense consensus means agreement among all parties regarding the sharing-based and mutually beneficial eco-model. Narrow-sense consensus is a standard built based on the ONEROOT protocols. With this as a framework and foundation, the frictional costs of transactions within the ecosystem as well as any technology R&D will be dramatically reduced. At the inception of program implementation, protocol standards will be developed by the ONEROOT team and will be open to everyone in the community. As the ecosystem grows, co-builders can augment and improve consensus based on the needs expressed by the community. The Foundation will provide comprehensive support for all co-builders.

**Co-building:** Whether active or passive, all co-builders are providing resources for development of the ecosystem. Purchasers provide transaction data into the ecosystem, and are also potential purchasers for future projects. Developers guide technological and conceptual innovation, providing products and services to users, promoting development of the ecosystem. Trading agencies set up platforms for value exchanges. Traffic holders have large audiences from inside and outside the industry, potentially attracting new

resources into the ecosystem. All co-builders contribute to the research and development of consensus protocols, set up commercial infrastructure as well as integrate and analyse industry information. They provide tools, services, and technological support for improving and promoting healthy development of the ecosystem.

**Sharing:** Co-builders have equal rights of use for all resources within the ecosystem.

**Win-win:** Resource-sharing speeds up circulation and exchange, from which all co-builders can benefit. In order to guarantee sustainable development of the ecosystem, the Foundation has been incorporated to oversee the ecosystem. Any operating profits from the prime contract will not be paid to the ONEROOT team, but will be paid to the Foundation which operates the ICOROOT Platform. These amounts will be held in the co-builder fund under the Foundation, which will be used for community incentives and ecosystem expansion, completing the value cycle. Positive development of the ecosystem would result in greater amounts of co-builder funds under the Foundation, which would tend to encourage the virtuous cycle of continuous growth of the ecosystem.

### 3.2 Incentives for co-builders

**Developers:**

ICOROOT Platform provides a channel for developers to interact and communicate with a large number of potential purchasers of their token currency, helping them fully display the contents of their projects and earn core users. Transparent and normalised contractual purchase services are safer and more efficient, vastly lowering time and labor resources that developers must allocate to this aspect of their project.

**Traffic holders:**

Flexible access to transaction proposals helps traffic holders overcome technical thresholds, enabling them to quickly and conveniently monetise their traffic – all they need to focus on is servicing their users and obtaining more traffic. Fans and followers would not be negatively affected, they will simply be able to enjoy a faster and more convenient transaction experience.

**Exchanges:**

Through sharing transaction data, exchanges are able to benefit from liquidity provided by the ecosystem on the ICOROOT Platform.

**Purchasers:**

Purchasers benefit from prompt and effective information, reliable purchasing channels, secure and transparent decentralised exchanges, low friction costs, competitive prices driven by ample liquidity and competition, plus a healthy and friendly community atmosphere and infrastructure.

**ICOROOT Platform ecosystem:**

The concept of inclusive win-win will attract resources from both inside and outside the industry. The circulation and exchange of resources generates further value. The Foundation, which is a non-profit entity, will apply all of its income to promote cooperation and community-building, helping the ecosystem develop positively and sustainably.

### 3.3 Function and usage of native token

Currently, ICOROOT Platform operates on the Ethereum platform and the Foundation has created its native token (**RNT**) which is the ecosystem's token of exchange based on the Ethereum ERC-20 standard. There will be 400,000,000 RNTs in circulation, a number which will never be increased.

RNT is a non-refundable functional utility token which will be used as the unit of exchange between participants on the ICOROOT Platform. RNT does not in any way represent any shareholding, participation, right, title, or interest in the Foundation, its affiliates, or any other company, enterprise or undertaking, nor will RNT entitle token holders to any promise of fees, revenue, profits or investment returns, and are not intended to constitute securities in Singapore or any relevant jurisdiction. RNT may only be utilised on the ICOROOT Platform, and ownership of RNT carries no rights, express or implied, other than the right to use RNT as a means to enable usage of and interaction with the ICOROOT Platform.

In particular, you understand and accept that RNT:

- (a) is non-refundable cannot be exchanged for cash (or its equivalent value in any other virtual currency) or any payment obligation by the Foundation or any affiliate;
- (b) does not represent or confer on you any right of any form with respect to the Foundation (or any of its affiliates) or its revenues or assets, including without limitation any right to receive future revenue, shares, ownership right or stake, share or security, any voting, distribution, redemption, liquidation, proprietary (including all forms of intellectual property), or other financial or legal rights or equivalent rights, or intellectual property rights or any other form of participation in or relating to the ICOROOT Platform, the Foundation and/or its service providers;
- (c) is not intended to be a representation of money (including electronic money), security, commodity, bond, debt instrument or any other kind of financial instrument or investment;
- (d) is not a loan to the Foundation or any of its affiliates, is not intended to represent a debt owed by the Foundation or any of its affiliates, and there is no expectation of profit; and
- (e) does not provide you with any ownership or other interest in the Foundation or any of its affiliates.

RNT is designed to have the following functions:

1. After the official launch of ROOTREX, RNT may be directly used to pay transactions fees for transactions on the decentralised exchange on the ICOROOT Platform.

2. RNT would be used on the ICOROOT Platform to pay for fees charged by prime contracts. These fees charged by prime contract transactions will be paid to the Foundation to promote development of the community and ecosystem.

3. RNT may also be used to purchase information / reports on token currency issuances.

4. Traffic providers on the ICOROOT Platform will be incentivised with RNT for trading in information and promoting ICOROOT Platform to users.

5. After the native public blockchain goes live, RNT will be the only currency which may be used as the medium of exchanges for products / services on the native public blockchain – it is envisaged that as the ecosystem on the ICOROOT Platform continues to grow, the frequency and scale of usage of RNT will continue to increase.

To the extent a secondary market or exchange for trading RNT does develop, it would be run and operated wholly independently of the Foundation, the sale of RNT and the ICOROOT Platform. The Foundation will not create such secondary markets nor will it act as an exchange for RNT, the ICOROOT Platform only providing the technical infrastructure for decentralised exchange.

### 3.4 Sustainability of ICOROOT Platform

The main source of fees for ICOROOT Platform would be the transaction fees associated with primary contracts. Globally, there are over \$8 billion in transactions of encrypted assets daily. Assuming a transaction fee of 0.2% per transaction, these transaction agencies are accumulating over \$16 million daily. Therefore, upon reaching a certain scale, exchanges would be able to obtain stable fees. The decentralised exchange template is currently undergoing internal testing and will soon be operable. The Foundation has already obtained in principle agreements with a number of project developers, exchanges, as well as traffic holders, laying a solid foundation for this aspect of the entire ecosystem on the ICOROOT Platform.

## 4 ONEROOT Technology System

The Foundation plans to build a set of underlying infrastructure, including purchasing solutions, decentralised exchange solutions, and digital asset management solutions on the ICOROOT Platform.

### 4.1 Purchasing solutions

Token currency purchase services controlled by smart contracts make the entire purchasing process open and transparent. Smart purchase contracts must include two components: token currency registration contracts and purchase contracts.

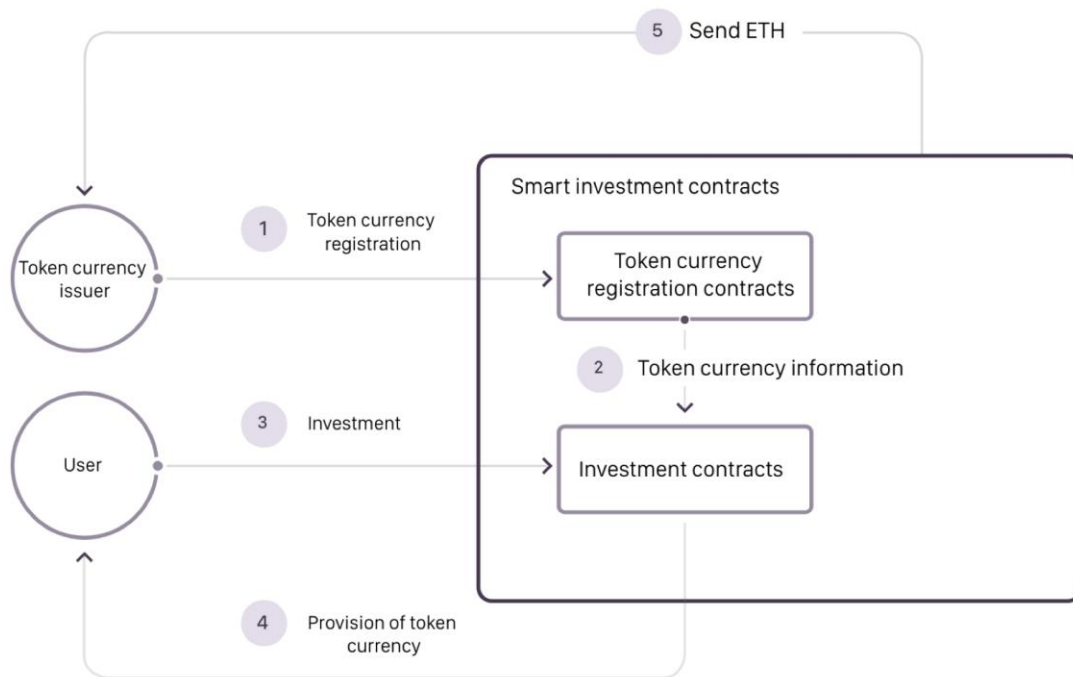


Diagram: Smart contracts workflow

#### Workflow explanation

- 1、Token currency issuer inputs token currency information, registers the currency into the registration contract ;
- 2、Currency registration contract writes relevant information into the purchase contract ;
- 3、Users purchase the token currency via the purchasing contract ;
- 4、Currency is provided to users ;
- 5、ETH is sent to the currency issuer ;

##### 4.1.1 Token currency registration contract

Token currency registration contracts are responsible for collecting information regarding the currency from the issuer. Then, they store this information and data structure in the purchasing contract.

Information about the token currency which the issuer must input includes: the token currency's token address, the token currency's name, precision, its exchange rate with ETH, its time of issuance, the time at which the rate was locked, etc. The issuer submits the currency information to ICOROOT Platform for official confirmation before it is written into the smart contract.

##### 4.1.2 Smart purchasing contracts

After the sale of token currency begins, users can purchase token currencies via the official ICOROOT website. Purchaser information is written to the Ethereum blockchain through the purchasing contracts. Simultaneously, the ETH currency sent by users will be locked within the purchasing contract. After the purchase is

completed, the ICOROOT Authority will deliver the token currency into users' digital wallet at the previously agreed exchange rate and deliver ETH to the currency issuer's wallet. Before the purchase is completed, users may withdraw their funds from the transaction and retrieve their ETH at any time.

Purchasing contracts provide the following ports

`purchase(uint256 amount)` : purchase port; Amount represents the amount of ETH to be applied towards the purchase.

`cancel(uint256 amount)` : funds withdrawal; Amount displays the amount of ETH withdrawn.

#### 4.2 Decentralised exchange solutions

A decentralised token currency transaction function, based on Ethereum, possesses the tamper-proofing, trustless transaction, and reviewability of blockchain. The solution architecture strictly abides by hierarchical partitioning, including: application layer, protocol layer, and persistent layer. At its core is the ONEROOT protocol.

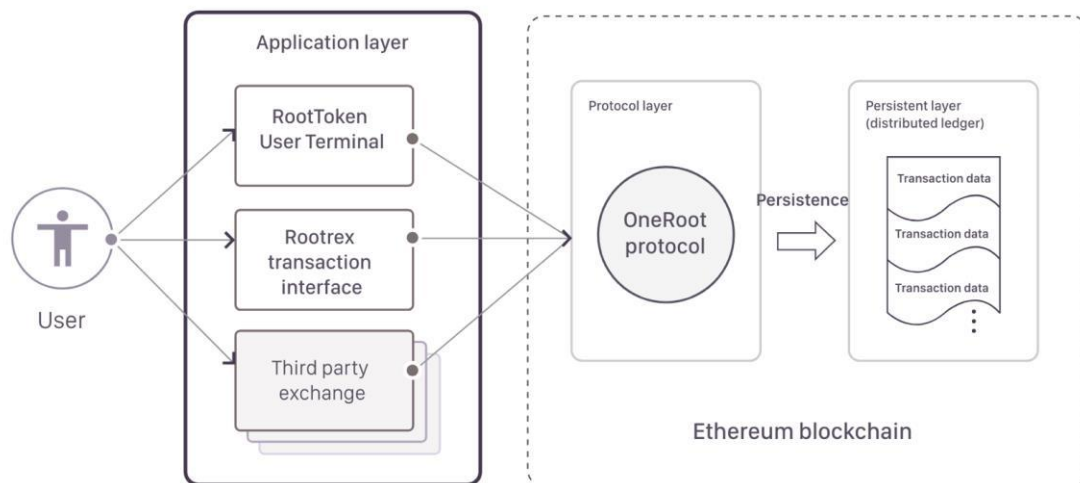


Diagram: ROOTREX exchange architecture

##### 4.2.1 Application layer

The application layer is based on the ICOROOT Platform's protocols' assorted decentralised application, and the ONEROOT ecosystem application is one of them. The ROOTKEN user terminal transaction area and the ROOTREX Exchange WEB terminal are based on the ONEROOT protocol's decentralised exchange application.

##### 4.2.2 Persistent layer

The persistent layer is the data storage layer. All transaction data are stored within the Ethereum distributed ledger and are open for all forms of review. This also

means once a transaction is submitted, it will remain unchanged forever, avoiding the crisis of trust often seen with centralised exchanges.

#### 4.2.3 Protocol Layer: ONEROOT protocol

The ONEROOT protocol and ICOROOT Platform is currently built on the ETHEREUM smart contract system and will in future shift to the ONEROOT sidechain. This is different from the current situation whereby orders are scattered among different exchanges. Eventually the Foundation will establish a single decentralised ordering directory, allowing third parties to access order information and enable exchanges to share liquidity.

##### 4.2.3.1 Contract architecture: multi-source data sharing control model

In order to make the system more scalable and flexible, the ONEROOT protocol was designed to separate the definitions within the data structure from the execution of operational logic by the way of different smart contracts. One part is responsible for executing operational logic (controller contracts); the other part is responsible for data definition and storage (data contracts). Please refer to the below diagram, in which multiple controller contracts share the same data contract, as the multi-source data sharing control model:

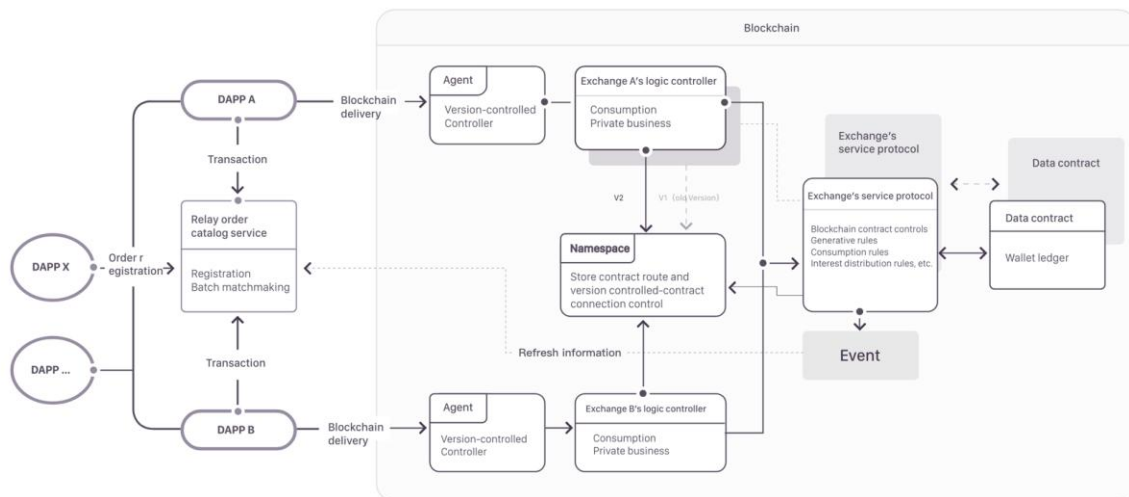


Diagram: ONEROOT contract architecture

#### Agent controller

Contract access is confirmed by external DAPP, guaranteeing that even if the contract is upgraded, there will be no inconsistencies with external calls.

#### Relay order catalog service

The existence of Relay is to solve user experience issues. Its current design uses an open centralised model. In the future the Foundation plans to create a side chain to safeguard the Relay order system, establishing balance between decentralisation and transaction experience.

1. Frictional fees and latency



Directly using the Ethereum network for pending orders or cancelling orders will impose a certain amount of frictional costs and storage fees. It would also introduce certain latency. For these reasons, the Relay service was conceptualised.

Currently, Relay is an open centralised catalog service. Using this type of service enables us to decrease frictional costs and substantially enhance operational speed. The contents of all orders sent to relay will include users' private key signature. Therefore, user intentions cannot be forged or tampered with, and can also be verified in any situation.

## 2. Matchmaking

Relay maintains a catalog of all orders. Therefore when new orders appear, Relay can first scan known orders, and remind users of their options. Once users confirm a transaction, they can place multiple orders within the range of available options in one attempt. The remaining unsatisfactory options may record the intention of closing a deal by creating new orders.

## Exchange logic controller

The exchange logic controller is a private business contract developed for co-builders on ICOROOT Platform, including but not limited to: order consumption logic, exchange commission logic.

## Namespace

Namespace records the mapping relationship of data contract addresses among different exchange versions. It guarantees that upgrades to the business logic will not affect system function and supports data traceability between different versions.

## Wallet contract

The wallet contract is users' actual digital asset ledger, including the ledger storage structure, and provides methods for external deposit and withdrawal.

## Data control protocol

According to the general rules established by all related parties, the protocol controller is digitalised. This protocol controller includes the following components:

- 1、 Access control to the affiliated logic controller
- 2、 Interactive interface with external systems
- 3、 General business logic
- 4、 Control logic for the general business core ledger
- 5、 Incident reporting mechanism

The following components are optional:

- 1、 Consumption mechanism for using this protocol
- 2、 Inventive mechanism for participating in this protocol

### 4.2.3.2 Message events

Message events refer to a mechanism used for reporting out required information in the process of executing a smart contract. While all parties are synchronising ledgers, they can obtain the current contract transaction information through the local redistributed ledger

block. Information itself is also an economical distributed ledger storage mechanism. If users are not concerned with a particular contract node, they may choose not to execute that contract – and of course will not receive the corresponding message event. If users are concerned with a particular contract noted, they may, by executing the contract, obtain the message event with related information. In this way, it is possible to drastically reduce the storage pressure on all nodes and actual transaction contents need not be stored on the native public blockchain.

#### 4.2.3.3 Business process

The design pattern of this type of diversified data model means that even if the upper-layer business process is not the same, as long as the process is based on the general business protocol, data sharing and complementarity can both be achieved, making cross-boundary cooperation easier. As data accumulates in the core ledger, it will ultimately form the industry's data core, attracting more participants to share traffic-based revenue.

Taking order registration as an example, the workflow is as follows (Diagram Order registration workflow).

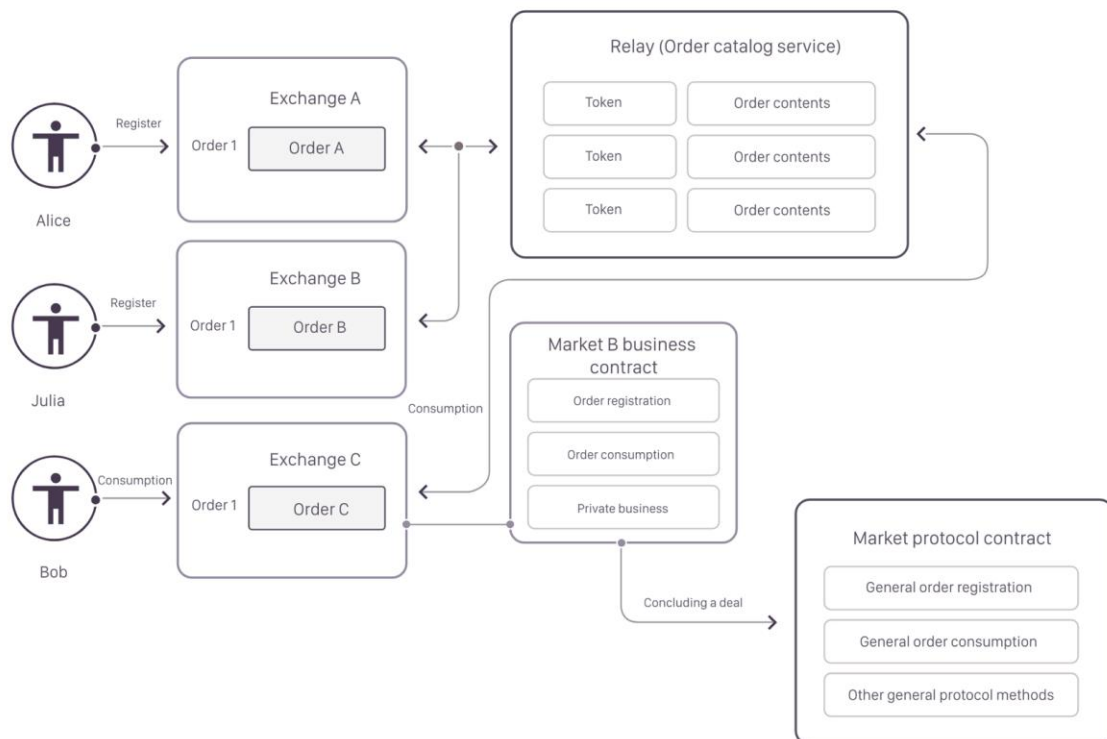


Diagram: Order registration workflow

#### Registration workflow

- 1、 After Market A examines Alice's order, depending on the protocol category, it will be registered in the corresponding contract;

- 2、 The market protocol contract examines Market A's permissions and the order contents – if all rules are met, the market protocol contract will register the order into the core ledger;
- 3、 After successful registration, the protocol contract will disseminate the order registration information and return a result;
- 4、 Market A's business contract will return the final result to Alice.

#### Transaction workflow

- 1、 By synchronising blocks, Market B acquires information of all transactions;
- 2、 By executing the transactions in the blocks, Market B will acquire all of the order registration information disseminated by Market A;
- 3、 Market B takes this order information and displays it within Market B
- 4、 Bob initiates a transaction with Market B for the order registered by Alice above;
- 5、 After examining Bob's transaction request, Market B, based on the transaction type, initiates a transaction with the corresponding protocol contract;
  
- 6、 The protocol contract examines Market B's permissions and transaction request – if the requirements are met, the protocol contract will handle Market B's transaction request and settle accounts;
- 7、 The protocol will broadcast the completion of this order transaction and return a result to Market B indicating that the request has been handled;
- 8、 Market B will return the final result to Bob;
- 9、 Market A detects the transaction completion information disseminated by the protocol contract and pushes the notification to Alice.

### 4.3 ROOTOKEN WALLET digital asset management solution

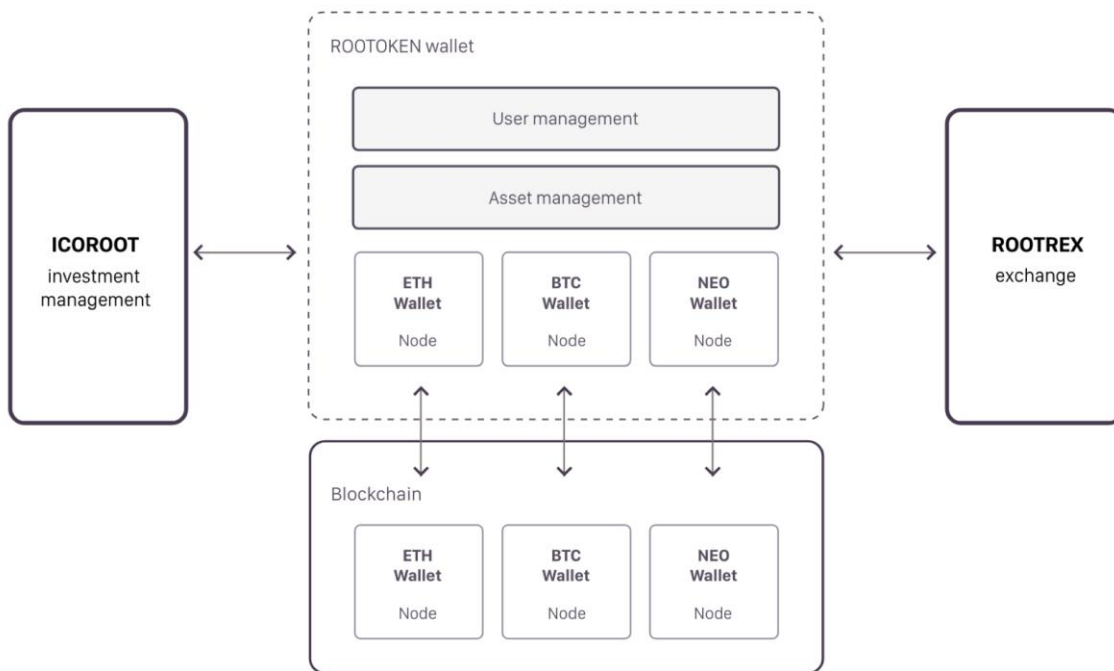


Diagram: ROOTOKEN Wallet architecture

#### 4.3.1 Multi-chain and multi-currency asset management

Some key features of ROOTOKEN are superior compatibility, and the fact that it can be linked with many mainstream public blockchains, for example ETH, BTC, NEO, QTUM, etc, making it convenient for users to manage a variety of encrypted digital assets in a unified way. ICOROOT Platform will first support asset management based on the Ethereum platform, and will successively be made compatible with other types of encrypted assets.

At a functional level, ROOTOKEN supports Ethereum features and the capability of displaying and transferring token currencies based on the Ethereum network. It can also create ETH wallets, imports, etc. By calling the Ethereum JSON RPC port, ROOTOKEN can perform the basic Ethereum wallet management.

As for asset display, ROOTOKEN optimises the contents displayed, automatically obtaining the majority of token currency price and displaying them as a weighted average. ROOTOKEN shows users the value of their assets and asset value fluctuations accurately and in real-time. Users can find basic information about their virtual currencies directly within their wallets, such as issuing time, fluctuation rates, etc.

#### 4.3.2 Security guarantee

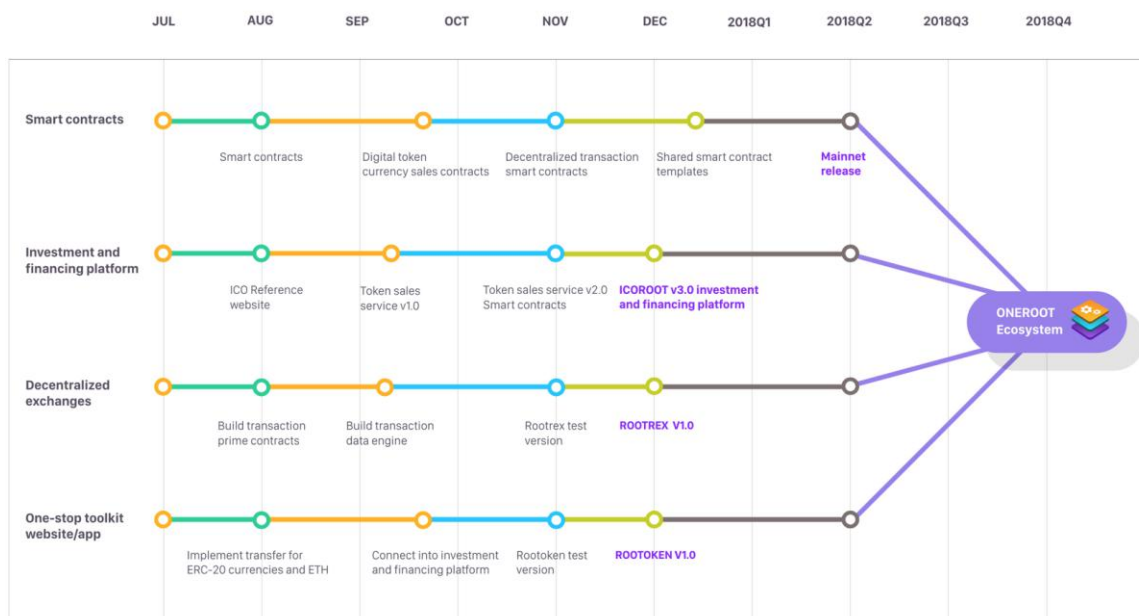
At the user end, ROOTOKEN provides secure encryption and obfuscation mechanisms, preventing users' private key from being stolen. The private key is stored only at the user end in a secure way, and cannot be uploaded to the Internet. During every transaction, users must input their transaction password, unlocking the

private key with his password, completing the transaction signature and sending it to the Ethereum network. ROOTOKEN can never acquire its users' passwords.

At the network transport layer, ROOTOKEN uses secure HTTPS channels to transmit data. HTTPS is HTTP with an added SSL layer where the original data is encrypted at the sender's end and decrypted at the receiver's end. Therefore, during the transmission process, the message is difficult to be intercepted and cracked, ensuring safe data transmission.

In order to avoid potential failure at a single point, the ICOROOT Platform deploys multiple Ethereum nodes. When one Ethereum node is down, the load balance will be automatically routed through different nodes, ensuring that Ethereum service is always available. This dramatically reduces the risk of ROOTOKEN breakdown at critical moments such as transactions and transfers.

## 5 Planned development Roadmap



Currently, purchasing solutions have already been launched; the decentralised exchange protocol framework has been built, and the ROOTREX decentralised exchange based on this protocol has entered the test phase; ROOTOKEN digital wallet has finished internal testing and is ready for launch.

Based on the Foundation's plan, the API for all infrastructure will be released in Q1 of 2018, the main chain will go online in Q2, and the complete ONEROOT ecosystem will be finished in Q4.

## 6 Organisational Structure

The Foundation is an entity incorporated or to be incorporated in Singapore as an independent non-profit entity. Its primary goal is the promotion and development of the ecosystem on the ICOROOT Platform.

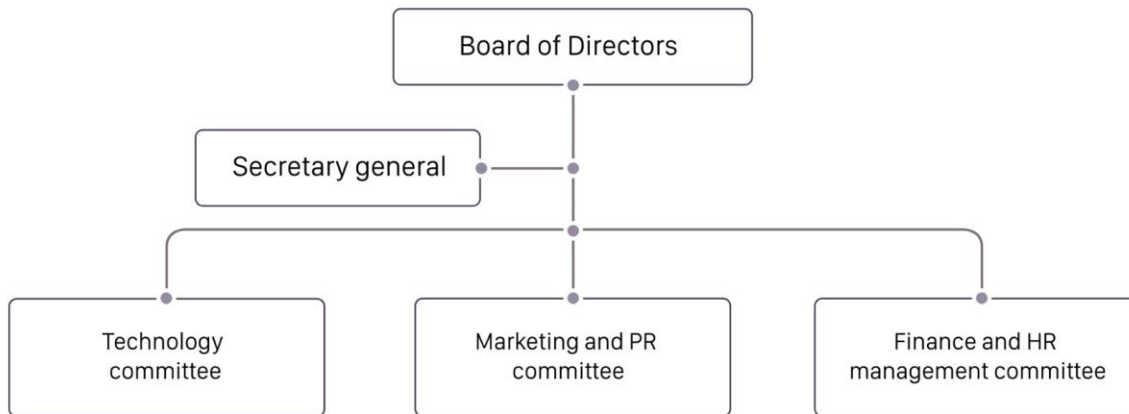


Diagram: ONEROOT Foundation's organizational structure

**Board of Directors:** The overall decision-making body of the Foundation, functions include nominating and voting on board members as well as functional committee leads; making critical decisions; and convening urgent meetings. The term for board members and chairperson is two years, and the chairperson cannot serve more than 2 terms.

The members of the first board of directors of the Foundation are selected from the following three groups: core members of ONEROOT team, business partners and consultants with abundant experience in the field, and one nominated community representative. Twenty community representatives will be selected based on the amount of RNT they are currently holding as well as the duration of time held, who will then select one member from amongst themselves to act as the nominated community representative based on the principle of competitive election.

**Executor (Secretary General):** Highest-level administrator of the Foundation, providing guidance and coordination for daily operational management, technology development, market development, community maintenance, and public relations. The Secretary General is elected by the board of directors, and reports its activities regularly to the board.

**Technology committee:** Consists of core developers from the ONEROOT team, in charge of determining the direction of technological research and development, underlying technology development, open-port development and audit, technology patent development and audit. Additionally, technology audit committee members must stay up to date on community and industry dynamics and hot issue. They are responsible for communicating with co-builders in the community and occasionally holding technology forums.

**Marketing and PR committee:** ecosystem development and community building is important to the Foundation's objects. Under the supervision of the Finance and HR committee, the Marketing and PR committee will use funds and digital asset profits received from community operations to carry out activities for marketing, promotion and business cooperation. They will bring more potential co-builders into the ecosystem, promoting sustainable development. Simultaneously, the committee is responsible for all external messaging and public relations operations.

Finance and HR committee: Responsible for the use and audit of the Foundations' funds, hiring personnel, managing salary packages, and the costs of daily operations.

It is expected that the Foundation's funds will come from the following sources: from the initial token currency crowdfunding event, at least 22% of all RNT will be deposited into the Foundation's account; all of the fees on the ICOROOT Platform will be paid back to the Foundation. Exchange or use of RNT must be approved by the board of directors and be audited by the Finance and HR committee, and must be publicly disclosed in the Foundation's regular reports.

## 7 Team



**ONEROOT FOUNDATION CHAIRMAN**  
Tony Sun



**Secretary General**  
Tommy Xu



**Co-Builder**  
Roy Li



**Co-Builder**  
Raymond Tan



**Co-Builder**  
Ady Rao



**Co-Builder**  
Yang Cao



**Co-Builder**  
Bo Wang



**Co-Builder**  
Suangjiang Lu



**Co-Builder**  
Weitao Liang



**Co-Builder**  
Wendong Zhu



**Co-Builder**  
Feifei Wang



**Co-Builder**  
JJ Wu



**Co-Builder**  
PP Liu



**Co-Builder**  
Yu Qi



**Co-Builder**  
Morton Wang



**Co-Builder**  
Downey Huang



**Co-Builder**  
Zoe Xiong



**Co-Builder**  
Dinda Ding



**Co-Builder**  
Downey Huang



**Co-Builder**  
币圈



**Co-Builder**  
币圈宝



**Co-Builder**  
币圈百科



**Co-Builder**  
币金融



**Co-Builder**  
太阳资本



More co-builders on their way!

## 8 Risks

### 1. Uncertain Regulations and Enforcement Actions

The regulatory status of RNT and distributed ledger technology is unclear or unsettled in many jurisdictions. It is impossible to predict how, when or whether regulatory agencies may apply existing regulations or create new regulations with respect to such technology and its applications, including RNT and/or the ICOROOT Platform. Regulatory actions could negatively impact the RNT and/or the ICOROOT Platform in various ways. The Foundation (or its affiliates) may cease operations in a jurisdiction in the event that regulatory actions, or changes to law or regulation, make it illegal to operate in such jurisdiction, or commercially undesirable to obtain the necessary regulatory approval(s) to operate in such jurisdiction.

### 2. Competitors

It is possible that alternative networks could be established that utilise the same or similar code and protocol underlying RNT and/or the ICOROOT Platform and attempt to re-create similar facilities. The ICOROOT Platform may be required to compete with these alternative networks, which could negatively impact RNT and/or the ICOROOT Platform.

### 3. Loss of Talent

The development of the ICOROOT Platform depends on the continued co-operation of the existing technical team and expert consultants, who are highly knowledgeable and experienced in their respective sectors. The loss of any member may adversely affect the ICOROOT Platform or its future development.

### 4. Failure to develop

There is the risk that the development of the ICOROOT Platform will not be executed or implemented as planned, for a variety of reasons, including without limitation the event of a decline in the prices of any digital asset, virtual currency or RNT, unforeseen technical difficulties, and shortage of development funds for activities.

### 5. Security weaknesses.

Hackers or other malicious groups or organisations may attempt to interfere with RNT and/or the ICOROOT Platform in a variety of ways, including, but not limited to, malware attacks, denial of service attacks, consensus-based attacks, Sybil attacks, smurfing and spoofing. Furthermore, there is a risk that a third party or a member of the Foundation or its affiliates may intentionally or unintentionally introduce weaknesses into the core infrastructure of RNT and/or the ICOROOT Platform, which could negatively affect RNT and/or the ICOROOT Platform.



## 6. Other risks

In addition to the aforementioned risks, there are other risks associated with your purchase, holding and use of RNT, including those that the Foundation cannot anticipate. Such risks may further materialise as unanticipated variations or combinations of the aforementioned risks. You should conduct full due diligence on the Foundation (and its affiliates), the ROOTONE team, understand the overall framework and vision for the ICOROOT Platform prior to purchasing RNT.