



## Ultiledger.io Economic Eco Whitepaper

The next generation global self-financing blockchain protocol

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# Disclaimer

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The Ultiledger team will continue to make reasonable attempts to ensure that the information in this White Paper is true and accurate. During the development process, the platform may be updated, including but not limited to platform mechanisms, tokens and their mechanisms, token distribution. Portions of the document may be adjusted in the new White Paper as the project progresses, and the team will release the update by posting a notice or a new White Paper on the site. Please be sure to get the latest White Papers, and make timely adjustments to your decisions based on the updates. It is expressly disclaimed that the participants will not be liable for any loss resulting from (i) reliance on the contents of this document, (ii) inaccuracies of the information in this document, and (iii) any action resulting from this document. The team will spare no efforts to achieve the goals mentioned in the document, but due to the existence of force majeure, the team cannot make a full promise.

Ultiledger is an important tool for generating performance on the platform and is not an investment product. Owning an ULT Token does not mean giving its owner ownership, control, or decision-making rights to the Ultiledger platforms. ULT as a digitally encrypted currency does not fall into the following categories: (a) currencies of any kind; (b) securities; (c) shares of legal entities; (d) stocks, bonds, notes, warrants, certificates or other instruments that grant any rights.

Depending on the market rules and the application of post-arrival demand, the value of the ULT may not have any value. The team will not make any commitment to its value-added and will not be responsible for the consequences caused by the increase or decrease in value. **TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW, FOR THE DAMAGES AND RISKS INCLUDING, BUT NOT LIMITED TO, DIRECT OR INDIRECT DAMAGES, LOSS OF BUSINESS PROFIT, LOSS OF BUSINESS INFORMATION, OR ANY OTHER ECONOMIC DAMAGES ARISING OUT OF THE INTEREST IN CONNECTION WITH THE PARTICULAR PURPOSE.** Ultiledger platform should comply with any regulations for healthy development conducive to the exchange

of industries and the development of self-regulation industry self-declaration. Participant and its Delegates will fully accept and abide by such inspections. At the same time, all information disclosed by participants to accomplish such inspections must be complete and accurate. The Ultiledger platform clearly communicated possible risks to the participants. Once the participants participate in the exchange, they acknowledge and accept the terms and conditions in the Rules, accept the potential risks of this platform and bear the consequences.

# Project Summary

Finance first emerged due to economic development, mainly to facilitate economic activities through financial intermediaries. Financial activities date back to 2000 BC in the Babylonian Temple and in the 6th century BC when the Greek temples provided custodial and interest-bearing mortgage services. Later, in ancient Greece and during the Roman Empire, there existed lenders and commercial institutions similar to banks. Modern banks rose from the currency exchange industry and the goldsmith industry in Europe. The oldest bank was the Bank of Venice (1580). In 1694, the first joint-stock bank, the Bank of England, was founded in the United Kingdom, establishing the most common form of organization for the modern financial industry. At the end of the 19th century and the beginning of the 20th century, the major capitalist countries entered the stage of monopoly capitalism. The credit-centered banking monopoly and industrial monopoly capital infiltrated each other to form financial capital which control the lifeline of the capitalist economy.

With the rapid development of the social economy, the modern financial industry has developed into a system of diverse financial institutions. It covers banking, insurance, trust, securities and leasing industries, with the banking industry taking the dominant role. In order to better serve complex economic behaviors, modern finance has innovatively developed financial products and related derivatives. The development and popularization of computer technology has made possible in recent years the emergence of Internet finance, such as online crowdfunding, online lending, online settlement, consumer finance, data currency, etc.

The financial industry is an indispensable part of modern economy. It promotes the rational allocation of social capital among market participants and improve the efficiency of social capital use. The indicators and tools of the financial market reflect the good and bad of the national economy. The capital demand side mainly raises capital by issuing stocks and bonds to directly attract surplus funds, without passing through a third-party financial institution, thereby reducing transaction costs. In an indirect financing case, a financial institution (such as a bank), transferred capital from its investment pool to the borrower based on the latter's qualifications. The emergence of third-party institutions can reduce moral hazard and adverse selection caused by information asymmetry, and is more conducive to the healthy development of financial markets.

Traditional financial institutions have made outstanding contributions to the economy, however, they are faced with inherent risks and are falling short of the rapid social and economic transformation. The financial sector may be exposed to new risks and problems in this high-tech era, which may magnify those inherent risks of traditional financial institutions. The emergence of Internet + finance has made it possible for mixed operations and finance groups. However, under mixed operations, information

asymmetry is more prominent, thus making financial risks more likely. Modern economic activities seek higher financial efficiency. However, transactions through traditional financial institutions require significant fees and prolonged process time, accompanied by increased risks of data breach of related parties due to human error.

Internet finance has unique advantages over traditional finance. However, due to limits of the credit information system and lack of a shared credit information platform, the Internet finance is prone to credit risks. The consensus mechanism in the blockchain can be introduced just to mitigate these risks. The cryptocurrency based on blockchain technology provides convenient alternatives to traditional financial payment and settlement. The technology promotes decentralized and peer-to-peer payment methods, breaking through the cumbersome bank transfers required by traditional financial institutions, and prompting great vitality in commercial activities.

Using the blockchain technology, Ultiledger wishes to establish an economic and financial ecosystem based on ULT Native Tokens to help any organization set up trust mechanisms at a low cost and time capital: distributed financial book of bank-grade security; zero-cost transaction settlement within the ecosystem; improved security, privacy, efficiency and capital availability of the system through the combination of the main chain and subchains. Our clients can include governments, companies, industry clusters, and even individuals or communities. In the Ultiledger ecosystem, users can register assets that they consider valuable in a code string on the blockchain for asset tokenization, and then perform transactions using the tokenized assets via smart contracts and open storage. Any digital or physical asset can be provided permanent storage and real-time tracking on the public chain, and ultimately allowing the interexchange between assets and value on a trusted basis. We hope to build a safer blockchain platform with a more open design and a lower cost, resulting in a more enjoyable experience. At the same time, the platform will respond to the supervision of governments, allowing the blockchain technology to seamlessly integrate with the real economy.

The blockchain technology will reshape the next generation of the Internet and distribute profits of the consensus economy. The Internet today is a "traffic ranch" where all users and companies are like cattle and sheep subject to ruling of corporate giants. A ride-hailing platform, as the largest of its kind in China, has greatly raised the percentage cut from ride fair or reduced subsidies to the driver on the one hand, and has direct-or-indirectly increased the price to passengers on the other. The distortion in charges and the cuts, as well as the unfair distribution mechanism, caused the drivers to put off orders from time to time, leaving passengers without available rides. On the contrary, a "distributed" consensus mechanism promoted by the blockchain is the ultimate weapon to break away from this monopoly mechanism for fair and equitable distribution. Since

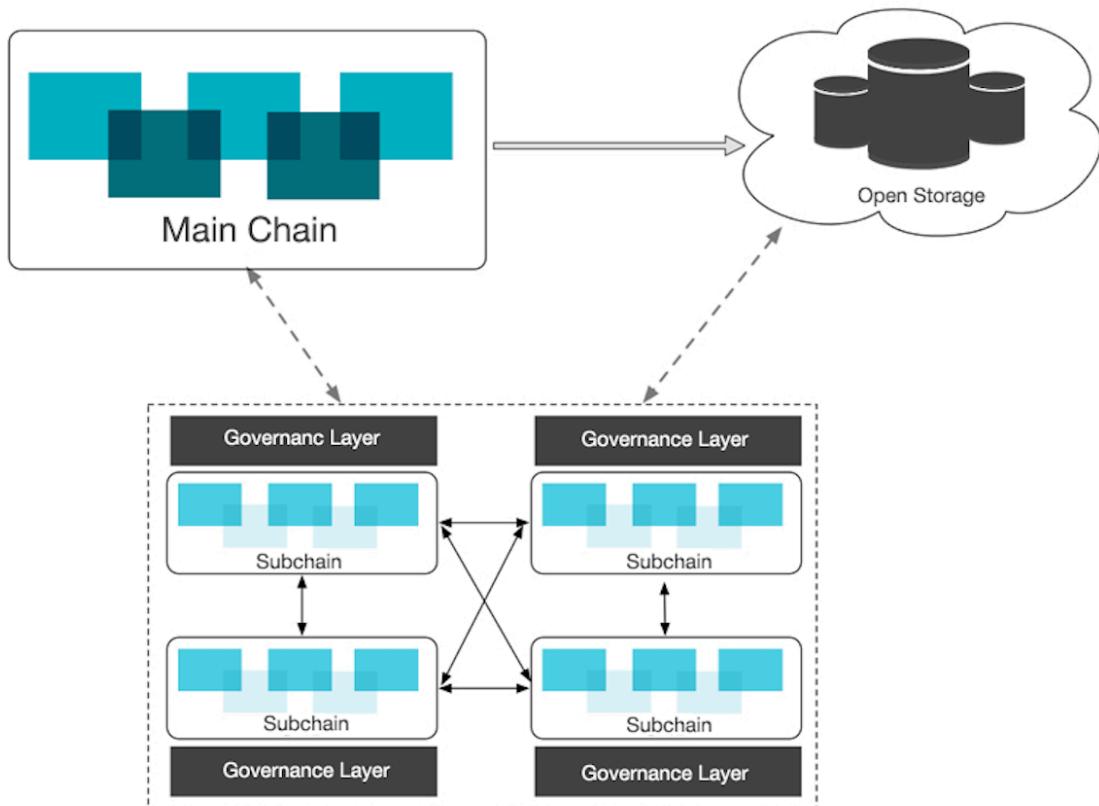
the distribution mechanism is based on consensus and approved by each participating entity, and the information is completely open, transparent and tamper-proof, participants can enjoy the rewards and rights they are entitled to.

As an early application of the blockchain technology, the success stories of Bitcoin and Ethereum attest to the infinite possibilities the technology. However, due to the current underlying transmission mechanism, computational performance and architectural constraints of the consensus algorithm, the existing public chains are facing the bottleneck of transaction processing. Both Bitcoin and Ethereum's System Throughput (TPS) are still in single digits or tens digits, which makes it impossible to carry actual trading scenarios. In actual economic activities, the required TPS often needs to reach thousands transactions per second. With traditional e-commerce platforms, payments and exchanges, the actual transaction demand often reaches tens of thousands of times per second. Ultiledger is designed through a multi-chain system which allows for overall faster transaction processing speed. The main chain adopts the Federated Byzantine Agreement, imposing thresholds on minimum data volume, minimum calculation amount and minimum network bandwidth. The subchains facilitates quicker consensus through fewer nodes.

The Ultiledger team has many years of practical exploration experience, and successfully developed multiple applications based on subchains of breakthrough innovations in the early days. With the expansion of the blockchain sector, it is observed that applications only achieving self-financing within the subchains, cannot satisfy the need for circulation of credit, assets and value. However, the financial scene is often complicated with an increasing amount of assets and fast-growing demand for interaction. To this end, the ground-breaking and interactive blockchain framework, ultimate ledger project (Ultiledger), is proposed as a blockchain solution that meet the needs of real business applications. The project aims to deploy a new generation of self-financial public chain to meet the financial needs of different scenarios on one hand, and to map and combine assets that require circulation on the other, supporting their circulation on a global scale.

# Economic Philosophy of Ultiledger

The main architecture of Ultiledger consist of three main components — the main chain, the subchain, and the storage architecture. Ultiledger has built a verifiable, secure and reliable high-performance blockchain architecture with a unified underlying protocol. The design logic is based on strict design principles and philosophy foundations. The system design follows the principle of dialectical thinking to find suitable technical solutions for the actual contradiction.



Ultiledger follows the following four principles to build a self-financial blockchain system.

**Cornerstone of trust:** Trust is the cornerstone of the blockchain. The purpose of system design is to build a trusted system.

**Community governance:** The main feature of the blockchain. It is the substantial support for establishing credibility.

**Practicality:** All technologies must be considered for the actual application of the service.

Experimental and unstable approaches should be abandoned.

**Openness:** Openness is a necessary condition for the success of blockchains. Openness means equality, open source code, and generalization of infrastructure.

In the process of creating Ultiledger by following the above principles, we may find that some principles conflict with each other: e.g. conflict between community governance and practicality can lead to an unreliable system. In order to resolve the potential issue, the following philosophical practices are induced:

Credibility is built out of distrust: the credibility of the blockchain system stems from the mutual distrust of participating nodes.

Comprehensive autonomy introduces chaos: a practical open system cannot fully adopt community autonomy, but local nodes can adopt autonomy.

Centralization without verification rights is not a centralized system: local node formation becomes a trusted architecture if it turns over the verification right.

Local unreliability is not global unreliable: decentralized local nodes are unreliable, but open verification mechanism brings reliability to the system.

The construction of the financial blockchain system requires innovative thinking. Based on the aforementioned principles, we have proposed a new solution: constructing a mutual constraint structure. Each constraint link of the system is connected with the service carrier organically. When the constraints of the various links of the system and the carrier are placed in the wrong position, the system's unreliability can be effectively resolved. To this end, we have established the following design ideas: to establish an open public main chain system, with its high credibility as the cornerstone of the open verification mechanism. The goals is using minimum data volume, minimum computational complexity, and minimum network bandwidth to achieve maximum openness, highest level of community autonomy, and strongest reliability. The scalability of some of the main chain systems can be comprised to increase the stability of the entire system. Enterprise-level applications require systems to be practical and scalable. Establishing subchain, form a multi-chain mechanism, extension of the local implementation, and practical applications all require the system to have powerful processing capabilities. Therefore, the system must be practical and adaptive, and deploy the extended dislocation to local nodes for the solution. This makes the entire system centralized but untrustworthy. Consequently, we establish an open storage system to return the data and verification rights to the main chain, so that the trust mechanism of the entire system will not be affected by the centralized characteristics of the subchain to which the local nodes belong.

The main chain, subchain and storage mechanism are far from enough to achieve the integrity of the dislocation mechanism. We have proposed three innovative technology protocols: subchain address protocol, value exchange protocol and open verification protocol.

By far the system is backed with completed solution theoretically and technologically along with the fundamental conditions for enterprise-level application business. The technical protocols provide the full theoretical support and technical assurance of the entire system in terms

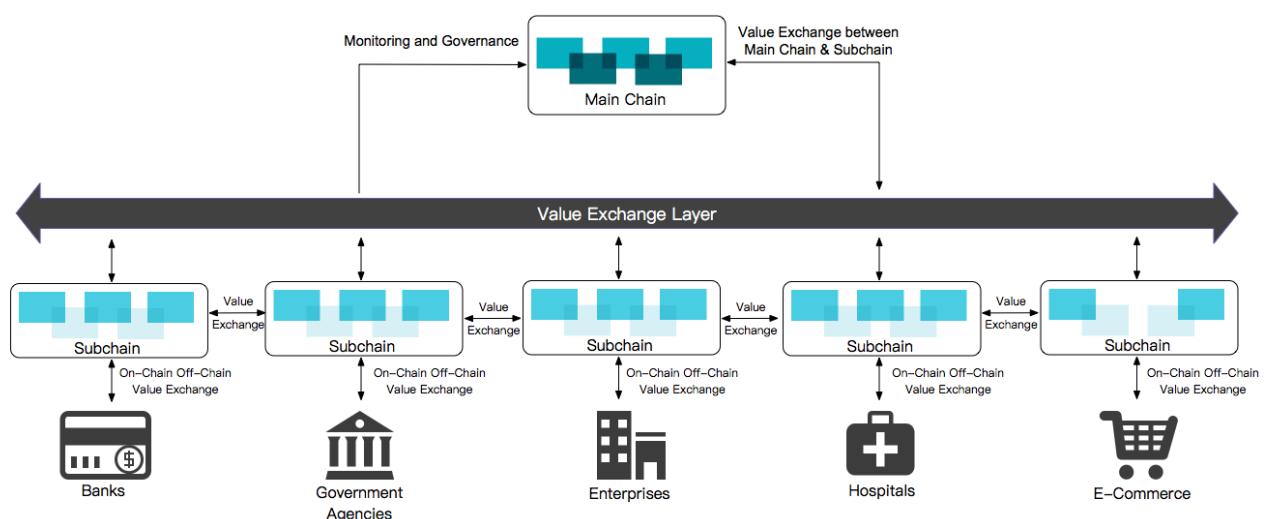
of credibility and scalability, and provide considerable technical details in such aspects as preventing subchain double-spending attacks, removing transaction account associations, and simplifying transaction verification procedure. It provides a practical and effective means for the system to successfully break through the technology bottleneck in blockchain credibility, security and scalability that are commonly faced in the development of blockchain.

Ultiledger is the first public blockchain system to truly meet the needs of real business applications.

# Ecosystem of Ultiledger

Ultiledger's design philosophy is to use profit incentive mechanism to construct a fast, low cost, efficient, safe and reliable public blockchain ecosystem which satisfies large-scale daily business needs. These requirements include, but are not limited to, trading and clearance of various types of assets, as well as redundant storage of information. At the same time, in order to protect the autonomy right of the participants in the ecosystem, Ultiledger adopts the multi-chain architecture design principle of main chain plus parallel subchains, which provides the subchain ecosystem with an independent operating system of asset transactions, clearance and storage. This mechanism not only significantly reduce the systemic risk, but will further improve systemic efficiency.

Based on the above design concept, the Ultiledger ecosystem consist of three parts: the main chain, the subchain and the open distributed storage (ODS). It is an open economic ecosystem based on the contradictory dislocation mechanism and the core rules of the unified underlying protocol and consensus mechanism. Components of the three modules each perform its specific functions, yet collaborate with each other and verify each other to constitute a complete guarantee of trust and value maintenance mechanism.



## Multi-Chain Mechanism

Ultiledger uses a multi-chain architecture with a main chain plus parallel subchains. As the core of the system, the main chain is designed with the minimum data volume, calculation amount and network bandwidth requirement, to provide the underlying protocol, ledger, main chain trust, smart contract and value system. It has the highest level of verification right which comes from all participating nodes and the federated Byzantine consensus mechanism.

The main chain design uses a Proof-of-Asset (PoA) mechanism for asset anchoring. PoA, as its name implies, is a mechanism designed to let users prove that they have a certain amount of cryptocurrency control. It is mainly implemented through the wallet's private key signature, the hardware wallet's private master key and its relevant information, or third-party credibility system. As the core for main chain to identify users owning a digital asset, PoA mechanism will bring a more liquid, secure and market-active distributed trading platform to Ultiledger ecosystem, enabling the real control that the holders have on their digital asset.

The main chain stores intra-subchain asset trading results on the one hand, and inter-subchain transaction and interaction records on the other hand. Once packaged into the main chain blockchain, it will form the safest and irreversible consensus. Another module function of the main chain is to clear transactions generated on different subchains. Since each subchain is connected to the main chain, transactions that form a consensus on the subchain are verified by the main chain consensus and then packaged into the main chain blockchain. Consequently, all subchains can share the general ledger and realize clearance between subchains. In addition to the usual functional modules of blockchain, wallet, gateway, virtual machine etc., the main chain blockchain also has a value exchange layer and a security mechanism module for value exchange with the subchain.

The subchain is an important part of the system, usually a subchain node carries a large number of specific services, such as exchange transactions, e-commerce, supply chain, Internet of Things platform or medical platform. Ultiledger triages the business of different organizations, institutions and enterprises to different subchains according to demand without additional processing, forming natural data fragmentations and ensuring data independence of organizations, institutions and enterprises. Ultiledger provides flexibility for pluggable consensus algorithms and ledger techniques for the ever-increasing subchain of ecosystem. For example, the subchain of exchange transactions can adopt PoW, and the subchain of supply chain finance can adopt PBFT. In the divide and conquer mode, the fault tolerance of each subchain can be different from TPS, and the TPS of Ultiledger presents the sum of all subchains. In the Ultiledger design, the value confirmation and final transaction verification is performed by the main chain, along with

the deposit of the Open Distributed Storage (ODS), to ensure that the subchain has an efficient processing capability close to the centralized system and provides safe and reliable divide-and-conquer solutions. According to the system design, even if a subchain is designed for attack purposes, it cannot cause any loss to other subchains and main chain.

As a complete blockchain system, the subchain will also have its own storage, clearance and trading system. On the one hand, the independent ledger system can quickly reach consensus based on the internal nodes of the subchains, and realize the efficient implementation of the subchain business; on the other hand, aspects contribute to the internal ecosystem of the subchain and maximize the value of the subchain system. However, the separate ledger system of the subchain does not exist separately from the main ledger, it is only a useful supplement to the main ledger of the main chain, as the ledger record of the main chain is mainly derived from the record of the subchain consensus. For example: if the consensus transaction on subchain A is not packaged into the main chain, it is only a consensus within the subchain, which is not necessarily accepted across the whole system. Only when being packaged into the main chain and verified by the node, can a true network-wide consensus be formed and the highest level of consensus be achieved.

The subchain contains the following key elements: the initial block, smart contract address route, and subchain address protocol, which guarantee the reliability, security, and effectiveness of the subchain transactions. The starting block of each subchain is a special block issued by the main chain, and defines a special account for the subchain, known as smart contract proxy route, to proxy all transactions between the subchain and the external accounts.

The trust of the subchain can be verified by the main chain, which forms a double verification. The process is subject to the rules of the main chain and its rules, and the final verification right belongs to the basic blockchain. Simply put, the identity and attributes of the subchain are determined by the main chain. The validity of the transaction needs to be approved by the main chain. The data is stored according to the requirements of the main chain, and the final settlement is verified by the main chain. The subchain design principle is: under the premise of satisfying this condition, the subchain node should undertake the computation workload as much as possible.

The value maintenance of the subchain should be treated differently according to the situation: For the subchains using the main chain value system, its value mechanism is derived from the main chain, which means it is implemented according to the main chain protocol, normative and consensus mechanism. It is bounded by the main chain's smart contract, and subjects to the main blockchain's supervision and eventually accepts its verification. For the subchain with

independent value system, its value is not derived from the main chain. The transactions between such subchain and external are limited, and can only be carried out through local exchange. The main chain does not verify its consensus mechanism, but still has the supervision right and final decision. The verification rules of the transaction are still determined by the main chain through smart contract.

When the subchain is initialized, it applies for authentication to the main chain, generates the ID of the subchain, the private/public key pair, and the attribute contract. These data are stored in the starting block, and the system supports the KYC function in an optional manner to confirm the identity of the subchain owner. Each subchain has its own independent ID and key pair, and the same subchain can also run on multiple nodes. At the time of initialization, each subchain generates a unique account for the main chain authentication, which acts as a proxy for the transaction between the main chain and the subchain, known as smart contract proxy route and controlled by the main chain smart contract. It has special features and cannot be manipulated by anyone, including the owner of the subchain. The account can only perform transactions between its subchain counterpart accounts or logically execute transactions between subchain internal accounts. At the same time, the subchain ID, public key and attribute parameters are stored in the value exchange layer subchain list. The starting block of the subchain is the authorization block issued by the main chain, including the verifiable ID of the subchain, and the stub is left on the main chain and the value exchange layer.

The system defined four states for valid transactions of the subchain, namely executed, witnessed, confirmed and completed, corresponding to four different transaction states respectively.

Once the subchain receives a transaction, the transaction is executed and generated locally, it is usually completed in a few milliseconds. This is an internal transaction only on the subchain. If the subchain is only one single node, it is essentially a centralized transaction, the trustworthiness of the transaction in this case is equivalent to the trustworthiness of the subchain.

When the subchain submits the transaction package to value exchange layer and receives the confirmation, it is in witnessed state. Normally this state can be achieved in several seconds to a few minutes since the transaction initiation. Once it is submitted to value exchange layer, the state of the transaction is maintained by the layer and its trustworthiness is significantly enhanced. Since the submission to value exchange layer is the subchain's initiative purpose, it is not manipulated by the main blockchain, therefore P2P, value exchange layer's confirmation count is taken as an important parameter to measure the trustworthiness of the transaction: the higher the number, the more reliable it is.

The block is generated on subchain and is validated by value exchange layer and stored on the open storage architecture (OSA) system, the state of transaction is confirmed. Usually it is completed in a few minutes since the transaction initiated. Submitted to the OSA indicates that the data storage is decentralized, the transaction is already very trustworthy, similar to value exchange layer confirmations count, the higher the number of OSA nodes that are submitted to, the higher the trustworthiness of the transaction is.

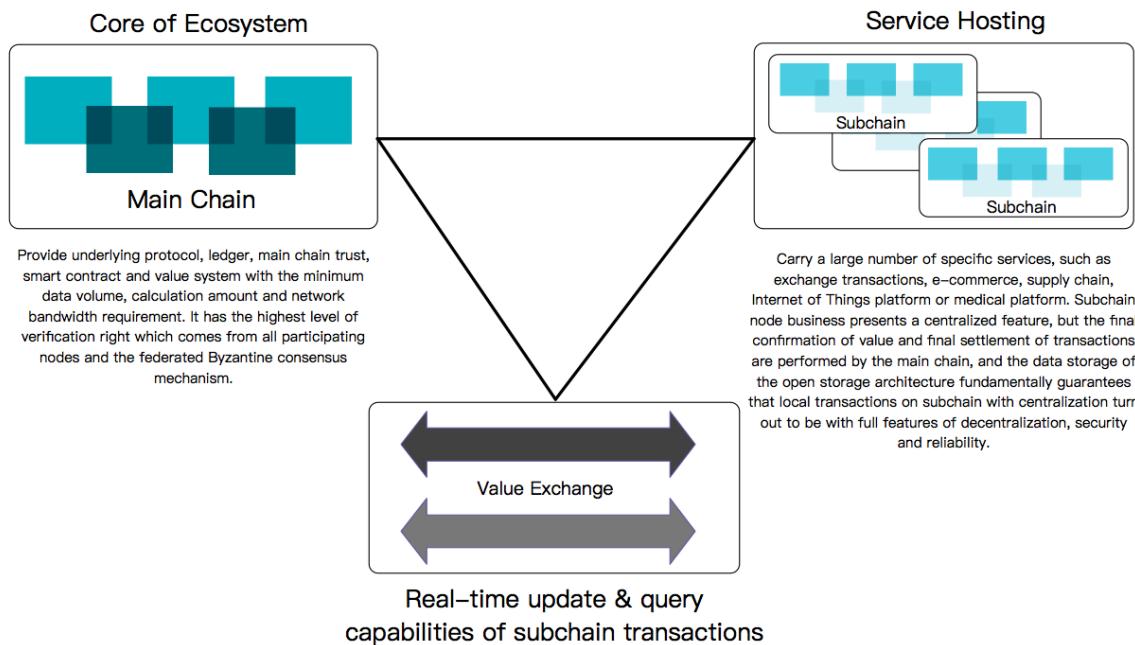
When an account submits the settlement to the main blockchain and completed, the transaction state is completed, that depends on when the account to submit. In this case, the transaction associated with the account has been submitted to the main blockchain and has the highest level of trust.

Generally, a transaction in witnessed state is basically risk-free, a small amount transaction can be regarded as reliable; while a transaction in confirmed state means it is with sufficient security guarantee, a fairly big amount of transaction could be recognized as assured. Since the credibility of the witnessed state is determined by confirmation number of value exchange layer, while the credibility of the confidence state is determined by the number of storage nodes submitted to, the system will supply a set of dedicated API to provide a revenue of judgment through smart contract.

## Value Exchange Protocol (VEP)

The Ultiledger ecosystem connects a large number of enterprise groups, and a large number of assets are mapped to Ultiledger, but the assets can only be reflected in the flow of assets. Therefore, in order to achieve efficient and safe circulation of assets, Ultiledger has designed an efficient value exchange protocol. (Value Exchange Protocol, VEP).

### Value Exchange between Main Chain and Subchain



The value exchange layer is designed to enforce states of local transactions on subchain can be updated and monitored globally in real-time in the entire blockchain range, so that to prevent double-spending. In the system, the value exchange layer runs in the node computer on the main chain in the form of a memory data management program or an in-memory database, and cooperates with the main blockchain presenting state monitoring globally for the subchain transaction. Value exchange layer is designed as a GPU in-memory database, on the one hand basically do not take the node's ordinary resources to ensure that the main chain operates efficiency; on the other hand GPU in-memory database data processing capabilities is far more than the computer main processor, it can greatly improve the value exchange layer's operating efficiency, so that state updates and query operations for a small batch of records can be implemented in a few milliseconds.

Based on the value exchange layer function, the transactions of the subchains are presented in real time in a trusted manner, which can effectively prevent double-spending. The maintenance

and update of the value exchange layer state is controlled by smart contract, and there is a strict validity verification relationship between the value exchange layer and the main and subchain nodes and storage nodes to ensure the accuracy and legality of the value exchange layer data. The process of the value exchange layer is:

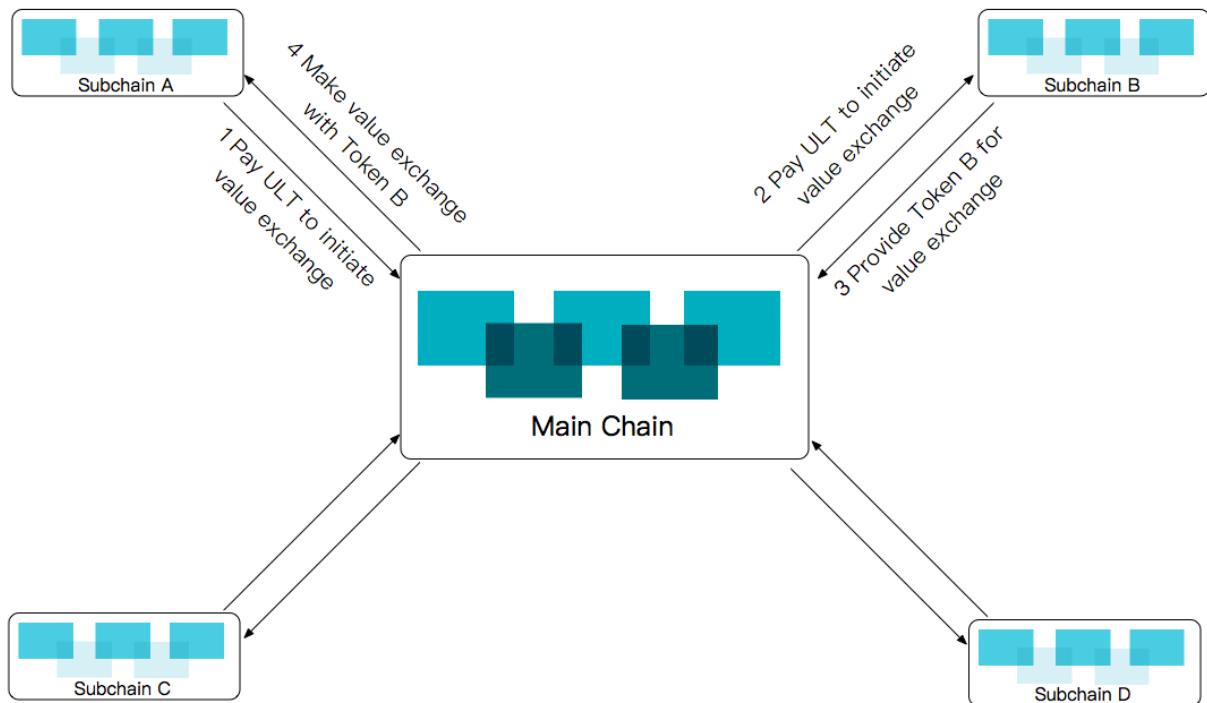
Receive the package from the subchain → verify the legitimacy of the package → verify the legitimacy of the transaction → update the status of value exchange layer → submit the receipt to the subchain. This allows the value exchange layer to maintain the exact state of the address or account in the subchain transaction, and if necessary, further verify the detailed transaction record on the subchain to the openstorage node.

After receiving the subchain data package, the value exchange layer verifies the legitimacy of the package and its inside transaction therein, updates the relevant address status after passing the verification, returns the receipt to the subchain and notifies the OSA with the node status and contract signature. If failure on verification, the data package will be rejected and notified to the subchain. The value exchange layer provides the current state of each address in real time to prevent double spending, and it also provides a signature stub for the last block of each subchain to verify the validity of the block in the subchain.

For new transactions on the subchain, the system verifies the validity of the transaction through the value exchange layer status and the main chain transaction status. If conflict occurs on an address or account, priority is given in chronological order. If conflict occurs on a transaction, set a warning flag for the address or account that caused the conflict. For addresses with warning flags set in the value exchange layer, detailed transaction records are logged through ODS nodes when new transactions occur.

The adoption of a multi-chain design allows a single blockchain architecture to be replaced by a series of subchains, where value exchange is achieved by ULT Token, and its several subchains, each of which can have its own unique transaction token. The subchain only supports a limited transaction type, for example, transferring from one account to another, trading ULT to each subchain Token and returning, all transactions that change the ULT balance are recorded in the subchain, therefore downloading from the subchain and reprocessing transactions can provide exactly the same security as the main chain. However, all transactions that only modify the subchain Token balance or any other account holdings (such as assets or currencies) are not recorded in the main subchain, but only in their corresponding subchains. Therefore, the cancellation of these subchain transactions will not affect the security of the blockchain, because the validity of the ULT account balance can always be verified without trust.

## Value Exchange among Subchains



The value exchange of the subchain can be realized globally by relying on the main chain, which is equivalent to an intermediary, and can effectively avoid the situation where one subchain's problem causes damage to other subchains. The maintenance and update of the value exchange status is realized by the main chain, and there is a strict verification relationship between the value exchanges to ensure the transaction data is accurate and legitimate. A transaction between account A and B on subchain are managed by main chain in the following proces:

Receive the application from subchain A  verify the legitimacy of the application  submit the exchange application to subchain B  settle transaction  submit the receipt to subchain A. After receiving subchain A value exchange application, the main chain verifies the legitimacy of the application by the verifier, and the verified transaction will be temporarily put on hold. At this time, the main chain submits the exchange application to subchain B. After the transaction of subchain B is confirmed, the two transactions are cleared by the system to realize the exchange of values between any subchains.

In the value exchange process, the initiator of each transaction uses ULT, which is a universal Token recognized and trusted by all parties to the transaction. Therefore, each transaction can be effectively implemented by relying on the main chain, and can avoid the situation where a certain subchain's problem causes damage to other subchains. In addition, as a core agent that connects various subchain value exchanges, the main chain also undertakes the function of verifying and liquidating transactions between different subchains.

## Open Distributed Storage (ODS)

In practical applications, users have a large amount of data to store. However, since each node in the blockchain system stores a copy of the blockchain, it is extremely expensive to store large amounts of data on the public ledger. In order to solve the storage problem of large files and ensure the security of data storage while saving costs, we provide storage that fully supports business transaction records based on distributed storage protocols. In this architecture, large files are stored on top of an open distributed storage node and the hash of the file is recorded on the blockchain to ensure file storage security. In addition to the data storage architecture, the open distributed storage node has a P2P protocol and a connection management and communication interface compatible with the blockchain system, and can be conveniently added to the blockchain network.

In order to protect the security and privacy of user data, Ultiledger uses asymmetric encryption to store and access data. Additionally, in order to support more flexible data access strategies, Ultiledger also integrates multi-signature technology to ensure that users can develop customized data storage and access forms.

## Blockchain-as-a-Service (BaaS)

Ultiledger hopes to combine the advantages of cloud computing and blockchain technology to help enterprise customers or individuals deploy Ultiledger distributed ledgers and customize their sub-ecological applications in the easiest way tailored to different business cases. Ultiledger refer this service Blockchain-as-a-Service (BaaS). This new BaaS service is supported by custom software development kits (SDKs) and application programming interfaces (APIs). BaaS is a relatively new development in the field of cloud computing. Like other forms of cloud services, BaaS is also an on-demand payment model. BaaS will provide scalability and eliminate the need for expensive hardware and expertise for traditional industry operators interested in using

Ultiledger blockchain technology. Ultiledger's BaaS capabilities include providing users with authentication, payment, data storage and more, providing users and third-party users with an easier-to-use interface and more consistent quality of service.

## Gateway and Wallet

The Ultiledger Ecosystem is not a closed ecosystem. The digital assets and external assets (extra-currency or other public-chain Token-denominated assets) within the ecosystem will be freely exchanged within the Ultiledger ecosystem through entities and mechanisms known as "gateways". After the external assets are exchanged into the Ultiledger chain value through the gateway, the value transfer (accept or send) will be completed through the Ultiledger wallet. In this process, the gateway mainly accomplishes two things:

1. Accept and deposit the corresponding equivalent to the user's wallet address and record it on the main chain ledger.
2. Return the equivalent to the gateway and retrieve the deposit to complete the cash withdrawal action.

In the Ultiledger ecosystem, only the underlying Tokens issued by the main chain can have a variety of currency gateways, but this does not mean that the subchain Token cannot be interconnected with external assets. In fact, the subchain Token implements the functions of various gateways by first exchanging values with the main chain Token.

The gateway not only realizes the mutual exchange of digital assets and physical assets, but also improves the efficiency of real asset exchange to some extent (for details, please refer to "Scenario of Ultiledger Ecosystem - Gateway" section of this white paper). Ultiledger will expand the number of currency gateways in the ecosystem with an open attitude, and realize the goal of users in the ecosystem to connect global assets efficiently and at any time.

## Self-Finance Application

It is the original intention and vision of the Ultiledger project to let enterprises or individuals independently carry out financial activities without relying on financial intermediaries, that is, "self-finance". The Ultiledger ecosystem is based on a blockchain-based network of trusted open nodes that provides a natural and reliable foundation for the landing of financial applications. Any company or individual that owns/needs assets or cash flows can be mapped on the Ultiledger public chain, through the consensus vote, to complete the value confirmation and meet financing requirements, without the need to trust the intermediary endorsement.

Since the emergence of self-financing, it has completely subverted the model of relying on traditional financial intermediation for financing, and realized a decentralized and peer-to-peer financing method. While significantly reducing the financing cost of enterprises, it has also accelerated the speed of corporate capital circulation. The Ultiledger ecosystem will focus on creating a "self-financing" functionality module to implement a global "self-financing system" based on digital currency (see "Scenario of Ultiledger Ecosystem - Self-Financing" section of this white paper for details).

# ULT's Function and Value

## ULT: the NativeToken

ULT is the abbreviation of the Ultiledger project's native Token. To some extent, ULT can be regarded as the "gold" of the digital domain, serving as the pricing unit for everything within the ecosystem (including various Tokens); all economic activities will be settled using ULT; the establishment and maintenance of all relationships will also depend on ULT. As the the foundation of Ultiledger's economic ecosystem, ULT will have all the functions of money for social and economic activities - a unit of account, a medium of exchange, a standard of deferred payment, and a store of value.

**Unit of account** Money performs the function of Unit of account as it measures and expresses the value of all other goods and services. In the Ultiledger ecosystem, ULT, as a Token, provides Ultiledger stakeholders with a price reference for the transactions and amounts. For example, if the price of a property is 2 million ULTs and the price of a copyright is 2 million ULTs, then in the Ultiledger ecosystem, we believe that the two can be exchanged equivalently.

**Medium of exchange**, Also known as the means of circulation, where money facilitates transactions, in place of barter, which involves direct exchange of one good or service for another. In the Ultiledger ecosystem, ULT will act as the medium of exchange. As with traditional commodity trading, related parties can use ULT to complete settlement without price anchoring with other commodities or fiat currencies.

**Standard of deferred payment** Money as an independent form of value has the function of payment method in a unilaterally transfer, such as paying off debts. In the Ultiledger ecosystem, ULT serves as the payment method when buyers and sellers require credit sales. For example, in order to promote sales, the seller grants the buyer a preferential condition of delayed payment collection. The buyer then completes the payment with ULT after the agreed upon number of days.

**Store of value**, When money temporarily exits the circulation and enters a relatively static state, it serves as a store of value. Reasons for this state are, one, to store purchasing power, and two, to accumulate wealth. This is a function commonly shared by all currencies. In the Ultiledger ecosystem, the ULT can serve both as a store of purchasing power and as store of wealth for global assets.

Although ULT mirrors all functions of a traditional currency, it is not fiat money. It does not rely on any central bank for its issuance, nor will it be issued in excess, causing inflation to go out of control. Similar to the scarcity of Bitcoin, the total ULT in circulation is fixed. As the economic

ecosystem continues to grow, and the on chain assets continue to increase, the value of ULT will develop subsequently, and ultimately reflect in the steady growth of prices.

## ULT: the Value and the Role

In Ultiledger, there are two types of Tokens, one is the ULT Native Token on the main chain which serves as the foundation of all payments and transactions; the other consists of sub-chain Tokens developed on-demand for specific commercial applications and partners. Each of the subchains that have been reviewed and approved through the consensus agreement<sup>1</sup> can issue its own tokens, which will further empower each participant within the sub-ecosystem.

### Value Development

Friedrich August von Hayek, the Nobel laureate economist, pointed out in the "Denationalization of Money" that the stability of purchasing power is one of the important qualities of money. The ULT as the Native Token should have a certain level of stability to meet the needs for daily payment and transaction. However, this stability is not static, and is in a process of value development in the long term. According to theories of money demand, the following equation can be used:

$$Md = Ws \div Mw \quad (1)$$

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<sup>1</sup> In the decentralized infrastructure of the blockchain, there is no central entity to record the transaction information of others. Instead, every node participating in the network has the right to bookkeep. In order to ensure the validity of the ledger entries, the blockchain needs a consensus algorithm to select a single node to record a transaction. When the node creates the record and have it verified by other nodes, the transaction is considered successful. The record cannot be tampered with. In order to encourage each node to participate in bookkeeping, the blockchain network usually gives the node a certain amount of rewards, such as block rewards in Bitcoin and Ethereum. At the same time, the consensus algorithm also regulates the security of the ledger information. Since the bookkeepers are rewarded in the blockchain system, they need to ensure that the information they record is correct and reliable. Otherwise,

In this case,  $M_d$  is money demand,  $W_s$  is supply of goods,  $M_w$  is the value of money.

Based on the above equation, the money demand is directly proportional to the supply of goods and inversely proportional to the value of money. The money demand increases as the supply of goods increases, and decreases as the value of money increases. The amount of money supplied depends on the money demand, according to the theory of market equilibrium - supply equals demand.

$$M_s = M_d = W_s \div M_w \quad (2)$$

This means that equilibrium is reached when money is supplied in accordance with the money demand. As a fundamental digital currency, **ULT**, on one hand, due to the fixed amount in circulation, is bound to increase in value and purchasing power with the continuous increase of assets on the chain. On the other hand, as **ULT** is the native token of a complex ecosystem, with the increasing number of participating nodes, frequent transactions will inevitably increase the demand for **ULT**, which will further boost the value of **ULT** according to the above equation. These increases in value are bound to be reflected in the rise in prices. As a result, the **ULT** digital currency will remain stable in the short term, enabling it to meet daily transactions and, over the long term, will gradually add value to reflect market expectations.

In addition, **ULT** has the following functions:

### As Gas

**Gas** is considered to be the cost of using network resources. In the economic ecosystem of Ultiledger, various types of transactions occur between different subchains. In order for the transaction to proceed smoothly, the transaction participants need to pay the "miners" a lump-sum fee, which is called the **Gas** in **ULT**. The existence of **Gas** motivates the miners to record the transaction package onto a blockchain, enabling a public record of each transaction in the Ultiledger ecosystem. In addition, a certain **ULT** is required in order to create a subchain account on the main chain, that is, the account opening fee. The existence of the account opening fee is mainly to avoid flooding registration and prevent similar "DDOS attacks".

### As a Medium for Value Conversion

**ULT** acts as a hub for exchange between different subchains and assumes the function of a medium for value transfer. On one hand, because the subchain Tokens are not interchangeable, in order to improve the usability of the subchain Tokens, **ULT** is required as a universal equivalent to realize the value conversion between different Tokens; on the other hand, since each subchain provides distinct services, a node on subchain A would need to use **ULT** in order to obtain the services on subchain B.

## As a Reward “Usage as Mining”

ULT also takes on the role of incentives for community upkeep. Any contributing participant to the community will receive respective reward in Tokens; the project team/developers will also be more driven to complement and promote the ecosystem, motivated by the ultimate value increase of the Tokens in their possession.

## The Role and Value of the Subchain Tokens

Tokens issued by the subchains also have an irreplaceable role. On one hand, since each subchain can issue its own token, thus the Token market function similarly to a “stock market”. Users may choose to hold Tokens as store of value for the long term, or to sell these for short-term gains. However, Ultiledger's Token market will far exceed the “stock market” in term of robustness. Its integrated capacities, including VC, crowdfunding, securities market, bank credit and others, provide guaranteed fundings at the lowest cost for project participants, either at the start-up phase when initial capital is scarce or during the project development and expansion. On the other hand, Token holders can access any product or service provided by Token consumer projects. Exchange between subchain Tokens is possible with the Native Token as a universal equivalent, which facilitates transactions across the ecosystem. Similarly, subchain Tokens can also be used for account activation and transaction processing fees.

# Scenarios of the Ultiledger Ecosystem

The fundamental premise of the Ultiledger economic ecosystem is based on ULT the Native Token. Specific application scenarios in this ecosystem are as follows:

## Self-Finance

"Self-finance" is proposed relative to third-party finance. It is a financial activity where any credited enterprise, industry cluster, individual or community independently carries out financial activities within its own ecosystem, with bank-level secured system of books and accounts, without involving a bank. As self-financing tokenizes its own credit and pass it on to the participants in the ecosystem, it greatly reduces financial costs and improves the efficiency of internal financial settlement, replacing to some extent intermediaries such as traditional banks and financial institutions.

"Self-finance" and "Internet finance" are not equivalent concepts. Internet finance is based on endorsements of intermediary platforms. Most of these applications will not achieve "self-finance", due to issues with their own credit and with supervision and management. On the contrary, any organization, corporation or individual can initiate self-finance, without passing through any organization.

Self-finance is unrealistic in current social and economic activities, as the financial intermediaries' role with "credit" is almost irreplaceable in the process. Intermediaries such as government regulatory agencies, notary services, banks, custodians and third-party payment platforms have supported the effective operation of the modern financial system by creating trust relationships. Centralization and intermediation have become the norms for the contemporary financial operations.

Finance, at its core, is credit. Credit is required for all financial activities. Blockchain technology does not guarantee credit, but provides a solution for trust in financial services for organizations or individuals with established credit. Financial solutions based on blockchain technology allow individuals or businesses to engage in financial activities without relying on intermediaries for the first time.

## Financing

Like fiat money, Bitcoin, Ethereum, etc., ULT as a public chain Token can also be used for ICO for financing purposes. ICO financing can be compared to direct financing IPO in the traditional financial sector. From the perspective of financiers, both are financing methods to support the development of projects or companies, except that ICO raises funds through the issuance of Tokens. By purchasing Tokens, investors obtain rights and interests promised by the project party. These include but are not limited to: "dividend tokens" (similar to dividends) and voting rights based on the amount of tokens held, as well as the rights to hold or spread trade. There can also be non-security tokens, which do not benchmark stocks in the securities market.

The multi-chain architecture of the Ultiledger enables the ecological development of all subchains to use the main chain ULT as the pricing reference, thus supports the subsequent subchain token issuance, financing and value exchange.

For example, each subchain, approved by consensus review, may be funded by ICO and issuing its own sub-ecological Token. The collected ULT Native Token can be used to purchase services from other subchains within the Ultiledger ecosystem, or to contract custom development, consulting, licensing, and other paid premium services. Payments can also be used to purchase services for other subchains in the Ultiledger ecosystem. ICO fundraising within the ULT ecosystem provides three major advantages: firstly, the threshold for Token issuance is reduced, because the subchain only needs to be approved by consensus review; secondly, the blockchain eliminates the risk of loss of trust base, as the of any subchain ICO is based on the ULT Native Token, and the ULT is trusted universally in the ecosystem; last but not least, the subchains do not need to recruit nodes or computing power for security backup, because the ULT ecosystem is maintained as a whole.

## Cross-Border Payment

World Bank's data shows that the global cross-border payment market (international remittance) continues to grow at a rate of about 5% per year, reaching \$622.6 billion in 2018. The profits of cross-border payment business in all regions maintain a growing trend, especially in Asia, where China surpassed Brazil to become the third largest global cross-border payment market after the US and the Eurozone. At the same time, cross-border payment costs remain high, averaging 7.68% the end user (payer) transfer amount. With the influx of new entities into the cross-border payment market, 10% of the overall transactions are now handled through non-bank institutions.

Payment is a fundamental step in the process of financing. Transfers through blockchain technology, especially in the cross-border payment scenario, enjoys prominent advantages. As the technology establishes direct interaction between multinational payers, it simplifies the

process and enables real-time settlement, improving efficiency, yet reducing costs. Thus, it also promotes the development of business models including cross-border micropayments.

## Asset Tokenization

Asset tokenization is an extension of asset securitization. In traditional financial markets, asset securitization refers to the sale of assets that are illiquid but have predictable income by issuing securities in the capital market in exchange of financing and maximized liquidity of assets. At the same time, the buyers of the securities acquire rights to future income right and to security holding.

Asset securitization is common practice worldwide. At present, more than half of the US housing mortgage loans and more than three-quarters of auto loans are provided through issuing asset securities. Asset securitization is a direct financing method that raises funds through the issuance of securities in capital markets and money markets.

In the Ultiledger ecosystem, either tangible goods, such as a house and a car, or intangible rights, such as claims, equity, intellectual property, etc., can be registered, confirmed, notarized on the Ultiledger public chain. These assets will be issued as Tokens for trading and circulation, in a traceable process throughout, preventing the risk of double spending. As a result, reconciliation is not required. In the process of traditional asset securitization, there are usually many parties involved, including the asset side, the capital side, and various types of intermediaries. Due to the large volume and high frequency of transactions, the inter-agency information transmission is very complex. Thus, liquidation and settlement, and the validity of the assets of the parties have always proposed challenges to asset securitization. Ultiledger's Proof of Assets (PoA) securely stores transaction data, ensuring that information stays tamper-proof and falsification-proof. At the same time, the ecosystem takes advantage of the automated processes of smart contracts, allowing parties access to the same transaction records in order to verify transaction information in real time, safeguarding its authenticity and integrity. These features shall effectively improve the transparency of asset securitization transactions.

Ultiledger's multi-chain trading model guarantees the authenticity of asset data and the reliability of transactions in asset securitization, effectively reducing the financing costs for enterprises within the ecosystem. At the same time, thanks to the distributed ledger and consensus mechanism, all subchains have a unified data source for transaction and asset information, effectively addressing the costly settlement between subchains (or institutions). Ultiledger's application in the asset tokenization scenario solves the problem of trust for asset securitization services, allowing investors to verify the authenticity of assets and detect the default risks in real time. In regard to supervision, the sources and the participating nodes of asset transfers are clearly and openly

recorded. In case of breached contracts, the system can effectively track down the responsible parties and prevent systemic risks. Ultiledger proposes an optimal solution for cost reduction, efficiency, and asset data validity for the entire financial market.

Asset tokenization may take several forms, including but not limited to the following application scenarios:

#### Tokenization of Equity

In traditional financial markets, enterprises may choose to sell and transfer through public channels part of the company's governance, voting rights, and business advice rights in the form of stocks, either for financing purposes or for longer-term development. This is the case for listed companies.

However, in the Token economy, paper stocks and contracts are synonymous with inefficiency and high cost. Under the decentralized blockchain consensus mechanism, through the automated management of smart contracts and tamper-proof transaction records, stock-based investment income rights, voting rights, and distribution of surplus assets, etc., will be better represented on the blockchain distributed ledgers.

#### Tokenization of Copyright

From the registration and confirmation of works, to the responsibility determination and the resorting to protection in case of infringement, the copyright holders often have to vigorously fight and defend their rights and interests, while consumers struggle to find a cost-effective platform for desired works. At the same time, the gainshare for authors of digital works such as general graphics is extremely low, which often involves layers of intermediaries, resulting in limited rewards for the authors. The tokenization of copyright allows each author to register his/her work on the public chain in the form of splittable and tradable Tokens, reducing intermediate links.

#### Tokenization of Creditors' Rights

Based on the core enterprise's accounts payable to the upstream suppliers, the suppliers' accounts receivable claims can be tokenized, which can be used to replace the traditional bank's acceptance bill and commercial acceptance bill as payment methods. The token can be split, circulated, repurchased, financed, thus the credit of the core enterprise is pushed through to multi-level suppliers and multi-level distributors. In a closed-loop ecosystem of procurement, production and sales, Tokens can greatly reduce financial costs and improve internal settlement efficiency. In the meantime, the Token assets on the subchains can be mapped on the main chain, allowing the assets to be standardized and combined in order to release new Token assets on the public chain for circulation and trade. This is the practical application scenario of supply chain finance.

## Tokenization of other assets

From the financial innovation perspective, asset tokenization is full of possibilities and could be applied in all aspects. In addition to the above mentioned scenarios, it also includes the tokenization of income rights. REITs (Real Estate Investment Trust) is a perfect example of securitization of income rights. Investors who hold shares of REITs will receive dividends on lump sum income (such as rental income and spreads from value increases). For mature traditional models such as the REITs, Ultiledger can recreate such success through the blockchain and digital currency technologies, if not a greater one. Due to the point-to-point and borderless nature of digital currency, it has been prescribed with cost advantages for bypassing the financial institutions such as banks. With the automated management of smart contracts, the tokenization of securities will be one of pillars of Ultiledger's economic ecosystem.

## Tokenization of Data

The tokenization of data refers to a new business model that registers valuable yet unpriced information onto the blockchain and shares it with industry stakeholders in return for real benefits. Specific applications via the blockchain include but are not limited to: encryption and protection of personal privacy data, tracking of medical R&D data, industry-wide sharing of medical diagnostic data, real-time analysis of the automobile network data, and more.

Via blockchain, the data provider assumes absolute ownership and control over the data. Participants who are not bound by smart contracts will not be able to access the encrypted data on the blockchain. Therefore, users no longer face the embarrassment where "sharing means surrendering". Through the management of smart contracts and Token incentives, the orderly sharing of data under the Ultiledger ecosystem will become an innovative business model.

## Consensus-Based Profit Sharing

Ultiledger's economic ecosystem is based on ULT as the Native Token, but unlike the social economy based on fiat currency, it uses the open and transparent chain code to execute automatic distribution of economic benefits, thus achieving true fairness. As a result, it puts an end to speculation for profiteering in all traditional economic models that rely on information asymmetry or monopoly status.

The Blockchain is a production relationship because the technology can perfectly distribute benefits to different participants. The recognition of the distribution rules of such benefits by all parties forms a consensus. In Ultiledger's economic ecosystem, there is no so-called intermediary platform, and all parties of the exchanges are directly connected in a point-to-point manner, which

allows each participant to better enjoy the corresponding rewards and rights. The shared rights of various tokens based on ULT through blockchain technology can benefit every participant, consumer, employee, and ordinary technical personnel, especially those often overlooked under the traditional corporate system and financial system. They can now access the sharing of Tokens through blockchain and through crowdfunding, which were privileges for the capitalist and the monopolist in the past.

## Gateway

Ultiledger's underlying protocol is designed and positioned to ensure that our self-finance agreements fully meet the needs of the ecosystem, that is, allowing any institution or individual to issue new assets based on the public chain native asset (ULT as the Native Token).

Assets issued within the Ultiledger ecosystem are supported and exchange through the multi-chain structure consisted of the main chain and the subchains. External assets, including external fiat money or Tokenized assets, will be supported through Ultiledger's gateway.

Gateways are entities that people trust (most gateways are financial institutions such as banks and payment companies). As the entry and exit point of fiat money to the Ultiledger ecosystem, these gateways provide real-time maintenance of fiat money accounts and Ultiledger wallets. As a user deposits funds into his /her fiat money accounts, the gateway will deposit equivalent amounts of ULT-based assets into the user's Ultiledger wallet and vice versa.

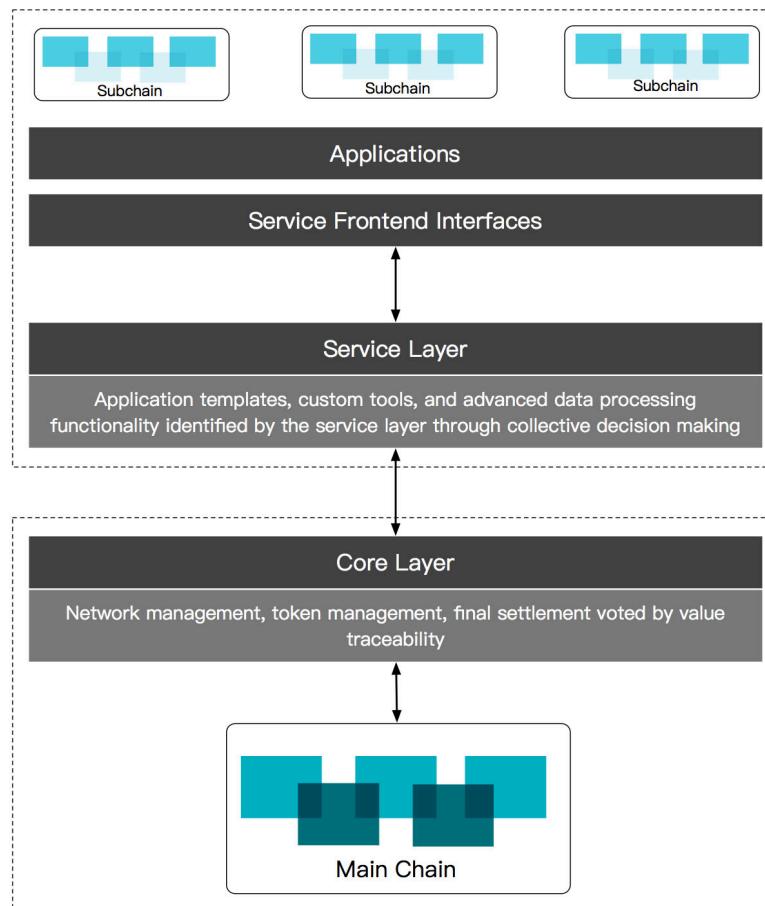
This operation is similar to PayPal: one first deposits funds from the bank account to PayPal before one gets the equivalent credit in the PayPal account. One can use these PayPal credit with anybody who trusts PayPal (anyone with a PayPal account). The person who receives the PayPal credit can in the end convert the credit to fiat money through PayPal and then transfer it to the bank.

The gateway plays a similar role in Ultiledger. The difference is that all "PayPal accounts" and other anchors exist on the same network, which allows exchanges, making the system more powerful. Users can easily send credits to each other and and exchange among all these different anchors, such as USD into CNY, or GBP into JPY.

# Governance of Ultiledger

The Ultiledger platform uses the most groundbreaking subchain economic governance model: the value-tracking voting system. Ultiledger's economic governance structure is designed with management as the core and implemented at all levels of the main chain and subchain economic activities. The development of blockchain has become more mature, and has surpassed the simple conventional payment system. The enterprise value storage and distribution carried by distributed applications will face a new economic governance revolution. E-commerce, manufacturing, and any traditional business model will be conceptualized on the blockchain, establishing new economic models and financing, trading, and value redistribution. Without an effective economic governance management layer, the aforementioned functionality are impossible to achieve, so Ultiledger's economic governance structure on the main chain and subchain will become an important part of its success. Ultiledger not only aims to be a corporate self-finance application, but also to build an ecosystem that is self-managing and engaging everyone.

## Governance Structure

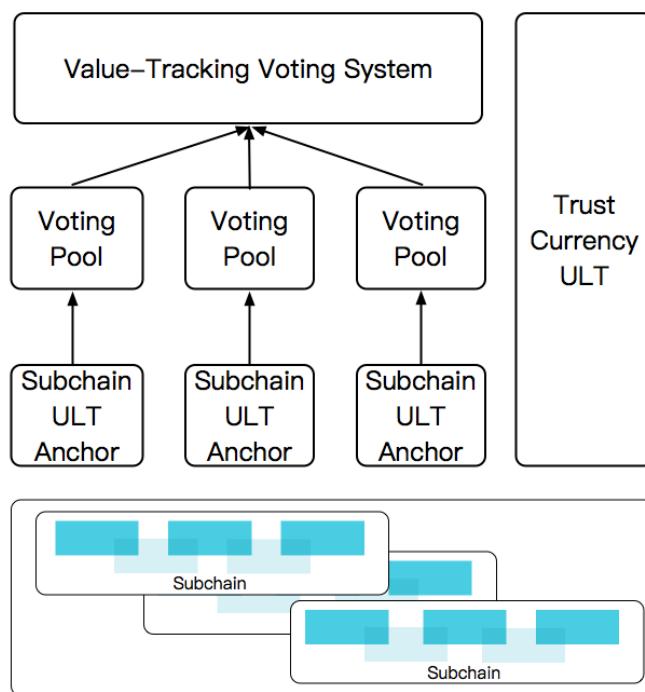


Level 1: Ultiledger Core Layer. The core layer provides basic system components and smart contracts for the use of Ultiledger, including network management, Token management, and final verification of value-tracking voting. The basic functions are related to the legal framework credit engine and trusted systems, as well as security and data transparency.

Layer 2: Ultiledger Service Layer. The Ultiledger service layer will provide additional services on top of the Ultiledger core layer. These services are designed to make it easy for any participant to build an investment application on Ultiledger and serve the market in the most innovative way. Ultiledger will introduce more features to best meet ever-changing market demands. For example, using application templates, custom tools, and advanced data processing capabilities identified through collective decision making on the service layer, users can achieve their vision more quickly while reducing the barriers to entry into new application creation.

Layer 3: Ultiledger Application Layer. The Ultiledger application layer is deployed at the end of the subchain, running on the Ultiledger service layer or directly on the Ultiledger core layer. These applications are both application front ends, some of which may be built by Ultiledger or by third parties.

## Value-Tracking Voting System

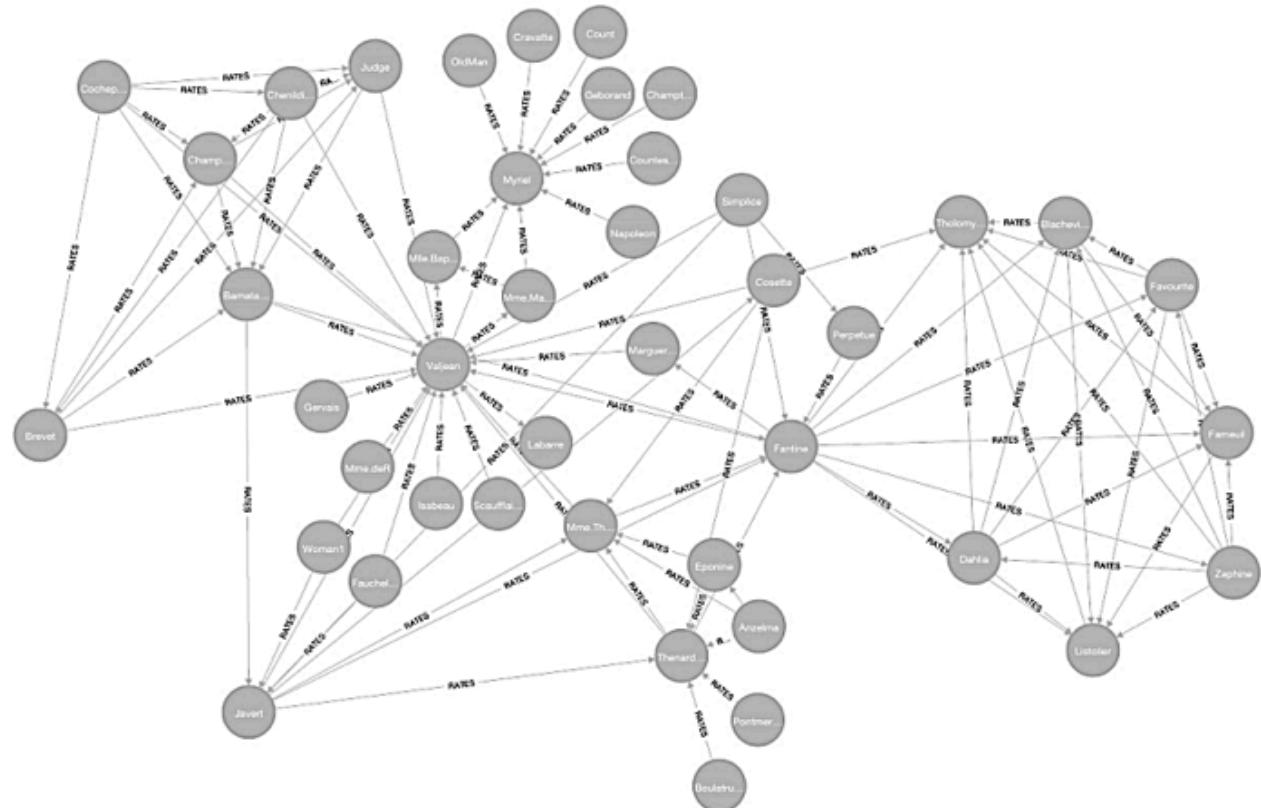


Value-tracking voting is an equity-weighted voting system (value-tracking voting system) that and also provides options for equity weighting and programmable liquidity. Weighting means that

voting rights are proportional to the number of shares you own in the project. In the blockchain world, this is often referred to as "Token." In the stock world, it is called "shares." The tracking voting of liquidity involves "authorized voting", which means that users can delegate their voting rights to the other party at any time, and the length of the voting is determined by the user. This allows the user to maintain a degree of control without having to participate in the decision all time. In the value-tracking voting system, investors retain control over discretion. The Token-weighted value-tracking voting system is a highly flexible governance model that applies to a variety of structures, from one person to one vote, to traditional corporate arrangements, to new types of organizations.

The model also appropriately motivates users to make many different types of contributions (code, community contributions, funds) to the network, with both decision-making and reward-issuing capabilities. It also integrates with other automated decision structures. Ultiledger uses an enhanced voting process designed to complement the equity-weighted liquid value retroactive voting system. This means that if someone has a provable long-term Token holding in the network, they can have a higher voting weight. The voting pool is organized by a trackable voting management of the network value of the allocated funds. Any Token entering the voting pool can be assigned or received independently by a higher-level value-tracking voting network.

## Trust Network



The Ultiledger subchain voting will take the mechanism of trust network. The trust network consists of a number of independent trust endorsements (ie, vectors) that are accountable and can be automated. The trust formula and trust vector are the sum of all the trustees and their suggestions from a personal point of view (here represented as vectors, which may be positive vectors or negative positive vectors). Through the credit formula, we record all of these endorsements and allow multiple levels of derivation. ULT will become a trust token in the su-chain voting. Each trust vector is an endorsement. A is the endorsement of business X for B, which includes a timestamp and an optional weight. A public credit ledger consisting of a single trust vector is a key element of the Ultiledger platform governance. This structure mimics the pyramidal form of corporate governance, making the entire voting process more effective. For example, low-level employees

## Incentive Management

The Ultiledger Foundation can allocate budgets to motivate management, and participants are rewarded by simply voting on major issues on the platform. Only ULT Token holders can own voting rights in platform decisions. Ultiledger's management model directly grants minority management rights. By value-tracking voting, individual members can vote directly on a question or delegate their voting rights to authorized expert (this expert may be a business owner or manager). The authorization model gives more experienced individuals greater voting rights. Ultiledger builds a trusted autonomy platform for the subchain, but the final discretion needs to be verified by the main chain. Voters can receive ULT rewards for participating in voting or optimizing the system.

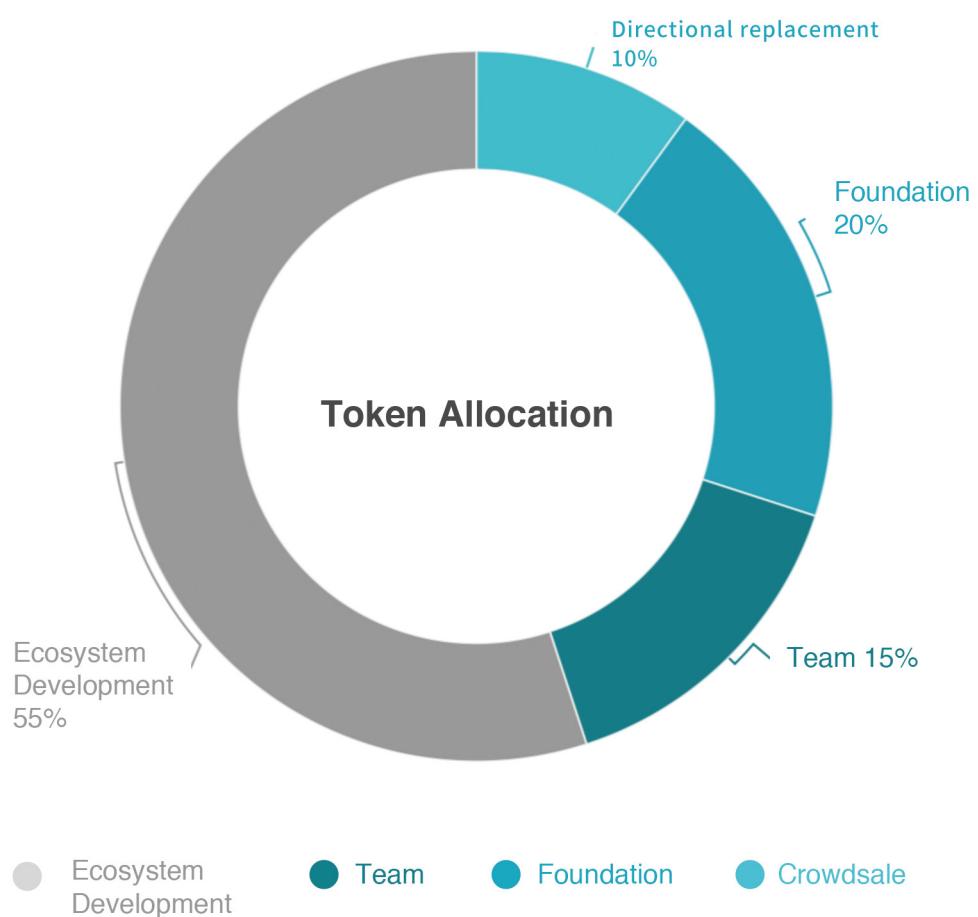
The Token holder community will vote on issues such as the direction of the entire platform. In order to facilitate the participation of the members of the subchain, Ultiledger allocates the budget from the foundation level to the subchain voting pool. Ultiledger sets a reasonable entry threshold: mortgage ULTs can submit recommendations, but all accepted suggestion proponents can recycle ULTs, so only those who have been rejected will be forfeited ULT. Of course, by value-tracking voting, Token holders can delegate their votes to authorized experts. Under this licensing module, experts have greater voting rights and reward incentives, management by experts can generate more innovative decisions.

# Token Issuance

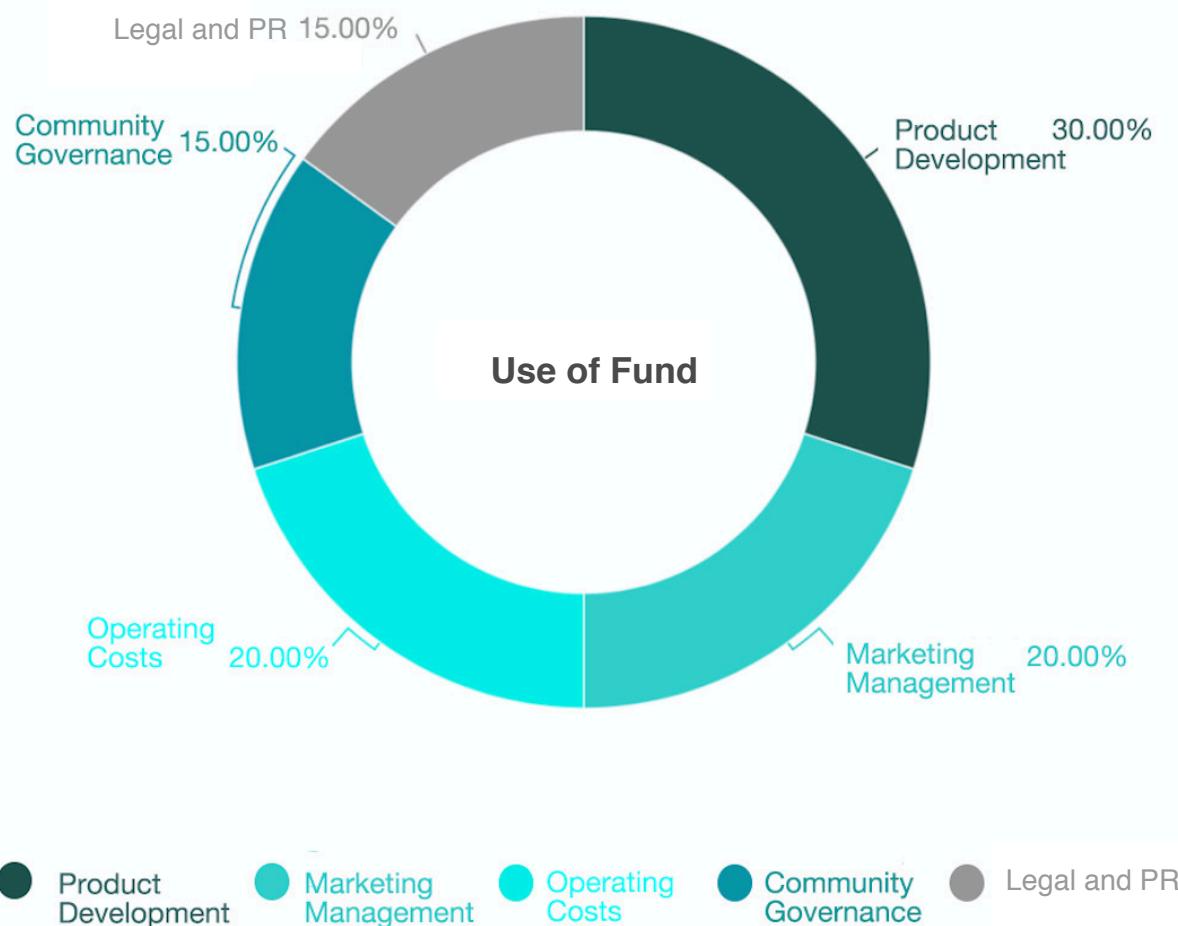
To achieve and deliver the ecosystem and all application scenarios described in this whitepaper, Ultiledger will issue a total of 4.5 billion ULT tokens, which will be serving as the essential currency within the ecosystem. Ultiledger promises that there will never be an additional offering after the initial coin offering (ICO).

Ultiledger will provide 450 million ULTs (10% of the total) directly to the open market through the Token Generation Event (TGE). Based on the purpose and principles of exploration and solicitation, the Ultiledger Foundation will provide a targeted exchange service for limited amount of ULTs to all community participants who are confident and willing to contribute to the project. The directional exchange rate of ETH to ULT will be 1 to 25000 (tentative) during the period. It is recommended that each eligible participant who meets the legal requirements does not subscribe for more than 2 ETHs.

## Token Allocation



## Use of Fund



# Roadmap



## 2018.Q4 Submodule Development

1. Development completion of the Federated Byzantine Algorithm based on the Gaussian channel model
2. Establishment of main chain and subchain architecture
3. Block information construction: transactions, block headers, caches, etc.
4. Implementation of subchain RAFT algorithm
5. Completion of point-to-point communication

## 2019.Q1 Main Network and Subnet Construction

1. Communication and initialization of the main network and subnet
2. Interoperability and transaction between subnets
3. Compatibility with the Stellar Gateway
4. Subchain smart contract templates
5. Launch of the test network

## 2019.Q1 Governance

1. Voting mechanism for trust endorsement algorithm development
2. Voting mechanism for subchain to join and exit the main network
3. Emergency voting mechanism
4. Election mechanism of super subchains

## 2019.Q2 Launch of Main Network

1. Code audit
2. Code optimization
3. Integration of business partners to the subchains
4. Token mapping

# Team Bios

Technical background:

HKEx + Wanxiang Group + Chinese Academy of Sciences + Ant Financial + SAP

Financial background:

Financial background: JPMorgan Chase + China Merchants Bank



**Randolf Liang**

Founder

Mr. Liang graduated from Zhejiang University. He is the founder of Ripplefox, which is the largest Ripple and Stellar gateway in China with more than four years of operation and more than 20,000 developers and enthusiasts. Mr. Liang has 12 years of IT development experience. He used to be a senior project manager of Wanxiang Blockchain Lab, a senior technical expert of SAP China Research Institute, and a development manager of Asia Pacific of State Street Bank. Mr. Liang was also a senior researcher at ChinaLedger (China Distributed General Ledger Primary Protocol Alliance), and a lecturer in the blockchain of the China Computer Society. Mr. Liang served as a system test specialist in the Ministry of Industry and Information Technology. He mainly studied the issuance and trading of crypto assets, and participated in the preparation of the ChinaLedger technical white paper. Ripple and Stellar founder Jed McCaleb was first introduced to China by Mr. Liang.



**Tommy Xu**

Co-Founder, Chief Operating Officer

Mr. Xu has four years of work experience in China Merchants Bank, and four and a half years of experience as an independent entrepreneurship. In 2015, his company was acquired, and he has then become a venture capital (VC) and private equity (PE) investor. Mr. Xu has many years of experience in finance, management and market development. He also has great ability in business sense, execution and integration of resources. In June of 2017, Mr. Xu co-founded the Win-Win Chain Information Technology (Shenzhen) Co., Ltd. with Liang Ran,

Xu Jiqiu, TCL and Wang Hui (the chief architect of Gree Supply Chain Financial System), which mainly focused on blockchain and supply chain financing. The company has won a seed round investment from Mr. Wang Lijie and Mr. Xia Zuoquan (one of BYD's founders) before its official launch. After six months of hard working, the company has successfully landed three customers and has made a in-depth engagement with super-large enterprises including Foxconn, Geely and BYD.



### Zeus Zuo (Canadian Chinese)

Co-Founder, Chief Scientist, PHD

Dr. Zuo was the managing director of the Hong Kong Stock Exchange and the general manager of the Hong Kong Stock Exchange Technology Corporation in China mainland. He served as the chief architect of the Dalian Commodity Exchange between 2009 - 2014. He has extensive experience in both international and domestic securities and futures markets, especially in the fields of financial technology (FinTech) and blockchain and distributed ledger technology. Dr. Zuo is a leading key member of blockchain and distributed ledger technology in Hong Kong's capital market. He was awarded the 2006 Best Business Intelligence Implementation by Computerworld Magazine, and was the key inventor of "Real-time measurement and monitoring of ultra-low latency performance of trading systems", a patent related to China's capital market technology. Between 2005 to 2009, Dr. Zuo served as an enterprise architect of the Chicago Mercantile Exchange Group (CME Group). Dr. Zuo received his Ph.D. degree from York University, Toronto, Canada in 1991.



### Eric Gao

Co-Founder, Chief Economic Officer

Mr. Gao has more than 10 years of securities practice, and has worked for CITIC Securities, Ping An Securities, Wanjia Fund, Founder Securities and First Venture JP Morgan Chase Securities (JPM's only investment banking platform in mainland China). Mr. Gao has extensive investment experience, and the total amount of investment and financing projects led by Mr. Gao was more than 100 billion yuan. Mr. Gao is specialized in asset securitization. He led the Anhui Province Mintou Microfinance Co., Ltd. Small Loan Asset Securitization, which was the third asset securitization case of small loan companies in China, and the Shandong Fengyuan Tongda Power Asset Securitization, which was the first asset securitization case of power charging rights, as well as other asset management projects include bank

credit card assets, car loan assets, consumer loans and generalized credit assets, leased factoring company assets, corporate accounts receivable, CMBS, etc.

## Key Developers



### Scott Xu

Mr. Xu is the co-founder of Ripplefox which is the largest Ripple and Stella's community in China. Mr. Xu was a data scientist of Ant Financial Service International Risk Control, a specialist of Alibaba Data Science Team, and an senior distributed system developer in IBM's Development Lab of China. Mr. Xu graduated from Zhejiang University, Chu Kochen Honors College, and he has 13 years of software system development experience, and 7 years of big data full link experience, as well as 5 years of blockchain technology practical experience. Mr. Xu has many algorithm invention patents, and has served as one of the first lecturers in Alibaba Data University. Mr. Xu has rich experience in distributed system and algorithm development, and also has extensive practical experience in fraud prevention and anti-cheating in financial systems.



### Alex Zhao

Mr. Zhao is an expert in artificial intelligence and distributed systems. He was an algorithm engineer in the AI department of Ant Financial Services Group's, an engineer in the data center of Alimama's machine learning, and an algorithm engineer in the data science team of Alibaba. Mr. Zhao graduated in Computer Science from Beihang University, and he has extensive experience in machine learning, recommendation systems, online advertising algorithms and distributed system development. Mr. Zhao's algorithms has achieved remarkable results in Taobao, Alimama and Alipay. Mr. Zhao is an expert of "Go" language, and he has in-depth research on the blockchain core distributed architecture and various consensus algorithms. Mr. Zhao has the capabilities and experience of algorithm design, system architecture, as well as development and operation of the full stack.



### Yole Yu

Mr. Yu is a former senior technical specialist of SAP China Research Institute and a former HP China Senior Systems Engineer, as well as the head of SAP Anywhere Channel Technology and Security Expert. Mr. Yu has extensive experience in systems security, service architecture, and other areas, and has long focused on high-performance, high-availability blockchain and distributed systems research, as well as cryptography and various distributed algorithms. Mr. Yu graduated from Northeastern University in China. He is a member of the China Computer Federation, and a certified ACP of Project Management Institute (PMI). He is also the author of the scaled agile series.



### Stephon Wu

Co-founder of RippleFox & COO

Focus on digital cryptocurrency and blockchain research; domestic Ripple and Stellar authority.

Bank-level system application development expert, with many years of experience in bank-level system security and high-availability business distributed architecture, has served as senior development engineer in the Asia Pacific region of State Street Bank.

He has unique insights in product design, human-computer interaction, and visual experience.



### William Zheng

The first group of developers involved in the Ripplefox community, he has in-depth research on high-performance, high-availability blockchain and distributed systems.

Mr. Zheng graduated from IT Academy, Zhejiang University of Technology in China, He has 8 years of experience in software system development, has worked for State Street Bank and Hikvision Internet Business Center as senior software development engineer and IoT software architect.

## key Consultants



### George Wang (American Chinese)

Dr. Wang was one of the "China National Thousand Talents". He received his Ph.D. from Georgia Institute of Technology. Dr. Wang currently serves as the chief scientist of the Integrated Supply Chain Laboratory of the Central Research Institute of Huawei Technologies Co. Ltd., and is an expert in optimized decision making and artificial intelligence. Dr. Wang received his bachelor's and master's degrees from Fudan University in 1987 and 1990 respectively. He has been in IT for nearly 30 years. He was the chief engineer of JP Morgan Chase, the chief engineer and operation research expert of American Sai Shi Software Research Institute. In 2013, Dr. Wang returned to China as the vice president of Tide Coal. Since 2016, he has been employed by Huawei Academia Sinica, working with MIT to develop a processing plan to optimize decision-making systems. Dr. Wang is familiar with blockchain principles and has developed systems for logistics delivery and payment payments.



### Benjamin Gu (American Chinese)

Mr. Benjamin Gu has a successful and extensive management and professional experience in Chinese and US financial service firms and enterprise software companies. He used to work as an associated CIO at Hua Tai Lian He Securities Corporation and held COO positions in several financial service companies. When he worked at the Options Clearing Corporation, he worked directly on the development and operation of the US options trading market's clearing system ENCORE. Mr. Gu has a MBA degree from the University of Texas at Austin, a MA degree from the University of Notre Dame, master graduate from the University of Science and Technology of China, and BS degree from Shandong University.



### Jinhai Luo

The Founder of Quantum School, the 2140 Encryption Community Sponsor, the Editor-in-Chief of Southern Metropolis Daily, the earliest blockchain entrepreneur in China, the founder of Coins Web, the founder of ColaPay, the founder of blockchain copyright project "Original Base", and the first promoter of blockchain "multi-signature". At the same time, Mr. Jin also has the identity of submarine engineer, science fiction writer, and reporter of the Southern Newspaper. He is the author of "Newton's New Clothes", "Everyone understands blockchain", "Calculation" and "City War". He is the prefacer of many science fiction works written by Cixin Liu, the author of "Three-body". The Quantum School was founded at the end of 2016, focusing on the popularization of natural science and logical rationality. The current platform has more than 500,000 readers and is the top natural science community in China.

**Frank**

Frank has worked in HP, Netease Games, Xueqiu, Tiger Securities, and served various management positions. Frank later started his own business, and created a public media channel called "chips", which mainly focused in US stock and oversea assets. The channel has more than 100,000 users with high net worth. In 2017, Frank established the Coin Tiger digital currency trading platform, and has been served as the founder and CEO thereafter.

# ULT TOKEN - TERMS AND CONDITIONS OF TOKEN SALE AND USAGE

Please read these terms of token sale and usage carefully. If you do not agree to these terms (as defined herein), do not purchase (whether through an intermediary or otherwise) or continue to hold or use ULT (as defined below). These terms do not constitute a prospectus or offering document, and are not an offer to sell, nor the solicitation of an offer to buy any investment or financial instrument in any jurisdiction. By making a contribution to the seller (as defined below) or any intermediary for the purchase of ULT, or by continuing to hold or use ULT which you may have obtained by any other means, you will be bound by these terms and all terms incorporated herein by reference. By accepting these terms, you will be entering into a binding agreement with the seller, which terms contain provisions which affect your legal rights. The purchase, holding and usage of digital tokens is subject to a number of risks (including financial risk), some of which we have set out in these terms. If you are in any doubt as to the suitability or otherwise of purchasing, holding or usage of the digital tokens referred to in these terms, you should seek appropriate professional advice. Nothing in these terms constitutes legal, financial, business or tax advice and you should consult your own legal, financial, tax or other professional advisers before engaging in any activity in connection herewith.

Your purchase, whether through an intermediary or otherwise, as well as continued holding and/or usage of ULT is subject to these Terms and Conditions (the Terms). Each of you and the Seller is a "Party," and together with the "Parties." Please read the below terms and conditions carefully before registering, accessing, browsing, downloading and/or using the website at <https://www.ultiledger.io> (the Website). By accessing or using the Website, purchasing ULT (whether through an intermediary or otherwise), or continuing to hold or use ULT, you agree to be bound by these Terms (and all terms incorporated by reference). Before agreeing to the Terms, you must read this document in full. If at any time you do not agree to these terms and conditions or do not wish to be bound by these terms and conditions, you may not access or use the Website, and shall not be entitled to purchase ULT (whether through an intermediary or otherwise) or continue to hold or use ULT. We shall be under no obligation to maintain a copy of these Terms on the Website after the sale of ULT, and you are advised to print or download and keep a copy of these

Terms for your future reference (if required).

1. PURPOSE AND USAGE OF TOKENS ULT is a cryptographic utility token. The purpose of ULT is to facilitate the participation in the ultiledger network which, when fully developed, is envisaged to be an infrastructure level high-throughput network incorporating novel DPOS-I based consensus algorithm that aims to meet the global commercial standards, to support a variety of location based applications such as travelling, car sharing, tourism, real estate, etc. Eventually, it is the goal for the ultiledger network to include tools for the blockchain community and developers to design and build applications within the ecosystem

thereon. The ultiledger network is not, and will in no case be, an enterprise, corporation, partnership or other entity or body corporate established under the laws of any jurisdiction, but a computerized consensus protocol based on which a public transaction ledger is generated. ULT is designed to be the only mechanism by which a user may obtain access to certain products and services on the ULT Network (when the same is completed and deployed). For each exchange of services or products on the ULT Network, the costs are to be quantified in ULT and paid to the ULT Network and/or the other party providing the service. The goal of introducing ULT is to provide a convenient and secure mode of payment and settlement between participants who interact within the ULT Network. Further, ULT is to be paid to users as incentives for contributions to and/or maintenance of the ULT Network. ULT is required as virtual crypto "fuel" for using certain designed functions on the ULT Network. Computational resources are required for running various applications and executing transactions on the ULT Network, as well as the validation and verification of additional blocks / information on the blockchain, thus providers of these services / resources would require payment for the consumption of these resources to maintain network integrity, and ULT will be used as the unit of exchange to quantify and pay the costs of the consumed computational resources. Users of the ULT Network and/or holders of ULT which did not actively participate in the ULT Network will not receive any ULT incentives. The precise scope of the ULT Network will be developed further and will be announced once finalised. ULT is an integral and indispensable part of the ULT Network because in the absence of ULT, there would be no common unit of exchange for goods and services or economic incentive to motivate users to contribute, thus rendering the ecosystem on the ULT Network unsustainable. The ownership of ULT carries no rights, express or implied, in the Seller, its related entities or its affiliates (each, a Group Entity) other than the right to use ULT as a means to enable usage of and interaction with the ULT Network, upon the successful development and deployment of the ULT Network. ULT is sold as a consumable virtual good, and does not have any functionality or utility outside the ecosystem on the ULT Network – accordingly it is not necessarily merchantable and does not necessarily have any other use or value. The ecosystem on the ULT Network is structured as a "closed system" insofar as the usage of ULT is concerned. You understand and accept that ULT:

- a. may only be utilised on the ULT Network, is non-refundable and cannot be exchanged for cash (or its equivalent value in any other virtual currency) or any payment obligation by any Group Entity;
- b. does not represent or confer on you any ownership right, shareholding, participation, right, title, or interest of any form with respect to any Group Entity or any other company, enterprise or undertaking, or any of their revenues or assets, including without limitation any right to receive future revenue, dividends, 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 ULT Network, any Group Entity and/or any service provider of any Group Entity;
- c. is not intended to be a representation of currency or money (whether fiat or virtual or any form of electronic money), security, commodity, bond, debt instrument or any other kind of financial instrument or investment;

d. is not intended to represent any rights under a contract for differences or under any other contract the purpose or pretended purpose of which is to secure a profit or avoid a loss;

e. is not a loan to any Group Entity and is not intended to represent a debt owed by any Group Entity, and there shall be no expectation of profit or interest income arising in connection therewith;

f. does not provide you with any ownership or other interest in any Group Entity;

g. is not any form of financial derivative;

h. is not any form of commercial paper or negotiable instrument;

i. will not entitle token holders to any promise of fees, dividends, revenue, profits or investment returns, nor should there be any such expectation;

j. is not any note, debenture, warrant or other certificate that entitles the holder to any interest, dividend or any kind of return from any Group Entity or any person;

k. is not any commodity or asset that any person is obliged to redeem or purchase;

l. is not for speculative investment;

m. is not intended to constitute securities in Singapore or any relevant jurisdiction;

n. does not result in any mutual covenants, or agreement to rights and obligations, being entered into between you and other holders of ULT.

o. is subject to limitations and conditions in these terms and all applicable policies as may be published from time to time on the ULT Network. You acknowledge and agree that no Group entity is under any obligation to issue replacement ULT in the event any ULT or private key is lost, stolen, malfunctioning, destroyed or otherwise inaccessible or unusable for any reason. In particular, please note that we are in the process of undertaking legal and regulatory analysis of the functionality of ULT. Following the conclusion of this analysis, there may be changes to the intended functionality of ULT in order to ensure compliance with any legal or regulatory requirements to which we are or ULT is subject. In the event of any changes to the intended functionality of ULT, the details of the changes shall be published on the website. It is your responsibility to regularly check the website for any such notices.

## 2. SCOPE OF TERMS

Unless otherwise stated herein, your purchase of ULT (whether through an intermediary or otherwise), and continued holding and/or usage of ULT is governed solely by these Terms. New terms or policies may be published from time to time on the ULT Network at our sole discretion. The sale of ULT does not constitute the provision of any goods and/or services as at the date that these Terms form a binding agreement between the Parties. Any potential future usage of ULT in connection with providing or receiving services or the usage of the ULT Network (when the same is completed and deployed) will be governed primarily by other applicable terms and policies (collectively, the Service Terms and Policies), which will be made available on the ULT Network and/or Website, if the services and the ULT Network is successfully completed and deployed. We may update these Terms or the Service Terms and Policies in our sole and absolute discretion. It shall be your responsibility to regularly check the ULT Network / Website for any such notices. To the extent of any conflict with these Terms, the updated Terms and the Service Terms and Policies which may be

published from time to time on the ULT Network shall prevail with respect to any issues relating to the usage of ULT in connection with the ULT Network. We reserve the right to require you to provide us with your personal details (including without limitation correct name, address and details of the digital wallet from which you have sent the funds), and it is your responsibility to provide correct details. Failure to provide this information will prevent us from transferring ULT to your digital wallet.

### 3. CANCELLATION AND REFUSAL AT SELLER'S DISCRETION

Your purchase of ULT (whether through an intermediary or otherwise) from the Seller is final; there are no refunds or cancellations except as may be required by applicable law or regulation and you waive any rights to be refunded any amounts which you have paid to the Seller in exchange for ULT or to cancel any purchase. Notwithstanding the foregoing, the Seller reserves the right to refuse or cancel any request(s) to purchase or purchases of ULT (as the case may be), at any time in its sole discretion without giving reasons, including without limitation the following:

- a. in connection with any failure to complete know-your-customer, anti-money laundering and counter terrorist financing checks prescribed by the Seller; or
- b. in connection with an adverse change of the regulatory environment. In such event, the price paid by you shall be rejected or refunded (as applicable) in accordance with the Seller's internal policies and procedures, less fees and expenses incurred in connection with the development of the ULT Network and the ecosystem thereon, or, if required by applicable law, confiscated. The Seller reserves the right to require you to provide the Seller with your personal details (including without limitation correct name, address and details of the digital wallet from which you have sent the funds), and it is your responsibility to provide correct details. Failure to provide this information will prevent the Seller from allocating the token to your digital wallet. Any refund of the price under this Clause 3 shall be calculated at the USD exchange rate of the relevant token which had been paid to the Seller, at the time of payment or refund, whichever would result in a lower fiat / USD value of the refund (as the same may be conclusively determined by the Seller). No interest will accrue on the value of any refund and the Seller shall be entitled to charge a processing fee not exceeding 15% of the refund amount.

### 4. ACKNOWLEDGMENT AND ASSUMPTION OF RISKS

You acknowledge and agree that there are numerous risks associated with purchasing ULT, holding ULT, and using ULT for participation in the ULT Network. If you have any queries or require any clarification regarding these risks, please contact us at [contact@ultiledger.io](mailto:contact@ultiledger.io). You clearly understand that blockchain and virtual currencies / tokens are new and unverified technologies that are beyond control of any group entity. In particular, and in addition to terms of this document, you bear full responsibility for any risks designated in the proposed documentation. By purchasing (whether through an intermediary or otherwise), holding and/or using ULT, you expressly acknowledge and assume the following risks:

- a. Uncertain Regulations and Enforcement Actions

The regulatory status of ULT and distributed ledger technology is unclear or unsettled in many jurisdictions, but numerous regulatory authorities across jurisdictions have been outspoken about considering the implementation of regulatory regimes which govern cryptocurrency or cryptocurrency markets. 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 ULT and/or the ULT Network. Regulatory actions could negatively impact ULT and/or the ULT Network in various ways. The Seller or any Group Entity 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.

b. Risks associated with the Blockchain Protocol Given that ULT and the ULT Network are based on blockchain protocol and architecture, any malfunction, breakdown or abandonment of the relevant blockchain protocol or architecture may have a material adverse effect on ULT and/or the ULT Network. Moreover, advances in cryptography, or technical advances (including without limitation development of quantum computing), could present unknown risks to ULT and/or the ULT Network by rendering ineffective the cryptographic consensus mechanism that underpins that blockchain protocol. The future of cryptography and security innovations are highly unpredictable.

#### c. Security

You are responsible for implementing reasonable measures for securing the digital wallet, vault or other storage mechanism you use to receive and hold ULT which you have purchased, including any requisite passwords, tokens, private key(s) or other credentials necessary to access such storage mechanism(s). If your passwords, tokens, private key(s) or other access credentials are lost, you may lose access to your ULT. We cannot be responsible for, and are technologically unable to recover, any such losses.

#### d. Insufficient Information

The ULT Network is at the stage of development as of the date of these Terms and its algorithm, code, consensus mechanism and/or various other technical specifications and parameters could be updated and changed frequently and constantly. While the marketing materials and Whitepaper released relating to the development of the ULT Network has been prepared with the then up-to-date key information of the ULT Network, it is not absolutely complete and is subject to adjustments and updates from time to time for optimal development and growth of the ULT Network and/or ecosystem on the ULT Network. We are unable, nor obliged, to keep you closely posted on every detail of the development of the ULT Network (including its progress and expected milestones no matter whether rescheduled or not) and therefore will not necessarily provide you with timely and full access to all the information relating to the ULT Network that may emerge from time to time. Due to the nature of the project to develop the ULT Network, you accept that such insufficiency of information disclosure is inevitable and reasonable.

e. Security weaknesses.

Hackers or other malicious groups or organisations may attempt to interfere with ULT and/or the ULT Network 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 any Group Entity may intentionally or unintentionally introduce weaknesses into the core infrastructure of ULT and/or the ULT Network, which could negatively affect ULT and/or the ULT Network.

f. Risks associated with markets for ULT.

There is no prior market for ULT and the ULT token sale may not result in an active or liquid market for ULT. ULT is intended to be used solely within the network for the ULT Network, hence there may be illiquidity risk with respect to any ULT you hold. ULT is not a currency issued by any central bank or national, supranational or quasi-national organisation, nor is it backed by any hard assets or other credit nor is it a "commodity" in the usual and traditional sense of that word. We are not responsible for, nor do we pursue, the circulation and trading of ULT on any market. Trading of ULT will merely depend on the consensus on its value between the relevant market participants. No one is obliged to purchase any ULT from any holder of ULT, including the purchasers, nor does anyone guarantee the liquidity or market price of ULT to any extent at any time. Furthermore, ULT may not be resold to a purchaser who is a citizen, national, resident (tax or otherwise), domiciliary or green card holder of a Restricted Country or to purchasers where the purchase of ULT may be in violation of applicable laws. Accordingly, we cannot ensure that there will be any demand or market for ULT, or that the price you pay for ULT is indicative of any market valuation or market price for ULT. Any secondary market or exchange for trading ULT would be run and operated wholly independently of the Group Entities, the sale of ULT and the ULT Network. No Group Entity will create such secondary markets nor will it act as an exchange for ULT. Even if secondary trading of ULT is facilitated by third party exchanges, such exchanges may be relatively new and subject to little or no regulatory oversight, making them more susceptible to fraud or manipulation. Furthermore, to the extent that third parties do ascribe an external exchange value to ULT (e.g., as denominated in a virtual or fiat currency), such value may be extremely volatile, decline below the price which you have paid for ULT, and/or diminish to zero.

g. Risk of Uninsured Losses

ULT is uninsured unless you specifically obtain private insurance to insure them. In the event of loss or loss of utility value, there is no public insurer or private insurance arranged by us, to offer recourse to you.

h. Taxation risks

The tax characterisation of ULT is uncertain. You must seek your own tax advice in connection with the purchase, holding and/or usage of ULT, which may result in adverse tax consequences to you, including withholding taxes, income taxes and tax reporting requirements.

i. Competitors

It is possible that alternative networks could be established that utilise the same or similar code and protocol

underlying ULT and/or the ULT Network and attempt to re-create similar facilities. The ULT Network may be required to compete with these alternative networks, which could negatively impact ULT and/or the ULT Network.

#### j. Insufficient Interest

It is possible that the ULT Network will not be used by a large number of individuals, companies and other entities or that there will be limited public interest in the creation and development of distributed ecosystems (such as the ULT Network). Such a lack of use or interest could negatively impact the development of the ULT Network and therefore the potential utility of ULT.

**k. Risk of Dissolution of the Seller, any Group Entity or the ULT Network Start-up** companies such as the Seller involve a high degree of risk. Financial and operating risks confronting start-up companies are significant, and the Seller is not immune to these. Start-up companies often experience unexpected problems in the areas of product development, marketing, financing, and general management, among others, which frequently cannot be solved. It is possible that, due to any number of reasons, including, but not limited to, an unfavourable fluctuation in the value of cryptographic and fiat currencies, decrease in the utility of ULT due to negative adoption of the ULT Network, the failure of commercial relationships, or intellectual property ownership challenges, the ULT Network may no longer be viable to operate and the Seller or any Group Entity may be dissolved.

#### **l. Risks Arising from Lack of Governance Rights**

Because ULT confers no governance rights of any kind with respect to the ULT Network or any Group Entity, all decisions involving the ULT Network or any Group Entity will be made by the relevant Group Entity at its sole and absolute discretion, including, but not limited to, decisions to discontinue the services and/or ecosystem on the ULT Network, to create and sell more ULT for use in the ecosystem on the ULT Network, or to sell or liquidate any Group Entity. These decisions could adversely affect the ULT Network and ULT you hold.

#### **m. Loss of Talent**

The development of the ULT Network depends on the continued cooperation 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 ULT Network or its future development. Further, stability and cohesion within the team is critical to the overall development of the ULT Network. There is the possibility that conflict within the team and/or departure of core personnel may occur, resulting in negative influence on the project in the future.

#### **n. Failure to develop**

There is the risk that the development of the ULT Network 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 ULT, unforeseen technical difficulties, and shortage of development funds for activities.

**o. Risks Involving Cloud Storage**

As the ULT Network may provide a decentralised cloud storage service to individual and institutional clients, including users and applications, the ULT Network (and services thereon) are susceptible to a number of risks related to the storage of data in the cloud. The ULT Network (and services thereon) may involve the storage of large amounts of sensitive and/or proprietary information, which may be compromised in the event of a cyberattack or other malicious activity. Similarly, the ULT Network and/or services thereon may be interrupted and files may become temporarily unavailable in the event of such an attack or malicious activity. Because users can use a variety of hardware and software that may interface with the ULT Network, there is the risk that the ULT Network and/or services thereon may become unavailable or interrupted based on a failure of interoperability or an inability to integrate these third-party systems and devices that the Group Entities do not control. The risk that the ULT Network and/or services thereon may face increasing interruptions and the ecosystem on the ULT Network may face additional security vulnerabilities could adversely affect the ULT Network and ecosystem thereon, and therefore the future utility of any ULT that you hold.

**p. Forking**

The ULT Network is a community project and certain elements are open-sourced. The Seller (nor any Group Entity) does not and cannot monopolise the development, marketing, operation or otherwise of the ULT Network. Any entity may independently develop a patch or upgrade of the source code of the ULT Network or blockchain without prior authorisation of any other party. The acceptance of these patches or upgrades by a sufficient (not necessarily overwhelming) percentage of ULT holders could result in a "fork" in the blockchain, and consequently two diverging networks will emerge and remain. Each branch of the blockchain arising from the fork will have its own native cryptographic tokens – accordingly there will be two different versions of ULT respectively residing in the two divergent branches with almost identical technical features and functions. The community on the ULT Network may split into two groups in support of the two branches respectively. Further, it is theoretically possible for each branch of the forked blockchain to be further forked an unlimited number of times. The temporary or permanent existence of forked blockchains could adversely affect the operation of the ULT Network and blockchain and the ULT which you hold, and may ruin the sustainability of the ULT Network.

**q. Other risks** In addition to the aforementioned risks, there are other risks associated with your purchase, holding and usage of ULT, including those that the Seller cannot anticipate. Such risks may further materialise as unanticipated variations or combinations of the aforementioned risks.

## 5. KNOW YOUR CLIENT REGULATIONS AND PERSONAL DATA

You hereby acknowledge and accept that:

**a. The Seller may be required to conduct customer identification, due diligence and anti-money laundering**

due diligence on all purchasers of ULT in compliance with all applicable laws and legislations. We may determine, in our sole discretion, that it is necessary to obtain certain information about you in order to comply with these laws and legislations. You agree to provide us such information promptly upon request, and you acknowledge that we may refuse to sell ULT to you until you provide such requested information and we have determined that it is permissible to sell you ULT under applicable law or regulation.

- b. We may at any point in time request information and/or documentation to establish that our identification records, as well as the information that form your profile, remain completely updated. In this respect, we reserve the right to examine and check on a regular basis the validity and adequacy of your identification data and information we maintain.
- c. If at any time we become aware that reliable or adequate data and information are missing from your identity, we reserve the right to take all necessary actions to collect the missing data and information (whether from you or from third parties) so as to update and complete your profile as necessary.
- d. If you fail or refuse to submit, within a reasonable timeframe, the required data and identification information for the updating of your identity and, as a consequence, we are unable to comply with any laws, legislations regulations or directives relating to customer identification requirements, the Seller will not be able to sell ULT and/or continue its relationship with you, and we may be required to submit a report of suspicious transactions/activities to the relevant authorities. Personal Data i. We (and our affiliates) will collect, use, process and disclose your information and personal data (as defined in the Personal Data Protection Act 2012 of Singapore) for providing our services and discharging of our legal duties and responsibilities, administration, customer services, crime (including tax evasion) prevention and detection, anti-money laundering, due diligence and verification of identity purposes (collectively, the Purposes). We may disclose your information to our service providers, agents, relevant custodians or similar third parties for these Purposes. We may keep your information for such period as may be determined by us (which shall be no shorter than any mandatory period prescribed by law) to contact you about the ULT Network. You hereby consent to us transferring your personal data to our affiliates or service providers for processing and to recipients in countries which do not provide the same level of data protection as Singapore if necessary for the Purposes. ii. If you withdraw your consent to any or all use of your personal data, depending on the nature of your request, this may limit the scope of our services which we are able to provide to you. Please contact us at [contact@ultiledger.io](mailto:contact@ultiledger.io) (marking your email for the attention of "Data Protection Officer"). We will endeavour to respond to your query / request within 30 days, and if that is not possible, we will inform you of the time by which we will respond to you. iii. You hereby warrant, represent and confirm to us and shall procure that with respect to any personal data of any individual (including, where applicable, your directors, partners, office holders, officers, employees, agents, shareholders and beneficial owners) (each, an Individual) disclosed to us in connection with these Terms, the Service Terms and Policies and/or the ULT token sale or otherwise collected by us in the course of your relationship with us or any of our affiliates:

(1) each Individual to whom the personal data relates has, prior to such disclosure or collection, agreed and consented to, and permitted you on its behalf to consent to, such disclosure as well as the collection, processing, use and disclosure of the Individual's personal data by us for all purposes required by us in connection with these Terms and/or the ULT token sale; (2) that each Individual has read and consented to the collection, processing, use and disclosure of the Individual's personal data by us in accordance with the Purpose; and (3) any consent given pursuant to these Terms in relation to each Individual's personal data shall survive death, incapacity, bankruptcy or insolvency of that Individual and the termination or expiration of these Terms and the Service Terms and Policies. iv. If any Individual should withdraw his/her consent to any or all use of his/her personal data, then depending on the nature of the withdrawal request, we may not be in a position to continue its relationship with you and/or sell ULT, and we shall be entitled to its rights under these Terms and the Service Terms and Policies (without prejudice to our other rights and remedies at law against you). 6. TAXES The price that you pay for ULT is exclusive of all applicable taxes (including without limitation obligations to pay value added, sales, use, offerings, withholding taxes, income or similar taxes) (Taxes). The onus for determining the Taxes applicable to your purchase, holding and/or usage of ULT lies solely with you. It is also your sole responsibility to comply with all relevant tax reporting requirements arising out of or in connection with your purchase, holding and/or usage of ULT. We are not responsible for withholding, collecting, reporting, or remitting any Taxes arising from your purchase, holding and/or usage of ULT. We cannot and do not provide any tax advice and we recommend that you seek appropriate professional advice in this area if required.

## 7. REPRESENTATIONS AND WARRANTIES

By purchasing (whether through an intermediary or otherwise), holding and/or using ULT, you represent and warrant that:

- a. You have read and understand these Terms, and you have all requisite power and authority to execute and deliver these Terms, to participate in the ULT token sale, to purchase, hold and/or use ULT, and to carry out and perform your obligations under these terms.
- b. If you are an individual, you are at least 18 years old and of sufficient legal age and capacity to purchase, hold and/or use ULT. If you are a legal person, you are duly organised, validly existing and in good standing under the laws of your domicile and each jurisdiction where you conduct business or where your assets are located. You are not purchasing, holding and/or using ULT on behalf of any other entity or person.
- c. The execution, delivery and performance of these Terms will not result in any violation of, be in conflict with, or constitute a default under, with or without the passage of time or the giving of notice: (i) any provision of your constitutional documents (if applicable), (ii) any provision of any judgment, decree or order, or any agreement, obligation, duty or commitment to which you are a party, or by which you are bound, or to which any of its material assets are subject, (iii) any laws, regulations or rules applicable to you,

(iv) any foreign exchange or regulatory restrictions applicable to such purchase, holding and/or usage of ULT, or (v) any governmental or other consents that may need to be obtained.

d. The execution and delivery of, and performance under, these Terms require no approval or other action from any governmental authority or person. You will and shall at your own expense ensure compliance with all laws, regulatory requirements and restrictions applicable to you (as the case may be).

e. You have a good and sufficient understanding in business and financial matters, including a good and sufficient understanding of the functionality, usage, storage, transmission mechanisms and other material characteristics of blockchain technology, blockchain-like technology, blockchain-based software systems as well as other similar technologies and systems, cryptographic tokens, and token storage mechanisms (such as digital token wallets) to understand these Terms and to appreciate the risks and implications of purchasing, holding and/or usage of ULT.

f. You have obtained sufficient information about ULT to make an informed decision to purchase, hold and/or use ULT.

g. The funds, including any fiat, digital currency, virtual currency or cryptocurrency, used to purchase ULT are obtained through “mining” activities or other lawful means, and are not derived from or related to any unlawful activities, including but not limited to money laundering or terrorist financing, and you shall not use ULT to finance, engage in, or otherwise support any unlawful activities. To the extent required by applicable laws and regulations, you shall fully comply with all anti-money laundering and counter-terrorism financing requirements in the jurisdiction.

h. Neither you (or any of your subsidiaries, any director or officer, or any employee, agent, or affiliate as the case may be) nor any person having a direct or indirect beneficial interest in you or ULT being purchased, held or used by you, or any person for whom you are acting as agent or nominee in connection with ULT, is the subject of any sanctions or similar lists administered or enforced by the Financial Action Task Force, Financial Crimes Enforcement Network, the US Department of the Treasury’s Office of Foreign Assets Control, the US Department of State, the United Nations Security Council, North Atlantic Treaty Organization, the European Union, Her Majesty’s Treasury, the Hong Kong Monetary Authority or the Monetary Authority of Singapore (collectively, Sanctions) or is located, organised, citizen or resident in a country or territory that is, or whose government is, the subject of Sanctions.

i. You are not (i) a citizen, national, resident (tax or otherwise), domiciliary or green card holder of a geographic area or country in which (A) access to or participation in the ULT token sale or the ULT Network is prohibited by applicable law, decree, regulation, treaty, or administrative act or (B) where it is likely that the sale of ULT would be construed as the sale of a security (howsoever named) or investment product

(including without limitation the United States of America, Canada, New Zealand, People's Republic of China (the Restricted Countries ), (ii) a citizen or resident of, or located in, a geographic area that is subject to Sanctions or (iii) an individual, or an individual employed by or associated with an entity, identified on any Sanctions list (including without limitation the U.S. Department of Commerce's Denied Persons or Entity List, the U.S. Department of Treasury's Specially Designated Nationals or Blocked Persons Lists, or the U.S. Department of State's Debarred Parties List), (iv) a citizen or resident of, or located in, a geographic area or country designated as "High-risk and other monitored jurisdictions" (or such other similar classification) by the Financial Action Task Force, or (v) a Politically Exposed Person (defined as a current or former senior official in the executive, legislative, administrative, military, or judicial branch of a government (elected or not), a senior official of a major political party, a senior executive of a government owned commercial enterprise, and/or being a corporation, business or other entity formed by or for the benefit of any such individual, any individual publicly known (or actually known by the relevant financial institution) to be a close personal or professional associate, or an immediate family member of such individual, meaning spouse, parents, siblings, children, and spouse's parents or siblings).

j. The funds used in the purchase of ULT will be made only in your name, from a digital wallet not located in a country or territory that has been designated as a "non-cooperative country or territory" by the Financial Action Task Force or any similar legislation.

k. You are purchasing, holding and/or using ULT to participate in the ULT Network, as well as to support the advancement, promotion, research, design and development of, and advocacy for blockchain technology and networks which are able to handle large scale TPS capacity, expand the usability of blockchain technology without sacrificing its core features of security and decentralisation, to achieve a network which is free of congestion and affordable for all usage scenarios that demand speed and volume, as well as potentially receiving services on the ULT Network (when the same is completed and deployed). You are not purchasing, holding or using ULT for any other uses or purposes, including, but not limited to, any investment, speculative or other financial purposes.

l. You shall not sell or transfer any ULT prior to procuring the purchaser's or transferee's agreement to these Terms. m. You acknowledge that the funds paid to us for the purchase of ULT will be held by us (or our affiliate) after the token sale, and you will have no economic or legal right over or beneficial interest in these contributions or the assets of that entity after the token sale. You hereby acknowledge that the Seller has entered into these Terms in reliance upon your representations and warranties being true, accurate, complete and non-misleading. The Seller does not and does not purport to make, and hereby disclaims, all representations, warranties or undertaking to you in relation to the sale of ULT or otherwise. Prospective purchasers of ULT should carefully consider and evaluate all risks and uncertainties (including financial and legal risks and uncertainties) associated with the ULT token sale, the Seller, and any relevant Group Entity.

## 8. INTELLECTUAL PROPERTY

The Seller (or the relevant Group Entity, as the case may be) retains all right, title and interest in all of that entity's intellectual property, including, without limitation, ideas, concepts, discoveries, processes, code, compositions, formulae, methods, techniques, information, data, patents, models, rights to inventions, copyright and neighbouring and related rights, moral rights, trademarks and service marks, business names and domain names, rights in get-up and trade dress, goodwill and the right to sue for passing off or unfair competition, rights in designs, rights in computer software, database rights, rights to use, and protect the confidentiality of, confidential information (including know-how and trade secrets), and all other intellectual property rights, in each case whether patentable, copyrightable or protectable in trademark, registered or unregistered, and including all applications and rights to apply for and be granted, renewals or extensions of, and rights to claim priority from, such rights and all similar or equivalent rights or forms of protection which subsist or will subsist now or in the future in any part of the world. You may not use any of the Seller's (or the relevant Group Entity's) intellectual property for any reason whatsoever.

## 9. INDEMNITY

To the fullest extent permitted by applicable law, you will indemnify, defend and hold harmless the Seller, each Group Entity, and their respective past, present and future employees, officers, directors, contractors, consultants, equity holders, suppliers, vendors, service providers, related companies, affiliates, agents, representatives, predecessors, successors and assigns (the Indemnified Parties) from and against all claims, demands, actions, damages, losses, costs and expenses (including legal fees on an indemnity basis) arising from or relating to:

- a. your purchase (whether through an intermediary or otherwise), holding or usage of ULT;
- b. your responsibilities or obligations under these Terms;
- c. your violation of these Terms;
- d. your violation of any rights of any other person or entity;
- e. your subsequent sale of ULT to any individuals or entities.

## 10. RELEASE

To the fullest extent permitted by applicable law, you release the Seller and the other Indemnified Parties from responsibility, liability, claims, demands and/or damages (actual and consequential) of every kind and nature, known and unknown (including, but not limited to, claims of negligence), arising out of or related to disputes between users and the acts or omissions of third parties. You expressly waive any rights you may have under any statute or common law principles that would otherwise limit the coverage of this release to include only those claims which you may know or suspect to exist in your favour at the time of agreeing to this release.

## 11. GOVERNING LAW AND DISPUTE RESOLUTION

These Terms will be governed by and construed and enforced in accordance with the laws of Singapore,

without regard to conflict of law rules or principles (whether of Singapore or any other jurisdiction) that would cause the application of the laws of any other jurisdiction. Any dispute arising out of or in connection with these Terms (including without limitation the enforceability of this arbitration Clause, any question regarding existence, validity or termination) shall be referred to and finally resolved by arbitration administered by the Singapore International Arbitration Centre (SIAC) in accordance with the Arbitration Rules of the Singapore International Arbitration Centre (SIAC Rules) for the time being in force, which rules are deemed to be incorporated by reference in this arbitration Clause. The seat of the arbitration shall be Singapore. The Tribunal shall consist of 1 arbitrator. The language of the arbitration shall be English.

## 12. PARTIAL INVALIDITY

If, at any time, any provision of these Terms is or becomes illegal, invalid or unenforceable in any respect under any law of any jurisdiction, neither the legality, validity or enforceability of the remaining provisions nor the legality, validity or enforceability of such provision under the law of any other jurisdiction will in any way be affected or impaired.

## 13. TERMINATION

The agreement set out in these Terms will terminate upon the completion of all sales of ULT. The Seller reserves the right to terminate the agreement set out in these Terms, in its sole discretion, in the event of a breach by you of these Terms. Upon termination of these Terms:

- a. all of your rights under these Terms immediately terminate;
- b. you are not entitled to any refund of any amount paid whatsoever, save in the case where these Terms are terminated by the Seller without any breach by you of these Terms; and
- c. Clauses 3, 4, 6, 9, 10, 17, 18 and 19 will continue to apply in accordance with their terms.

## 14. ENTIRE AGREEMENT

These Terms, including the documents and material incorporated by reference, constitute the entire agreement between you and the Seller and supersedes all prior or contemporaneous agreements and understandings (including without limitation the Whitepaper or any other marketing material), both written and oral, between you and the Seller with respect to the subject matters. We may make changes to these Terms from time to time as reasonably required to comply with applicable law or regulation. If we make changes, we will as soon as practicable post the amended Terms at the Website. The amended Terms will be effective immediately. It is your responsibility to regularly check the Website for any such amendments.

## 15. ASSIGNMENT

You shall under no circumstances be entitled to assign or novate your rights and obligations under these Terms (including without limitation the right to claim any ULT purchased). We may assign or novate our rights and obligations under these Terms without your consent, and you agree to, at your own expense, take whatever action or execute any document which the Seller may require for the purpose of effecting any such

assignment or novation by the Seller.

## 16. REMEDIES AND WAIVERS

No failure to exercise, nor any delay in exercising, on our part, any right or remedy under these Terms Documents shall operate as a waiver, of any such right or remedy or constitute an election to affirm these Terms. No election to affirm these Terms on our part shall be effective unless it is in writing. No single or partial exercise of any right or remedy prevents any further or other exercise or the exercise of any other right or remedy. The rights and remedies provided in these Terms are cumulative and not exclusive of any rights or remedies provided by law.

## 17. DISCLAIMERS

- a. You expressly acknowledge, understand and agree that you are purchasing (whether through an intermediary or otherwise), holding and/or using ULT at your sole risk and discretion, and that ULT is provided, used and purchased on an "AS IS" and on an "AS AVAILABLE" basis without any representations, warranties, promises or guarantees whatsoever of any kind by the Seller or any Group Entity. Prior to making any decision to purchase (whether through an intermediary or otherwise), hold and/or use ULT, you shall conduct your own due diligence and rely only on your own examination and investigation thereof.
- b. Changes in relevant laws and regulations in any jurisdictions which we are operating shall constitute a force majeure and we will not be responsible for any result arose out of such changes in relevant laws and regulations.
- c. We do not make and expressly disclaims all representations and warranties, express, implied or statutory; and with respect to ULT, we specifically does not represent and warrant and expressly disclaims any representation or warranty, express, implied or statutory, including without limitation, any representations or warranties of title, non-infringement, merchantability, usage, suitability or fitness for any particular purpose, or as to the workmanship or technical coding thereof, or the absence of any defects therein, whether latent or patent. In addition, we cannot and do not represent or warrant that ULT or the delivery mechanism for ULT are free of viruses or other harmful components.
- d. We assume that you have already read these Terms, especially the risks and disclaimer stated herein and hereunder, and you shall automatically be regarded agree to take all risks (including but not limited to the risks stated herein) in relation to purchasing (whether through an intermediary or otherwise), holding and/or using ULT.

## 18. SELLER NOT LIABLE

ULT is not being structured or sold as securities or any other form of investment product. Accordingly, none of the information presented in these Terms is intended to form the basis for any investment decision, and no specific recommendations are intended. Save in the case of fraud or gross negligence, the Seller expressly disclaims any and all responsibility for any direct, indirect, special, incidental, consequential or exemplary loss or damage of any kind whatsoever arising directly or indirectly (including without limitation, those

relating to loss of revenue, income or profits, loss of use or data, or damages for business interruption) in connection with:

- a. reliance on any information contained in these terms;
- b. any error, omission or inaccuracy in any such information;
- c. any action resulting from such information; or
- d. the sale or usage of ULT. In no event will the aggregate liability of the Seller and the Indemnified Parties (jointly), whether in contract, warranty, tort, or other theory, arising out of or relating to these terms or the usage of or inability to use ULT, exceed the amount you pay to us for ULT.

## 19. CLAIMS

The Seller shall not be liable in any way or in any event in respect of any claim under these Terms if such claim was not made within the 6-month period commencing from the date that you receive ULT (the Claim Period). Any claim which has been made before the expiration of the Claim Period shall, if it has not been previously satisfied in full, settled or withdrawn, be deemed to have been withdrawn and shall become fully barred and unenforceable on the expiry of the period of six (6) months commencing from the date on which such claim was made, unless proceedings in respect thereof shall have been commenced against the Seller and for this purpose proceedings shall not be deemed to have been commenced unless they shall have been issued and served upon the Seller. For the avoidance of doubt, nothing in these Terms shall limit your obligation (at law or otherwise) to mitigate your loss in respect of any claim under these Terms, and you shall not be entitled to recover damages in respect of any claim (as the case may be) if, and to the extent that, you have already recovered damages in respect of the same fact or subject matter.

## 20. PARTNERSHIP

Purchasing (whether through an intermediary or otherwise), holding and/or using ULT does not create any form of partnership, joint venture or any other similar relationship between you and us.

## 21. RIGHTS OF THIRD PARTIES

Except as otherwise provided in herein, these Terms are intended solely for the benefit of you and us and are not intended to confer third-party beneficiary rights upon any other person or entity. A person who is not a party under these Terms has no right under the Contracts (Rights of Third Parties) Act, Chapter 53B of Singapore to enforce or to enjoy the benefit of any term of these Terms. Notwithstanding the foregoing, any Group entity shall be entitled to enforce or to enjoy the benefit of any term of these Terms.

## 22. LANGUAGE

You acknowledge that, solely for convenience, these Terms may be translated into a language other than English, and that a copy of the English language version of these Terms has been provided to you (which you have read and understand). In the event of conflict or ambiguity between the English language version and translated versions of these Terms, the English language version shall prevail.

## 23. SEVERABILITY

If any provision or part-provision of these Terms is or becomes invalid, illegal or unenforceable in any respect under any law of any jurisdiction, it shall be deemed modified to the minimum extent necessary to make it valid, legal and enforceable. If such modification is not possible, the relevant provision or part-provision shall be deemed deleted. Any modification to or deletion of a provision or part-provision pursuant to this Clause shall not affect or impair the validity and enforceability of the rest of these Terms, nor the validity and enforceability of such provision or part-provision under the law of any other jurisdiction.

## 24. NOTICES

You agree and acknowledge that all agreements, notices, disclosures, and other communications that we provide to you, including these Terms, will be provided in electronic form. These Terms have been entered into for and on behalf of the Seller. If you have any questions regarding these Terms, please contact us at [contact@ultiledger.io](mailto:contact@ultiledger.io).



Ultiledger.io Economic Eco Whitepaper

[www.ultiledger.io](http://www.ultiledger.io)

The next generation global self-financing blockchain protocol